



## Installing and Configuring WebSphere Process Server





## Installing and Configuring WebSphere Process Server

**Note**

Before using this information, be sure to read the general information in the Notices section at the end of this document.

**24 April 2009**

This edition applies to version 6, release 2, modification 0 of WebSphere Process Server for Multiplatforms (product number 5724-L01) and to all subsequent releases and modifications until otherwise indicated in new editions.

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	<p>A link to a PDF book.</p>



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# Contents

<b>PDF books and the information center</b>	<b>iii</b>	
<b>Tables</b>	<b>ix</b>	
<b>Chapter 1. Shortcuts to common installation and configuration tasks</b>	<b>1</b>	
<b>Chapter 2. WebSphere Process Server: Product package contents</b>	<b>3</b>	
<b>Chapter 3. Preparing to install WebSphere Process Server</b>	<b>31</b>	
Product compatibility	31	
Prerequisites for installing WebSphere Process Server	31	
Stopping servers and nodes	34	
Preparing the operating system for WebSphere Process Server installation	35	
Preparing AIX systems for installation	35	
Preparing HP-UX systems for installation	39	
Preparing i5/OS systems for installation	44	
Preparing Linux systems for installation	45	
Preparing Solaris systems for installation	49	
Preparing Windows systems for installation	53	
Creating the Common database manually before product installation	56	
Creating the DB2 database for i5/OS	57	
Creating the DB2 database	59	
Creating the DB2 database for z/OS	60	
Creating the Informix database	61	
Creating the Oracle database	63	
Creating the Microsoft SQL Server database	64	
<b>Chapter 4. Installing the software</b>	<b>67</b>	
Starting the launchpad	69	
Options on the launchpad	70	
Installing WebSphere Process Server interactively	79	
Installing with existing WebSphere Process Server installations	84	
Installing with existing WebSphere Enterprise Service Bus or WebSphere Process Server Client installations	87	
Installing with existing WebSphere Application Server or WebSphere Application Server Network Deployment installations	90	
Installing WebSphere Process Server and creating a profile interactively	93	
Installing WebSphere Process Server with a deployment environment interactively	100	
Installing the WebSphere Process Server Client interactively	112	
Installing additional features on an existing installation	116	
Converting a WebSphere Enterprise Service Bus or WebSphere Process Server Client installation into a WebSphere Process Server installation	120	
Installing silently on Linux, UNIX, and Windows	123	
Installing silently on i5/OS from a System i server	127	
Installing silently on i5/OS from a Windows workstation command line	129	
Replacing the underlying integrated installation package	132	
Running scripts on i5/OS	133	
Starting the First steps console	133	
Options on the First steps console	136	
wbi_ivt command-line utility	142	
Installing Message Service clients	144	
Starting the installation	144	
Installing the JNDILookup Web Service application	146	
<b>Chapter 5. Installing the documentation</b>	<b>149</b>	
Installing a new help system	150	
Installing the latest documentation into a help system	151	
Installing different versions of documentation into an help system	152	
Installing the documentation in other Eclipse-based help viewers	154	
Starting the help system	155	
Stopping the help system	156	
Viewing the help system	156	
Uninstalling the documentation	157	
<b>Chapter 6. Verifying the product installation</b>	<b>159</b>	
Verifying checksums of installed files	159	
Verifying against the bill of materials	161	
Computing a new baseline checksum for an inventory of configured files	165	
Excluding files from a checksum comparison	168	
Comparing specific file and component checksums	172	
Changing the default message digest algorithm for the installver_wbi command	175	
Handling out-of-memory situations	176	
installver_wbi command	177	
<b>Chapter 7. Coexisting with other WebSphere product installations</b>	<b>185</b>	
Installing WebSphere Process Server or the WebSphere Process Server Client to coexist with existing installations of various WebSphere products	186	

Creating new WebSphere Process Server profiles to coexist with configuration instances of WebSphere Business Integration Server Foundation and selected pre-6.0 versions of WebSphere Application Server products . . . . .	187
Creating new WebSphere Process Server profiles to coexist with profiles of other WebSphere products . . . . .	188

**Chapter 8. Configuring the software 191**

Configuring profiles . . . . .	191
Profiles . . . . .	191
Prerequisites for creating or augmenting profiles	192
Creating profiles . . . . .	197
Augmenting profiles . . . . .	230
manageprofiles command . . . . .	251
Configuring profiles with default values . . . . .	280
Configuring profiles with customized values	288
Configuring profiles for a deployment environment. . . . .	335
Creating the Common database and tables after profile creation or augmentation . . . . .	359
Creating tables on an existing Common database after profile creation or augmentation . . . . .	360
Configuring remote database support on i5/OS	361
Creating Common Event Infrastructure and Common database repositories in DB2 on a remote z/OS server . . . . .	367
Configuring a DB2 message logger database on a remote z/OS system . . . . .	368
Deleting profiles using the manageprofiles command . . . . .	370
Setting up deployment environments . . . . .	371
Creating deployment environments . . . . .	371
Custom deployment environment layout configuration . . . . .	373
Updating the deployment environment topology	379
Configuring host aliases . . . . .	381
Configuring authentication aliases for a deployment environment . . . . .	381
Configuring custom deployment environments	382
Configuring deferred configurations for a deployment environment . . . . .	384
Configuring deployment environments using the command line . . . . .	385
Configuring a data source for your deployment environment. . . . .	386
Creating deployment environment definitions using the command line. . . . .	386
Validate the deployment environment definition from the command line . . . . .	387
Deleting deployment environment definitions using the command line. . . . .	388
Renaming a deployment environment definition using the command line. . . . .	390
Add nodes to a deployment environment definition using the command line . . . . .	391
Removing nodes from a deployment environment definition using the command line.	392
Renaming nodes in a deployment environment definition using the command line . . . . .	393

Modifying deployment environment definition parameters . . . . .	395
Displaying deployment environment status using the command line. . . . .	395
Configuring SCA support for a server or cluster	397
Considerations for Service Component Architecture support in servers and clusters . . . . .	399
Configuring REST service endpoints. . . . .	400
Configuring Business Process Choreographer. . . . .	401
Configuring Business Space . . . . .	401
Configuring Business Space using the Profile Management Tool . . . . .	403
Configuring Business Space using the administrative console . . . . .	404
Configuring Business Space as part of the Deployment Environment Configuration wizard.	405
Configuring Business Space database tables . . . . .	407
Configuring Business Space using the command line. . . . .	408
Enabling Business Space widget REST service endpoints on the administrative console . . . . .	413
Enabling Business Space widgets manually for remote endpoints . . . . .	415
Enabling Business Space widgets for multiple endpoints . . . . .	419
Enabling forms for running human workflow widgets in Business Space . . . . .	423
Enabling images in My Team's Tasks and Team List widgets. . . . .	424
Mapping Business Space URLs for a reverse proxy server. . . . .	425
Setting up security for Business Space . . . . .	426
Configuring Business Space widgets for WebSphere Portal . . . . .	430
Configuring SSO and SSL for widgets in WebSphere Portal . . . . .	431
Configuring a wrapper for iWidgets in WebSphere Portal . . . . .	433
Creating portlets in WebSphere Portal for Business Space widgets . . . . .	434
Configuring Business Space themes and skins in WebSphere Portal . . . . .	435
Setting up a WebSphere Portal page with portlets for your widgets . . . . .	436
Configuring business rules and selectors . . . . .	437
Configuring the business rule and selector audit log . . . . .	437
Configuring business rule and selector auditing using commands . . . . .	438
Considerations for installing the business rules manager . . . . .	441
Configuring the relationship service. . . . .	446
Configuring extended messaging resources . . . . .	447
Enabling the Extended Messaging Service . . . . .	448
Configuring listener port extensions to handle late responses . . . . .	449
Selecting extended messaging providers . . . . .	450
Configuring Common Event Infrastructure . . . . .	455
Common Event Infrastructure components . . . . .	456
Configuring the Common Event Infrastructure using the Administrative Console . . . . .	457



Deploying the Common Event Infrastructure application . . . . .	459
Configuring event messaging . . . . .	462
Configuring the event database . . . . .	465
Cross-cell Common Event Infrastructure configuration for WebSphere Business Monitor . . . . .	488
Configuring WebSphere Business Integration Adapters . . . . .	489
Setting up administration of a WebSphere Business Integration Adapter . . . . .	489

## **Chapter 9. Verifying your deployment environment . . . . . 493**

Verifying the application deployment target cluster starts . . . . .	494
Installing the test application . . . . .	495
Configuring the test application for routing . . . . .	496
Starting the test application. . . . .	496
Running the test application . . . . .	497
Installing and accessing other applications. . . . .	497

## **Chapter 10. Installing fix packs and refresh packs with the Update Installer . . . . . 499**

Installing the Update Installer for WebSphere Software . . . . .	504
Uninstalling maintenance packages . . . . .	506

## **Chapter 11. Installing fix packs and refresh packs with customized installation packages . . . . . 511**

## **Chapter 12. Uninstalling the software 513**

Uninstalling the product using the GUI or silently . . . . .	513
Preparing for reinstallation after failed uninstallation . . . . .	519
Preparing for reinstallation after failed uninstallation on AIX systems . . . . .	519
Preparing for reinstallation after failed uninstallation on HP-UX systems. . . . .	522
Preparing for reinstallation after failed uninstallation on i5/OS systems . . . . .	524
Preparing for reinstallation after failed uninstallation on Linux systems . . . . .	526
Preparing for reinstallation after failed uninstallation on Solaris systems . . . . .	529
Preparing for reinstallation after a failed uninstallation on Windows systems . . . . .	532
Uninstalling Business Process Choreographer. . . . .	535

## **Chapter 13. Installation information 537**

Avoiding port conflicts . . . . .	537
Automatic installation of interim fixes . . . . .	538
Default installation directories for the product, profiles, and tools . . . . .	539
i5/OS scripts . . . . .	545
install command . . . . .	546
Mounting disk drives on Linux and UNIX operating systems . . . . .	551

Mozilla 1.7 support for national languages . . . . .	553
Naming considerations for profiles, nodes, hosts, and cells . . . . .	554
.nifregistry and vpd.properties files . . . . .	561
Operating system registry keys . . . . .	563
Port number settings . . . . .	565
Installable features of WebSphere Process Server . . . . .	565
Product version and history information . . . . .	565
Product library, directories, subsystem, job queue, job description, and output queues . . . . .	566
Profile commands in a multiprofile environment . . . . .	567
Special considerations when installing from Passport Advantage . . . . .	568

## **Chapter 14. Using the IBM WebSphere Installation Factory . . . . . 569**

IBM WebSphere Installation Factory - overview . . . . .	569
Installing the IBM WebSphere Installation Factory . . . . .	570
Working with customized installation packages . . . . .	571
Starting the IBM WebSphere Installation Factory . . . . .	573
Creating customized installation packages. . . . .	597
Installing customized installation packages: task roadmap . . . . .	605
Maintaining a customized installation package installation . . . . .	622
Uninstalling a customized installation package installation . . . . .	624
Working with integrated installation packages . . . . .	624
Developing and installing integrated installation packages . . . . .	625
IIP overview. . . . .	626
IIP macro replacement . . . . .	628
Creating a build definition and generating the IIP . . . . .	630
Installing an IIP . . . . .	637
Uninstalling the Installation Factory tool . . . . .	663

## **Chapter 15. Troubleshooting installation and configuration . . . . . 665**

Messages: installation and profile creation . . . . .	668
Supported IBM JDK was not found. The IBM JDK shipped with this product must be located at <i>install_root</i> /JDK. Please correct this problem and try again. . . . .	669
Warning: Cannot convert string "<type_name>" to type FontStruct. . . . .	669
Installation and profile creation log files . . . . .	669
Troubleshooting the launchpad application . . . . .	674
Troubleshooting a silent installation . . . . .	675
i5/OS installation troubleshooting tips . . . . .	676
Diagnosing a failing Ant configuration script. . . . .	677
Recovering from profile creation or augmentation failure. . . . .	678
Troubleshooting the Business Process Choreographer configuration . . . . .	680

## **Notices . . . . . 683**



---

## Tables

1. Icons that prefix links to topics outside this book . . . . .	iii	38. Defaulted manageprofiles command parameters . . . . .	210
2. Software supplied with WebSphere Process Server. . . . .	3	39. Specified manageprofiles command parameters . . . . .	211
3. Contents of AIX media pack (32-bit). . . . .	7	40. Defaulted manageprofiles command parameters . . . . .	211
4. Contents of AIX media pack (64-bit). . . . .	9	41. Specified manageprofiles command parameters . . . . .	212
5. Contents of HP-UX media pack (32-bit) . . . . .	10	42. Defaulted manageprofiles command parameters . . . . .	212
6. Contents of HP-UX media pack (64-bit) . . . . .	11	43. Specified manageprofiles command parameters . . . . .	213
7. Contents of i5/OS media pack . . . . .	13	44. Defaulted manageprofiles command parameters . . . . .	213
8. Contents of Linux x86 media pack (32-bit) . . . . .	15	45. Specified manageprofiles command parameters . . . . .	214
9. Contents of Linux x86 media pack (64-bit) . . . . .	17	46. Defaulted manageprofiles command parameters . . . . .	214
10. Contents of Linux POWER media pack (32-bit) . . . . .	18	47. Specified manageprofiles command parameters . . . . .	215
11. Contents of Linux POWER media pack (64-bit) . . . . .	20	48. Defaulted manageprofiles command parameters . . . . .	216
12. Contents of Linux on System z media pack (31-bit) . . . . .	21	49. Specified manageprofiles command parameters . . . . .	216
13. Contents of Linux on System z media pack (64-bit) . . . . .	22	50. Defaulted manageprofiles command parameters . . . . .	217
14. Contents of Solaris x86 media pack (32-bit) . . . . .	23	51. Specified manageprofiles command parameters . . . . .	218
15. Contents of Solaris SPARC and x86 media pack (64-bit) . . . . .	25	52. Defaulted manageprofiles command parameters . . . . .	219
16. Contents of Windows media pack (32-bit) . . . . .	26	53. Additional manageprofiles command parameters for Oracle. . . . .	219
17. Contents of Windows media pack (64-bit) . . . . .	28	54. Specified manageprofiles command parameters . . . . .	221
18. Applicable database types and their directory names . . . . .	57	55. Defaulted manageprofiles command parameters . . . . .	222
19. DB2 for i5/OS scripts for WebSphere Process Server . . . . .	57	56. Additional manageprofiles command parameters for Oracle. . . . .	222
20. DB2 scripts for WebSphere Process Server . . . . .	59	57. Specified manageprofiles command parameters . . . . .	225
21. DB2 for z/OS scripts for WebSphere Process Server . . . . .	60	58. Defaulted manageprofiles command parameters . . . . .	225
22. Informix scripts for WebSphere Process Server . . . . .	61	59. Additional manageprofiles command parameters for Oracle. . . . .	226
23. Oracle scripts for WebSphere Process Server . . . . .	63	60. Specified manageprofiles command parameters . . . . .	226
24. Default schemas . . . . .	64	61. Defaulted manageprofiles command parameters . . . . .	227
25. Microsoft SQL Server scripts for WebSphere Process Server. . . . .	64	62. Additional manageprofiles command parameters for Oracle. . . . .	227
26. Next step based on existing installations of WebSphere products . . . . .	82	63. Specified manageprofiles command parameters . . . . .	228
27. Clusters offered per deployment environment pattern on existing deployment manager . . . . .	109	64. Defaulted manageprofiles command parameters . . . . .	228
28. Available options on First steps consoles . . . . .	137	65. Specified manageprofiles command parameters . . . . .	229
29. Commands called by First steps console options . . . . .	140		
30. Site element attributes . . . . .	153		
31. Specified manageprofiles command parameters . . . . .	205		
32. Defaulted manageprofiles command parameters . . . . .	206		
33. Specified manageprofiles command parameters . . . . .	207		
34. Defaulted manageprofiles command parameters . . . . .	207		
35. Specified manageprofiles command parameters . . . . .	208		
36. Defaulted manageprofiles command parameters . . . . .	209		
37. Specified manageprofiles command parameters . . . . .	209		

66. Defaulted manageprofiles command parameters . . . . .	230	93. Available manageprofiles parameters for configuration of Common database using Oracle 9i, Oracle 10g, or Oracle 11g . . . . .	273
67. Specified manageprofiles command parameters . . . . .	238	94. Available manageprofiles parameters for configuration of Common database using Informix Dynamic Server . . . . .	274
68. Defaulted manageprofiles command parameters . . . . .	239	95. Available manageprofiles parameters for configuration of Common database using Microsoft SQL Server. . . . .	275
69. Specified manageprofiles command parameters . . . . .	239	96. Available manageprofiles parameters for configuration of Common Event Infrastructure database using Derby Embedded . . . . .	276
70. Defaulted manageprofiles command parameters . . . . .	240	97. Available manageprofiles parameters for configuration of Common Event Infrastructure database using Derby Network Server . . . . .	276
71. Specified manageprofiles command parameters . . . . .	241	98. Available manageprofiles parameters for configuration of Common Event Infrastructure database using DB2 Universal . . . . .	277
72. Defaulted manageprofiles command parameters . . . . .	241	99. Available manageprofiles parameters for configuration of Common Event Infrastructure database using a database supplied with an i5/OS operating system . . . . .	277
73. Specified manageprofiles command parameters . . . . .	241	100. Available manageprofiles parameters for configuration of Common Event Infrastructure database using DB2 for z/OS v8 or DB2 for z/OS v9 . . . . .	278
74. Defaulted manageprofiles command parameters . . . . .	242	101. Available manageprofiles parameters for configuration of Common Event Infrastructure database using Oracle 9i, Oracle 10g, or Oracle 11g . . . . .	278
75. Specified manageprofiles command parameters . . . . .	242	102. Available manageprofiles parameters for configuration of Common Event Infrastructure database using Informix Dynamic Server. . . . .	279
76. Specified manageprofiles command parameters . . . . .	243	103. Available manageprofiles parameters for configuration of Common Event Infrastructure database using Microsoft SQL Server. . . . .	279
77. Specified manageprofiles command parameters . . . . .	244	104. Required Common database configuration fields for Derby Network Server . . . . .	302
78. Defaulted manageprofiles command parameters . . . . .	245	105. Required Common database configuration fields for DB2 Universal Database. . . . .	303
79. Additional manageprofiles command parameters for Oracle. . . . .	245	106. Required Common database configuration fields for DB2 for z/OS V8 and V9 . . . . .	303
80. Specified manageprofiles command parameters . . . . .	247	107. Required Common database configuration fields for DB2 UDB for iSeries (Toolbox) or DB2 for i5/OS (Toolbox) . . . . .	304
81. Defaulted manageprofiles command parameters . . . . .	248	108. Required Common database configuration fields for DB2 UDB for iSeries (Native) or DB2 for i5/OS (Native) . . . . .	305
82. Additional manageprofiles command parameters for Oracle. . . . .	248	109. Required Common database configuration fields for DB2 Universal Runtime Client . . . . .	305
83. Specified manageprofiles command parameters . . . . .	250	110. Required Common database configuration fields for Informix Dynamic Server . . . . .	306
84. Defaulted manageprofiles command parameters . . . . .	250	111. Required Common database configuration fields for Microsoft SQL Server Embedded. . . . .	306
85. Specified manageprofiles command parameters . . . . .	251	112. Required Common database configuration fields for Microsoft SQL Server DataDirect and Microsoft SQL Server (Microsoft) . . . . .	307
86. Defaulted manageprofiles command parameters . . . . .	251		
87. Available manageprofiles parameters for configuration of Common database using Derby Embedded . . . . .	270		
88. Available manageprofiles parameters for configuration of Common database using Derby Network Server . . . . .	270		
89. Available manageprofiles parameters for configuration of Common database using DB2 Universal . . . . .	271		
90. Available manageprofiles parameters for configuration of Common database using DB2 Universal Runtime Client . . . . .	271		
91. Available manageprofiles parameters for configuration of Common database using a database supplied with an i5/OS operating system . . . . .	272		
92. Available manageprofiles parameters for configuration of Common database using DB2 for z/OS v8 or DB2 for z/OS v9 . . . . .	272		

113. Required Common database configuration fields for Oracle 9i . . . . .	308	138. Deployment environment component relationships . . . . .	376
114. Required Common database configuration fields for Oracle 10g or 11g . . . . .	308	139. States of a topology instance in order of least to most available . . . . .	396
115. Required Common database configuration fields for Derby Network Server . . . . .	322	140. Event database limitations . . . . .	466
116. Required Common database configuration fields for DB2 Universal Database. . . . .	323	141. Information required when uninstalling a maintenance package . . . . .	507
117. Required Common database configuration fields for DB2 for z/OS V8 and V9 . . . . .	323	142. install_root default directory . . . . .	540
118. Required Common database configuration fields for DB2 UDB for iSeries (Toolbox) or DB2 for i5/OS (Toolbox) . . . . .	324	143. profile_root default directory . . . . .	541
119. Required Common database configuration fields for DB2 UDB for iSeries (Native) or DB2 for i5/OS (Native) . . . . .	325	144. updi_root default directory . . . . .	541
120. Required Common database configuration fields for DB2 Universal Runtime Client . . . . .	325	145. cip_proc_server_root default directory . . . . .	541
121. Required Common database configuration fields for Informix Dynamic Server . . . . .	326	146. i5/OS default directories on a clean server . . . . .	542
122. Required Common database configuration fields for Microsoft SQL Server Embedded . . . . .	326	147. install_root default directory when an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment exists . . . . .	542
123. Required Common database configuration fields for Microsoft SQL Server DataDirect and Microsoft SQL Server (Microsoft) . . . . .	327	148. i5/OS default directories when an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment exists . . . . .	543
124. Required Common database configuration fields for Oracle 9i . . . . .	328	149. install_root default directory when an existing installation of WebSphere Process Server exists . . . . .	543
125. Required Common database configuration fields for Oracle 10g or 11g . . . . .	329	150. i5/OS default directories when a WebSphere Process Server installation exists . . . . .	544
126. Required Common database configuration fields for Derby Network Server . . . . .	347	151. install_root default directory when you install WebSphere Process Server over an existing installation of WebSphere Enterprise Service Bus . . . . .	544
127. Required Common database configuration fields for DB2 Universal Database. . . . .	347	152. i5/OS default directories when a WebSphere Enterprise Service Bus installation exists . . . . .	545
128. Required Common database configuration fields for DB2 for z/OS V8 and V9 . . . . .	348	153. Scripts commonly used for WebSphere Process Server for i5/OS . . . . .	545
129. Required Common database configuration fields for DB2 UDB for iSeries (Toolbox) or DB2 for i5/OS (Toolbox) . . . . .	348	154. i5/OS platform specific scripts . . . . .	546
130. Required Common database configuration fields for DB2 UDB for iSeries (Native) or DB2 for i5/OS (Native) . . . . .	349	155. Installation commands for software on WebSphere Application Server Network Deployment Supplements V6.1 CD and WebSphere Application Server Toolkit V6.1.1 Disk 1 CD . . . . .	547
131. Required Common database configuration fields for DB2 Universal Runtime Client . . . . .	350	156. Installation commands for software on WebSphere Process Server DVD . . . . .	547
132. Required Common database configuration fields for Informix Dynamic Server . . . . .	350	157. WebSphere Process Server install command option values table. . . . .	549
133. Required Common database configuration fields for Microsoft SQL Server Embedded . . . . .	351	158. Naming guidelines for nodes, hosts, and cells . . . . .	554
134. Required Common database configuration fields for Microsoft SQL Server DataDirect and Microsoft SQL Server (Microsoft) . . . . .	351	159. Identifier in the vpd.properties file for WebSphere products . . . . .	563
135. Required Common database configuration fields for Oracle 9i . . . . .	352	160. Keys used to register WebSphere Process Server and WebSphere Enterprise Service Bus. . . . .	564
136. Required Common database configuration fields for Oracle 10g or 11g . . . . .	353	161. Product version and history information links. . . . .	566
137. Clusters offered per deployment environment pattern on existing deployment manager . . . . .	357	162. Supported trade-up pathways. . . . .	621
		163. Exit code actions . . . . .	640
		164. Default installation directory path values . . . . .	654
		165. IIP installation options . . . . .	660
		166. Installation and profile logs for WebSphere Process Server components . . . . .	670



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# Chapter 1. Shortcuts to common installation and configuration tasks

Follow these shortcuts to get started quickly with popular installation and configuration tasks.

## Prerequisite information and tasks

- “Prerequisites for installing WebSphere Process Server” on page 31
- “Creating the Common database manually before product installation” on page 56
- Chapter 5, “Installing the documentation,” on page 149

## Installing the software

- “Installing WebSphere Process Server interactively” on page 79
- “Installing silently on Linux, UNIX, and Windows” on page 123
- **i5/OS** “Installing silently on i5/OS from a System i server” on page 127
- **i5/OS** “Installing silently on i5/OS from a Windows workstation command line” on page 129

## Working with profiles

- “Creating profiles using the Profile Management Tool” on page 198
- “Creating profiles using the manageprofiles command” on page 203
- “Augmenting profiles using the Profile Management Tool” on page 231
- “Augmenting profiles using the manageprofiles command” on page 235
- “Deleting profiles using the manageprofiles command” on page 370
- “Configuring remote database support on i5/OS” on page 361
- “Configuring a DB2 message logger database on a remote z/OS system” on page 368

## Configuring the installation

- “Setting up deployment environments” on page 371
- “Configuring SCA support for a server or cluster” on page 397
- “Configuring REST service endpoints” on page 400
- `../../../../com.ibm.websphere.bpc.620.doc/doc/bpc/t2configovr.dita`
- “Configuring Business Space” on page 401
- “Configuring business rules and selectors” on page 437
- “Configuring the relationship service” on page 446
- “Configuring extended messaging resources” on page 447
- Setting up the messaging server environment
- Configuring Common Event Infrastructure
- “Configuring WebSphere Business Integration Adapters” on page 489

## Verifying and troubleshooting the installation and environment

- Chapter 6, “Verifying the product installation,” on page 159
- Chapter 9, “Verifying your deployment environment,” on page 493

- Chapter 15, “Troubleshooting installation and configuration,” on page 665

#### **Using the IBM® WebSphere® Installation Factory**

- Chapter 14, “Using the IBM WebSphere Installation Factory,” on page 569

#### **Updating the installation**

- Chapter 10, “Installing fix packs and refresh packs with the Update Installer,” on page 499
- Chapter 11, “Installing fix packs and refresh packs with customized installation packages,” on page 511

#### **Uninstalling the software**

- Chapter 12, “Uninstalling the software,” on page 513



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## Chapter 2. WebSphere Process Server: Product package contents

Learn how to acquire WebSphere Process Server and what software is supplied in its media packs and downloadable electronic installation images.

### How to acquire WebSphere Process Server

You can obtain the product code in any of the following ways:

- From the product media packs which include CD-ROM and DVD media.
- From the Passport Advantage® site, where licensed customers can download installation images. For more information about the images available for download, see the Passport Advantage download document.

To buy the software, contact your IBM representative or IBM reseller, or visit the WebSphere Process Server home page at <http://www.ibm.com/software/integration/wps> and select the *How to buy* link in the left column.

### Software supplied with WebSphere Process Server

Each media pack includes software that you need to install WebSphere Process Server, to set up your WebSphere Process Server environment, and to assemble and deploy applications. Also included in each media pack are optional supplemental software programs that provide value and tool support for your production and development environments.

Table 2 lists the software that is provided with the WebSphere Process Server product. Not every software program is supplied on every platform.

*Table 2. Software supplied with WebSphere Process Server*

Software	Description
WebSphere Process Server	Based on service-oriented architecture (SOA) and as a single, simplified programming model, WebSphere Process Server is the next-generation business process server that delivers and supports all styles of integration based on open standards to automate business processes that span people, workflows, applications, systems, platforms, and architectures. Features new in this release of WebSphere Process Server can be found in the topic <i>What is new in this release</i> in the <i>WebSphere Process Server for Multiplatforms, version 6.2.0 Product Overview</i> PDF. Or you can view the topic in the <i>WebSphere Process Server for Multiplatforms, version 6.2 online information center</i> at <a href="http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r2mx/">http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r2mx/</a> .

Table 2. Software supplied with WebSphere Process Server (continued)

Software	Description
WebSphere Application Server Network Deployment	The industry's premier Java-based application platform, integrating enterprise data and transactions for the dynamic e-business world. The Network Deployment version, upon which WebSphere Process Server is built, delivers a rich application deployment environment with application services that provide enhanced capabilities for transaction management, as well as the security, performance, availability, connectivity, and scalability expected from the WebSphere family of products. This configuration also enables clustering, edge-of-network services, Web services enhancements, and high availability for distributed configurations. For more information about WebSphere Application Server Network Deployment, see the WebSphere Application Server Network Deployment information center.
IBM HTTP Server	The foundation of any e-business application is the Web server. IBM HTTP Server features include: <ul style="list-style-type: none"> <li>• Easy installation</li> <li>• Support for SSL secure connections</li> <li>• Fast Response Cache Accelerator</li> <li>• IBM support as part of the WebSphere bundle</li> <li>• Hardware crypto support</li> <li>• Administration Server that helps to administer and configure IHS servers</li> <li>• Help information that uses the easy-to-navigate design that is common to all WebSphere products</li> </ul>
Web server plug-ins	WebSphere Process Server supplies a unique binary plug-in module and an associated plug-in configuration file for each supported Web server. The Plug-ins Installation wizard installs required files and configures the Web server and the underlying application server of WebSphere Process Server to allow communication between the servers.
WebSphere Application Server Application Clients	An application client module is a Java™ Archive (JAR) file that contains a client for accessing a Java application. Running J2EE and Thin application clients that communicate with the underlying WebSphere Application Server product requires that elements of the Application Server are installed on the unit on which the client runs. However, if the system does not have the Application Server installed, you can install Application Clients, which provide a stand-alone client runtime environment for your client applications.
IBM User Interface Help System Built on Eclipse	Downloadable versions of the WebSphere Process Server documentation are packaged as Eclipse document plug-ins and must be viewed using the IBM User Interface Help System. The help system (or viewer) and document plug-in format are based on an open source approach developed by the Eclipse Project.

Table 2. Software supplied with WebSphere Process Server (continued)

Software	Description
IBM Message Service Clients	<p>Software that provides messaging and Web services capabilities in non-Java environments. Extend interaction between applications and WebSphere Process Server by using the provided clients:</p> <ul style="list-style-type: none"> <li>• IBM Message Service Client for C/C++ extends the JMS model for messaging to C and C++ applications</li> <li>• IBM Message Service Client for .NET enables .NET applications to participate in JMS-based information flows</li> </ul>
WebSphere Application Server Toolkit	<p>Provides basic assembly and deployment tooling for publishing to an application server, such as WebSphere Application Server Network Deployment. You can also use the tool to perform basic unit testing, debugging, and profiling functions.</p>
WebSphere Application Server Edge Components	<p>Address the needs of highly available, high-volume environments with the Edge components. The Edge components include sophisticated load balancing, caching, and centralized security capabilities. See the WebSphere Application Server Edge Components Web page for more information.</p>
DB2® Restricted Enterprise Edition	<p>DB2 Restricted Enterprise Edition includes portions of DB2 Enterprise Server Edition (DB2 Enterprise 9). DB2 Enterprise 9 is designed to meet the data server needs of mid- to large-size businesses. It can be deployed on Linux®, UNIX®, or Windows® servers of any size, from one processor to hundreds of processors. DB2 Enterprise 9 is an ideal foundation for building on demand enterprise-wide solutions. A broad array of autonomic or self-managing capabilities can free more administrator time to focus on driving business value. The ease of use in DB2 and the self-managing characteristics might even eliminate the need for dedicated administrators in smaller implementations.</p> <p>DB2 provides the following clients:</p> <ul style="list-style-type: none"> <li>• DB2 Runtime Client. This client is best suited for enabling applications to access DB2 servers.</li> <li>• DB2 Client. This client includes all the functionality found in the DB2 Runtime Client plus functionality for client-server configuration, database administration and application development.</li> </ul>
IBM Tivoli® Directory Server	<p>The IBM Tivoli Directory Server product is a powerful Lightweight Directory Access Protocol (LDAP) infrastructure. Tivoli Directory Server provides a foundation for deploying comprehensive identity management applications and advanced software architectures. See the IBM Tivoli Directory Server for more information.</p>

Table 2. Software supplied with WebSphere Process Server (continued)

Software	Description
IBM Tivoli Access Manager Servers	IBM Tivoli Access Manager Servers integrates with e-business applications right out of the box, to deliver a secure, unified, and personalized e-business experience. By providing authentication and authorization APIs and integration, Tivoli Access Manager Servers helps you secure access to business-critical applications and data that might be spread across the extended enterprise. See IBM Tivoli Access Manager for e-business for more information.
WebSphere Partner Gateway Advanced Edition	WebSphere Partner Gateway offers a consolidated gateway solution to support EDI and Internet standards that can extend enterprise processes to external trading partners. It provides consolidated partner services for process integration with the WebSphere software platform. Business-to-business (B2B) gateway consolidation centralizes a company's B2B communications with trading partner communities, providing a central point of control for interactions among partners, and providing a security-rich environment at the edge of the enterprise. For more information on WebSphere Partner Gateway Advanced Edition, see WebSphere Partner Gateway Advanced Edition.
IBM WebSphere Installation Factory	The IBM WebSphere Installation Factory creates turn-key installation packages for installing WebSphere products in a reliable and repeatable way, tailored to your specific needs. The installation packages are customized WebSphere Process Server installation images that can include one or more maintenance packages, scripts and other files that help customize the resulting installation.
Migration tools	The Migration tools allow you to perform migration from earlier versions of WebSphere Process Server or WebSphere Enterprise Service Bus. There is a Migration tool for WebSphere Process Server and for WebSphere Application Server. The Migration tools step you through the migration process.
IBM Update Installer for WebSphere software	IBM Update Installer for WebSphere software is the tool used to install updates (interim fixes, fix packs and refresh packs) to WebSphere software, including WebSphere Enterprise Bus V6.2 releases, WebSphere Process Server V6.2 releases, WebSphere Application Server V6.1 releases, IBM HTTP Server, Web Server plug-ins, and WebSphere Application Clients.
IBM Rational® Agent Controller	IBM Rational Agent Controller is a daemon that allows client applications to launch and manage local or remote applications and provides information about running applications to other applications.

Table 2. Software supplied with WebSphere Process Server (continued)

Software	Description
IBM Support Assistant	<p>The IBM Support Assistant (ISA) is a tool that helps you use various IBM Support resources. The IBM Support Assistant offers four components to help you with software questions:</p> <ul style="list-style-type: none"> <li>• a Search component, which helps you access pertinent Support information in multiple locations.</li> <li>• a Support Links component, which provides a convenient location to access various IBM Web resources such as IBM product sites, IBM support sites and links to IBM news groups.</li> <li>• an Education component, which provides guided access to IBM product education Web sites, including IBM Education Assistant modules.</li> <li>• a Service component, which helps you submit an enhanced problem report that includes key system data to IBM.</li> </ul> <p>Using the IBM Support Assistant with WebSphere Process Server, requires installing IBM Support Assistant, version 3.0, and then installing plug-ins for WebSphere Process Server.</p>

## Media packs supplied with WebSphere Process Server

Eight media packs are available for WebSphere Process Server. Each media pack contains the product media applicable to a specific operating environment.

**Note:** Each media pack contains a WebSphere Process Server 6.2.0 Quick Start CD. This CD-ROM contains the WebSphere Process Server Quick Start Guide in all available translations.

See the following sections for detailed contents per platform:

- “AIX media pack”
- “HP-UX media pack” on page 10
- “i5/OS media pack” on page 12
- “Linux x86 media pack” on page 15
- “Linux POWER media pack” on page 18
- “Linux on System z media pack” on page 21
- “Solaris media pack” on page 23
- “Windows media pack” on page 26

### AIX® media pack

The following table shows the 32-bit media included with WebSphere Process Server for AIX.

Table 3. Contents of AIX media pack (32-bit)

Media label	How supplied
Assembly 1: Images recommended for installation	

Table 3. Contents of AIX media pack (32-bit) (continued)

Media label	How supplied
WebSphere Process Server 6.2 AIX 32-bit	<p>One DVD contains the following installable components:</p> <ul style="list-style-type: none"> <li>• WebSphere Process Server in the WBI directory</li> <li>• IBM WebSphere Installation Factory in the IF directory</li> <li>• IBM Update Installer for WebSphere Software in the UpdateInstaller directory</li> <li>• IBM User Interface Help System in the IEHS directory</li> <li>• Messaging Client (Message Service Client for C/C++) in the MsgClients directory</li> <li>• Migration tool in the Migration directory</li> <li>• WebSphere Application Server Network Deployment (version 6.1.0.21) in the WAS directory.</li> </ul> <p>Use the Launchpad application in the root directory to install and view information about any of the installable components on <i>WebSphere Process Server V6.2 DVD</i>, <i>WebSphere Application Server Network Deployment Supplements V6.1 CD</i>, and <i>WebSphere Application Server Toolkit V6.1.1 Disk 1 CD</i>, except the IBM WebSphere Installation Factory, which must be installed by following the procedure in “Installing the IBM WebSphere Installation Factory” on page 570.</p>
WebSphere Application Server Network Deployment 6.1 Supplements AIX 32-bit	<p>One CD-ROM contains the following installable components:</p> <ul style="list-style-type: none"> <li>• Application Client for WebSphere Application Server</li> <li>• IBM HTTP Server</li> <li>• IBM Support Assistant</li> <li>• Web Server Plug-ins</li> <li>• Migration tool</li> </ul>
WebSphere Application Server Toolkit 6.1.1 for 32-bit Windows	Two CD-ROMs.
WebSphere Application Server Toolkit 6.1.1 for 32-bit Linux on x86	Two CD-ROMs.
<b>Assembly 2: Optional installation images</b>	
WebSphere Application Server Network Deployment 6.1 for 32-bit AIX	<p>One CD-ROM.</p> <p>This CD-ROM is only for use with IBM WebSphere Installation Factory for creating WebSphere Application Server Network Deployment Custom Install Packages (CIPs).</p>
WebSphere Application Server Network Deployment Rational Agent Controller 6.1.5	One CD-ROM.
Edge Components 6.1 for AIX	One CD-ROM.
Edge Components for IPv6 6.1 AIX	One CD-ROM.
Tivoli Access Manager 6.0 AIX	One CD-ROM.
IBM DB2 Restricted Enterprise Server Edition 9.5 - Authorized User Option - Activation CD	One CD-ROM.

Table 3. Contents of AIX media pack (32-bit) (continued)

Media label	How supplied
IBM DB2 Enterprise Server Edition 9.5 for AIX	One DVD.
IBM Data Server Runtime Client 9.5 for AIX	One DVD.
IBM Data Server Drivers 9.5 for AIX, HP-UX, Solaris, Linux, and Windows	One DVD.
IBM Data Server Client 9.5 for AIX	One DVD.
WebSphere Partner Gateway Advanced Edition 6.2 for AIX	One CD-ROM.
Data Interchange Services 6.0 for Advanced Edition	One CD-ROM.

The following table shows the 64-bit media included with WebSphere Process Server for AIX.

Table 4. Contents of AIX media pack (64-bit)

Media label	How supplied
<b>Assembly 1: Images recommended for installation</b>	
WebSphere Process Server 6.2 AIX 64-bit	<p>One DVD contains the following installable components:</p> <ul style="list-style-type: none"> <li>• WebSphere Process Server in the WBI directory</li> <li>• IBM WebSphere Installation Factory in the IF directory</li> <li>• IBM Update Installer for WebSphere Software in the UpdateInstaller directory</li> <li>• IBM User Interface Help System in the IEHS directory</li> <li>• Messaging Client (Message Service Client for C/C++) in the MsgClients directory</li> <li>• Migration tool in the Migration directory</li> <li>• WebSphere Application Server Network Deployment (version 6.1.0.21) in the WAS directory.</li> </ul> <p>Use the Launchpad application in the root directory to install and view information about any of the installable components on <i>WebSphere Process Server V6.2 DVD</i>, <i>WebSphere Application Server Network Deployment Supplements V6.1 CD</i>, and <i>WebSphere Application Server Toolkit V6.1.1 Disk 1 CD</i>, except the IBM WebSphere Installation Factory, which must be installed by following the procedure in “Installing the IBM WebSphere Installation Factory” on page 570.</p>
WebSphere Application Server Network Deployment 6.1 Supplements AIX 64-bit	<p>One CD-ROM contains the following installable components:</p> <ul style="list-style-type: none"> <li>• IBM HTTP Server</li> <li>• IBM Support Assistant</li> <li>• Web Server Plug-ins</li> <li>• Migration tool</li> </ul>
<b>Assembly 2: Optional installation images</b>	

Table 4. Contents of AIX media pack (64-bit) (continued)

Media label	How supplied
WebSphere Application Server Network Deployment 6.1 for 64-bit AIX	One CD-ROM.  This CD-ROM is only for use with IBM WebSphere Installation Factory for creating WebSphere Application Server Network Deployment Custom Install Packages (CIPs).
Tivoli Directory Server 6.2 AIX for Linux 64-bit	One DVD.

## HP-UX media pack

The following table shows the 32-bit media included with WebSphere Process Server for HP-UX.

Table 5. Contents of HP-UX media pack (32-bit)

Media label	How supplied
<b>Assembly 1: Images recommended for installation</b>	
WebSphere Process Server 6.2 HP-UX 32-bit	One DVD contains the following installable components: <ul style="list-style-type: none"> <li>• WebSphere Process Server in the WBI directory</li> <li>• IBM WebSphere Installation Factory in the IF directory</li> <li>• IBM Update Installer for WebSphere Software in the UpdateInstaller directory</li> <li>• IBM User Interface Help System in the IEHS directory</li> <li>• Messaging Client (Message Service Client for C/C++) in the MsgClients directory</li> <li>• Migration tool in the Migration directory</li> <li>• WebSphere Application Server Network Deployment (6.1.0.21) in the WAS directory.</li> </ul> <p>Use the Launchpad application in the root directory to install and view information about any of the installable components on <i>WebSphere Process Server V6.2 DVD</i>, <i>WebSphere Application Server Network Deployment Supplements V6.1 CD</i>, and <i>WebSphere Application Server Toolkit V6.1.1 Disk 1 CD</i>, except the IBM WebSphere Installation Factory, which must be installed by following the procedure in “Installing the IBM WebSphere Installation Factory” on page 570.</p>
WebSphere Application Server Network Deployment 6.1 Supplements HP-UX 32-bit	One CD-ROM contains the following installable components: <ul style="list-style-type: none"> <li>• Application Client for WebSphere Application Server</li> <li>• IBM HTTP Server</li> <li>• IBM Support Assistant</li> <li>• Web Server Plug-ins</li> <li>• Migration tool</li> </ul>
WebSphere Application Server Toolkit 6.1.1 for 32-bit Windows	Two CD-ROMs.
WebSphere Application Server Toolkit 6.1.1 for 32-bit Linux on x86	Two CD-ROMs.



Table 5. Contents of HP-UX media pack (32-bit) (continued)

Media label	How supplied
<b>Assembly 2: Optional installation images</b>	
WebSphere Application Server Network Deployment 6.1 for 32-bit HP-UX	One CD-ROM.  This CD-ROM is only for use with IBM WebSphere Installation Factory for creating WebSphere Application Server Network Deployment Custom Install Packages (CIPs).
Rational Agent Controller 6.1.5	One CD-ROM.
Edge Components 6.1 HP-UX	One CD-ROM.
Edge Components 6.1 HP-UX for IPv6	One CD-ROM.
Tivoli Access Manager 6.0 HP-UX	One CD-ROM.
IBM DB2 Restricted Enterprise Server Edition 9.5 - Authorized User Option - Activation CD	One CD-ROM.
IBM DB2 Enterprise Server Edition 9.5 for HP-UX on HP Integrity Itanium-based systems	One DVD.
IBM Data Server Runtime Client 9.5 for HP-UX on HP Integrity Itanium-based systems	One DVD.
IBM Data Server Drivers 9.5 for AIX, HP-UX, Solaris, Linux, and Windows	One DVD.
IBM Data Server Client 9.5 for HP-UX on HP Integrity Itanium-based systems	One DVD.

The following table shows the 64-bit media included with WebSphere Process Server for HP-UX.

Table 6. Contents of HP-UX media pack (64-bit)

Media label	How supplied
<b>Assembly 1: Images recommended for installation</b>	

Table 6. Contents of HP-UX media pack (64-bit) (continued)

Media label	How supplied
WebSphere Process Server 6.2 HP-UX IA64	<p>One DVD contains the following installable components:</p> <ul style="list-style-type: none"> <li>• WebSphere Process Server in the WBI directory</li> <li>• IBM WebSphere Installation Factory in the IF directory</li> <li>• IBM Update Installer for WebSphere Software in the UpdateInstaller directory</li> <li>• IBM User Interface Help System in the IEHS directory</li> <li>• Messaging Client (Message Service Client for C/C++) in the MsgClients directory</li> <li>• Migration tool in the Migration directory</li> <li>• WebSphere Application Server Network Deployment (6.1.0.21) in the WAS directory.</li> </ul> <p>Use the Launchpad application in the root directory to install and view information about any of the installable components on <i>WebSphere Process Server V6.2 DVD</i>, <i>WebSphere Application Server Network Deployment Supplements V6.1 CD</i>, and <i>WebSphere Application Server Toolkit V6.1.1 Disk 1 CD</i>, except the IBM WebSphere Installation Factory, which must be installed by following the procedure in “Installing the IBM WebSphere Installation Factory” on page 570.</p>
WebSphere Application Server Network Deployment 6.1 Supplements HP-UX 64-bit	<p>One CD-ROM contains the following installable components:</p> <ul style="list-style-type: none"> <li>• IBM HTTP Server</li> <li>• IBM Support Assistant</li> <li>• Web Server Plug-ins</li> <li>• Migration tool</li> </ul>
<b>Assembly 2: Optional installation images</b>	
WebSphere Application Server Network Deployment 6.1 for 64-bit HP-UX	<p>One CD-ROM.</p> <p>This CD-ROM is only for use with IBM WebSphere Installation Factory for creating WebSphere Application Server Network Deployment Custom Install Packages (CIPs).</p>
Edge Components V6.1 HP-UX IA64 64-bit	One CD-ROM.
Edge Components V6.1 HP-UX IA64 64-bit for IPV6	One CD-ROM.
Tivoli Directory Server 6.2 HP-UX IA64	One DVD.
WebSphere Partner Gateway Advanced Edition 6.2 for HP-UX IA64	One CD-ROM.
Data Interchange Services 6.0 for Advanced Edition	One CD-ROM.

## i5/OS® media pack

The following table shows the media included with WebSphere Process Server for i5/OS.

Table 7. Contents of i5/OS media pack

Media label	How supplied
<b>Assembly 1: Images recommended for installation</b>	
WebSphere Process Server 6.2 i5/OS DVD	<p>One DVD contains the following installable components:</p> <ul style="list-style-type: none"> <li>• WebSphere Process Server in the WBI directory</li> <li>• IBM WebSphere Installation Factory in the IF directory</li> <li>• IBM Update Installer for WebSphere Software in the UpdateInstaller directory</li> <li>• IBM User Interface Help System in the IEHS directory</li> <li>• WebSphere Application Server Network Deployment (version 6.1.0.21) in the WAS directory.</li> </ul> <p>Use the Launchpad application in the root directory to install and view information about any of the installable components on <i>WebSphere Process Server V6.2 DVD</i>, <i>WebSphere Application Server Network Deployment Supplements V6.1 CD</i>, and <i>WebSphere Application Server Toolkit V6.1.1 Disk 1 CD</i>, except the IBM WebSphere Installation Factory, which must be installed by following the procedure in “Installing the IBM WebSphere Installation Factory” on page 570.</p>
WebSphere Application Server Network Deployment 6.1 Supplements for i5/OS	<p>One CD-ROM contains the following installable components:</p> <ul style="list-style-type: none"> <li>• Application Client for WebSphere Application Server</li> <li>• IBM Support Assistant</li> <li>• Web Server Plug-ins</li> <li>• Migration tool</li> </ul>
WebSphere Application Server Toolkit 6.1.1 for 32-bit Windows	Two CD-ROMs.
WebSphere Application Server Toolkit 6.1.1 for 32-bit Linux on x86	Two CD-ROMs.
<b>Assembly 2: Optional installation images</b>	
WebSphere Application Server Network Deployment 6.1 for i5/OS	<p>One CD-ROM.</p> <p>This CD-ROM is only for use with IBM WebSphere Installation Factory for creating WebSphere Application Server Network Deployment Custom Install Packages (CIPs).</p>
Rational Agent Controller 6.1.5	One CD-ROM.
WebSphere Application Server Network Deployment 6.1 Windows Supplements - 32-bit	One CD-ROM.
WebSphere Application Server Network Deployment 6.1 Supplements AIX - 32-bit	One CD-ROM.
WebSphere Application Server Network Deployment 6.1 Supplements Solaris - 32-bit	One CD-ROM.
WebSphere Application Server Network Deployment 6.1 Supplements HP-UX - 32-bit	One CD-ROM.

Table 7. Contents of i5/OS media pack (continued)

Media label	How supplied
WebSphere Application Server Network Deployment 6.1 Supplements Linux x86 32-bit	One CD-ROM.
WebSphere Application Server 6.1 WorldTypeFonts Linux Supplements - Linux x86 32-bit	One CD-ROM.
WebSphere Application Server Network Deployment 6.1 Linux PowerPC® Supplements	One CD-ROM.
WebSphere Application Server Network Deployment 6.1 Linux on System z® Supplements	One CD-ROM.
Edge Components V6.1 Windows	One CD-ROM.
Edge Components V6.1 Windows for IPV6	One CD-ROM.
Edge Components V6.1 AIX	One CD-ROM.
Edge Components V6.1 AIX for IPV6	One CD-ROM.
Edge Components V6.1 Solaris	One CD-ROM.
Edge Components V6.1 Solaris for IPV6	One CD-ROM.
Edge Components V6.1 HP-UX	One CD-ROM.
Edge Components V6.1 HP-UX for IPV6	One CD-ROM.
Edge Components V6.1 Linux x86	One CD-ROM.
Edge Components V6.1 Linux x86 for IPV6	One CD-ROM.
Edge Components V6.1 Linux PPC 32-bit	One CD-ROM.
Edge Components V6.1 Linux PPC 32-bit for IPV6	One CD-ROM.
Edge Components V6.1 Linux on System z	One CD-ROM.
<b>Assembly 3: Optional installation images</b>	
WebSphere Application Server Network Deployment 6.1 Windows 2k3 AMD 64-bit Supplements	One CD-ROM.
WebSphere Application Server Network Deployment 6.1 Supplements AIX 64-bit	One CD-ROM.
WebSphere Application Server Network Deployment 6.1 Supplements Solaris Opteron 64-bit	One CD-ROM.

Table 7. Contents of i5/OS media pack (continued)

Media label	How supplied
WebSphere Application Server Network Deployment 6.1 Supplements Solaris SPARC 64-bit	One CD-ROM.
WebSphere Application Server Network Deployment 6.1 Supplements HP-UX 64-bit	One CD-ROM.
WebSphere Application Server Network Deployment 6.1 Linux 64-bit Supplements	One CD-ROM.
WebSphere Application Server Network Deployment 6.1 Linux PowerPC 64-bit Supplements	One CD-ROM.
WebSphere Application Server Network Deployment 6.1 Linux on System z 64-bit Supplements	One CD-ROM.
Edge Components 6.1 Windows AMD Opteron 64-bit	One CD-ROM.
Edge Components 6.1 Windows AMD Opteron 64-bit IPV6	One CD-ROM.
Edge Components 6.1 Solaris x86-64	One CD-ROM.
Edge Components 6.1 HP-UX IA64 64-bit	One CD-ROM.
Edge Components 6.1 HP-UX IA64 64-bit for IPV6	One CD-ROM.
Edge Components 6.1 Linux x86 64-bit	One CD-ROM.
Edge Components 6.1 Linux x86 64-bit for IPV6	One CD-ROM.
Edge Components 6.1 Linux PPC 64-bit	One CD-ROM.
Edge Components 6.1 Linux PPC 64-bit for IPV6	One CD-ROM.
Edge Components 6.1 Linux on System z 64-bit for IPV6	One CD-ROM.

## Linux x86 media pack

The following table shows the 32-bit media included with WebSphere Process Server for Linux x86.

Table 8. Contents of Linux x86 media pack (32-bit)

Media label	How supplied
<b>Assembly 1: Images recommended for installation</b>	

Table 8. Contents of Linux x86 media pack (32-bit) (continued)

Media label	How supplied
WebSphere Process Server 6.2 Linux x86 32-bit	<p>One DVD contains the following installable components:</p> <ul style="list-style-type: none"> <li>• WebSphere Process Server in the WBI directory</li> <li>• IBM WebSphere Installation Factory in the IF directory</li> <li>• IBM Update Installer for WebSphere Software in the UpdateInstaller directory</li> <li>• IBM User Interface Help System in the IEHS directory</li> <li>• Messaging Client (Message Service Client for C/C++) in the MsgClients directory</li> <li>• Migration tool in the Migration directory</li> <li>• WebSphere Application Server Network Deployment (version 6.1.0.21) in the WAS directory.</li> </ul> <p>Use the Launchpad application in the root directory to install and view information about any of the installable components on <i>WebSphere Process Server V6.2 DVD</i>, <i>WebSphere Application Server Network Deployment Supplements V6.1 CD</i>, and <i>WebSphere Application Server Toolkit V6.1.1 Disk 1 CD</i>, except the IBM WebSphere Installation Factory, which must be installed by following the procedure in “Installing the IBM WebSphere Installation Factory” on page 570.</p>
WebSphere Application Server Network Deployment Supplements 6.1 Linux x86 32-bit Supplements	<p>One CD-ROM contains the following installable components:</p> <ul style="list-style-type: none"> <li>• Application Client for WebSphere Application Server</li> <li>• IBM HTTP Server</li> <li>• IBM Support Assistant</li> <li>• Web Server Plug-ins</li> <li>• Migration tool</li> </ul>
WebSphere Application Server 6.1 WorldTypeFonts Linux Supplements	One CD-ROM.
WebSphere Application Server Toolkit 6.1.1 for 32-bit Windows	Two CD-ROMs.
WebSphere Application Server Toolkit 6.1.1 for 32-bit Linux on x86	Two CD-ROMs.
<b>Assembly 2: Optional installation images</b>	
WebSphere Application Server Network Deployment 6.1 for Linux x86 32-bit	<p>One CD-ROM.</p> <p>This CD-ROM is only for use with IBM WebSphere Installation Factory for creating WebSphere Application Server Network Deployment Custom Install Packages (CIPs).</p>
Rational Agent Controller 6.1.5	One CD-ROM.
Edge Components 6.1 Linux x86	One CD-ROM.
Edge Components 6.1 Linux x86 for IPV6	One CD-ROM.
Tivoli Access Manager 6.0 Linux Intel®	One CD-ROM.

Table 8. Contents of Linux x86 media pack (32-bit) (continued)

Media label	How supplied
Tivoli Directory Server 6.2 Linux IA 32-bit	One DVD.
IBM Data Server Runtime Client 9.5 for Linux on 32-bit AMD and Intel systems (x86)	One DVD.
IBM Data Server Drivers 9.5 for AIX, HP-UX, Solaris, Linux, and Windows	One DVD.
IBM Data Server Client 9.5 for Linux on 32-bit AMD and Intel systems (x86)	One DVD.
WebSphere Partner Gateway Advanced Edition 6.2 for Linux Intel	One CD-ROM.
Data Interchange Services 6.0 for Advanced Edition	One CD-ROM.

The following table shows the 64-bit media included with WebSphere Process Server for Linux x86.

Table 9. Contents of Linux x86 media pack (64-bit)

Media label	How supplied
<b>Assembly 1: Images recommended for installation</b>	
WebSphere Process Server 6.2 Linux x86 64-bit	<p>One DVD contains the following installable components:</p> <ul style="list-style-type: none"> <li>• WebSphere Process Server in the WBI directory</li> <li>• IBM WebSphere Installation Factory in the IF directory</li> <li>• IBM Update Installer for WebSphere Software in the UpdateInstaller directory</li> <li>• IBM User Interface Help System in the IEHS directory</li> <li>• Messaging Client (Message Service Client for C/C++) in the MsgClients directory</li> <li>• Migration tool in the Migration directory</li> <li>• WebSphere Application Server Network Deployment (version 6.1.0.21) in the WAS directory.</li> </ul> <p>Use the Launchpad application in the root directory to install and view information about any of the installable components on <i>WebSphere Process Server V6.2 DVD</i>, <i>WebSphere Application Server Network Deployment Supplements V6.1 CD</i>, and <i>WebSphere Application Server Toolkit V6.1.1 Disk 1 CD</i>, except the IBM WebSphere Installation Factory, which must be installed by following the procedure in "Installing the IBM WebSphere Installation Factory" on page 570.</p>
WebSphere Application Server Network Deployment Supplements 6.1 Linux 64-bit	<p>One CD-ROM contains the following installable components:</p> <ul style="list-style-type: none"> <li>• IBM HTTP Server</li> <li>• IBM Support Assistant</li> <li>• Web Server Plug-ins</li> <li>• Migration tool</li> </ul>

Table 9. Contents of Linux x86 media pack (64-bit) (continued)

Media label	How supplied
<b>Assembly 2: Optional installation images</b>	
WebSphere Application Server Network Deployment 6.1 for Linux 64-bit	One CD-ROM.  This CD-ROM is only for use with IBM WebSphere Installation Factory for creating WebSphere Application Server Network Deployment Custom Install Packages (CIPs).
Edge Components 6.1 Linux x86 64-bit	One CD-ROM.
Edge Components 6.1 Linux x86 64-bit for IPv6	One CD-ROM.
Tivoli Directory Server 6.2 Linux x86 64-bit	One DVD.
IBM DB2 Restricted Enterprise Server Edition 9.5 - Authorized User Option - Activation CD	One CD-ROM.
IBM DB2 Enterprise Server Edition 9.5 for Linux on AMD64 and Intel EM64T systems (x64)	One DVD.
IBM Data Server Runtime Client 9.5 for Linux on AMD64 and Intel EM64T systems (x64)	One DVD.
IBM Data Server Drivers 9.5 for AIX, HP-UX, Solaris, Linux, and Windows	One DVD.
IBM Data Server Client 9.5 for Linux on AMD64 and Intel EM64T systems (x64)	One DVD.

## Linux POWER® media pack

The following table shows the 32-bit media included with WebSphere Process Server for Linux POWER.

Table 10. Contents of Linux POWER media pack (32-bit)

Media label	How supplied
<b>Assembly 1: Images recommended for installation</b>	



Table 10. Contents of Linux POWER media pack (32-bit) (continued)

Media label	How supplied
WebSphere Process Server 6.2 Linux PPC 32-bit	<p>One DVD contains the following installable components:</p> <ul style="list-style-type: none"> <li>• WebSphere Process Server in the WBI directory</li> <li>• IBM WebSphere Installation Factory in the IF directory</li> <li>• IBM Update Installer for WebSphere Software in the UpdateInstaller directory</li> <li>• IBM User Interface Help System in the IEHS directory</li> <li>• Messaging Client (Message Service Client for C/C++) in the MsgClients directory</li> <li>• Migration tool in the Migration directory</li> <li>• WebSphere Application Server Network Deployment (version 6.1.0.21) in the WAS directory.</li> </ul> <p>Use the Launchpad application in the root directory to install and view information about any of the installable components on <i>WebSphere Process Server V6.2 DVD</i>, <i>WebSphere Application Server Network Deployment Supplements V6.1 CD</i>, and <i>WebSphere Application Server Toolkit V6.1.1 Disk 1 CD</i>, except the IBM WebSphere Installation Factory, which must be installed by following the procedure in “Installing the IBM WebSphere Installation Factory” on page 570.</p>
WebSphere Application Server Network Deployment 6.1 Linux PowerPC Supplements	<p>One CD-ROM contains the following installable components:</p> <ul style="list-style-type: none"> <li>• Application Client for WebSphere Application Server</li> <li>• IBM HTTP Server</li> <li>• IBM Support Assistant</li> <li>• Web Server Plug-ins</li> <li>• Migration tool</li> </ul>
WebSphere Application Server 6.1 WorldTypeFonts Linux Supplements	One CD-ROM.
Application Server Toolkit 6.1.1 for Windows CD	Two CD-ROMs.
Application Server Toolkit 6.1.1 for Linux on x86 CD	Two CD-ROMs.
<b>Assembly 2: Optional installation images</b>	
WebSphere Application Server Network Deployment 6.1 for Linux PowerPC	<p>One CD-ROM.</p> <p>This CD-ROM is only for use with IBM WebSphere Installation Factory for creating WebSphere Application Server Network Deployment Custom Install Packages (CIPs).</p>
Rational Agent Controller 6.1.5	One CD-ROM.
Edge Components 6.1 Linux PPC 32-bit	One CD-ROM.
Edge Components Linux PPC 32-bit for IPV6	One CD-ROM.
Tivoli Access Manager 6.0 Linux PowerPC	One CD-ROM.

Table 10. Contents of Linux POWER media pack (32-bit) (continued)

Media label	How supplied
IBM DB2 Restricted Enterprise Server Edition 9.5 - Authorized User Option - Activation CD	One CD-ROM.
IBM DB2 Enterprise Server Edition 9.5 for Linux on POWER (System i <sup>®</sup> and System p <sup>®</sup> ) systems	One DVD.
IBM Data Server Runtime Client 9.5 for Linux on POWER (System i and System p) systems	One DVD.
IBM Data Server Drivers 9.5 for AIX, HP-UX, Solaris, Linux, and Windows	One DVD.
IBM Data Server Client 9.5 for Linux on POWER (System i and System p) systems	One DVD.
WebSphere Partner Gateway Advanced Edition 6.2 Linux PowerPC	One CD-ROM.
Data Interchange Services 6.0 for Advanced Edition	One CD-ROM.

The following table shows the 64-bit media included with WebSphere Process Server for Linux POWER.

Table 11. Contents of Linux POWER media pack (64-bit)

Media label	How supplied
<b>Assembly 1: Images recommended for installation</b>	
WebSphere Process Server 6.2 Linux PPC 64-bit	<p>One DVD contains the following installable components:</p> <ul style="list-style-type: none"> <li>• WebSphere Process Server in the WBI directory</li> <li>• IBM WebSphere Installation Factory in the IF directory</li> <li>• IBM Update Installer for WebSphere Software in the UpdateInstaller directory</li> <li>• IBM User Interface Help System in the IEHS directory</li> <li>• Messaging Client (Message Service Client for C/C++) in the MsgClients directory</li> <li>• Migration tool in the Migration directory</li> <li>• WebSphere Application Server Network Deployment (version 6.1.0.21) in the WAS directory.</li> </ul> <p>Use the Launchpad application in the root directory to install and view information about any of the installable components on <i>WebSphere Process Server V6.2 DVD</i>, <i>WebSphere Application Server Network Deployment Supplements V6.1 CD</i>, and <i>WebSphere Application Server Toolkit V6.1.1 Disk 1 CD</i>, except the IBM WebSphere Installation Factory, which must be installed by following the procedure in “Installing the IBM WebSphere Installation Factory” on page 570.</p>

Table 11. Contents of Linux POWER media pack (64-bit) (continued)

Media label	How supplied
WebSphere Application Server Network Deployment 6.1 Linux PowerPC 64-bit Supplements	One CD-ROM contains the following installable components: <ul style="list-style-type: none"> <li>• IBM HTTP Server</li> <li>• IBM Support Assistant</li> <li>• Web Server Plug-ins</li> <li>• Migration tool</li> </ul>
<b>Assembly 2: Optional installation images</b>	
WebSphere Application Server Network Deployment 6.1 for Linux PowerPC 64-bit	One CD-ROM. This CD-ROM is only for use with IBM WebSphere Installation Factory for creating WebSphere Application Server Network Deployment Custom Install Packages (CIPs).
Tivoli Directory Server 6.2 Linux PPC 64-bit	One DVD.
Edge Components 6.1 Linux PPC 64-bit	One CD-ROM.
Edge Components 6.1 Linux PPC 64-bit for IPv6	One CD-ROM.

## Linux on System z media pack

The following table shows the 31-bit media included with WebSphere Process Server for Linux on System z.

Table 12. Contents of Linux on System z media pack (31-bit)

Media label	How supplied
<b>Assembly 1: Images recommended for installation</b>	
WebSphere Process Server 6.2 Linux on System z 31-bit	One DVD contains the following installable components: <ul style="list-style-type: none"> <li>• WebSphere Process Server in the WBI directory</li> <li>• IBM WebSphere Installation Factory in the IF directory</li> <li>• IBM Update Installer for WebSphere Software in the UpdateInstaller directory</li> <li>• IBM User Interface Help System in the IEHS directory</li> <li>• Messaging Client (Message Service Client for C/C++) in the MsgClients directory</li> <li>• Migration tool in the Migration directory</li> <li>• WebSphere Application Server Network Deployment (version 6.1.0.21) in the WAS directory.</li> </ul> <p>Use the Launchpad application in the root directory to install and view information about any of the installable components on <i>WebSphere Process Server V6.2 DVD</i>, <i>WebSphere Application Server Network Deployment Supplements V6.1 CD</i>, and <i>WebSphere Application Server Toolkit V6.1.1 Disk 1 CD</i>, except the IBM WebSphere Installation Factory, which must be installed by following the procedure in "Installing the IBM WebSphere Installation Factory" on page 570.</p>

Table 12. Contents of Linux on System z media pack (31-bit) (continued)

Media label	How supplied
WebSphere Application Server Network Deployment 6.1 Linux on System z Supplements	One CD-ROM contains the following installable components: <ul style="list-style-type: none"> <li>• IBM HTTP Server</li> <li>• IBM Support Assistant</li> <li>• Web Server Plug-ins</li> <li>• Migration tool</li> </ul>
WebSphere Application Server 6.1 WorldTypeFonts Linux Supplements	One CD-ROM.
Application Server Toolkit 6.1.1 for 32-bit Windows	Two CD-ROMs.
Application Server Toolkit 6.1.1 for 32-bit Linux on x86	Two CD-ROMs.
<b>Assembly 2: Optional installation images</b>	
WebSphere Application Server Network Deployment 6.1 for Linux on System z	One CD-ROM.  This CD-ROM is only for use with IBM WebSphere Installation Factory for creating WebSphere Application Server Network Deployment Custom Install Packages (CIPs).
Rational Agent Controller 6.1.5	One CD-ROM.
Edge Components 6.1 for Linux on System z	One CD-ROM.
Tivoli Access Manager 6.0 for Linux on System z	One CD-ROM.
IBM DB2 Restricted Enterprise Server Edition 9.5 - Authorized User Option - Activation CD	One CD-ROM.
IBM DB2 Enterprise Server Edition 9.5 for Linux on System z	One DVD.
IBM Data Server Runtime Client 9.5 for Linux on System z	One DVD.
IBM Data Server Drivers 9.5 for AIX, HP-UX, Solaris, Linux, and Windows	One DVD.
IBM Data Server Client 9.5 for Linux on System z	One DVD.

The following table shows the 64-bit media included with WebSphere Process Server for Linux on System z.

Table 13. Contents of Linux on System z media pack (64-bit)

Media label	How supplied
<b>Assembly 1: Images recommended for installation</b>	

Table 13. Contents of Linux on System z media pack (64-bit) (continued)

Media label	How supplied
WebSphere Process Server 6.2 Linux on System z 64-bit	<p>One DVD contains the following installable components:</p> <ul style="list-style-type: none"> <li>• WebSphere Process Server in the WBI directory</li> <li>• IBM WebSphere Installation Factory in the IF directory</li> <li>• IBM Update Installer for WebSphere Software in the UpdateInstaller directory</li> <li>• IBM User Interface Help System in the IEHS directory</li> <li>• Messaging Client (Message Service Client for C/C++) in the MsgClients directory</li> <li>• Migration tool in the Migration directory</li> <li>• WebSphere Application Server Network Deployment (version 6.1.0.21) in the WAS directory.</li> </ul> <p>Use the Launchpad application in the root directory to install and view information about any of the installable components on <i>WebSphere Process Server V6.2 DVD</i>, <i>WebSphere Application Server Network Deployment Supplements V6.1 CD</i>, and <i>WebSphere Application Server Toolkit V6.1.1 Disk 1 CD</i>, except the IBM WebSphere Installation Factory, which must be installed by following the procedure in “Installing the IBM WebSphere Installation Factory” on page 570.</p>
WebSphere Application Server Network Deployment 6.1 Linux on System z 64-bit Supplements	<p>One CD-ROM contains the following installable components:</p> <ul style="list-style-type: none"> <li>• IBM HTTP Server</li> <li>• IBM Support Assistant</li> <li>• Web Server Plug-ins</li> <li>• Migration tool</li> </ul>
<b>Assembly 2: Optional installation images</b>	
WebSphere Application Server Network Deployment 6.1 for Linux on z 64-bit	<p>One CD-ROM.</p> <p>This CD-ROM is only for use with IBM WebSphere Installation Factory for creating WebSphere Application Server Network Deployment Custom Install Packages (CIPs).</p>
Tivoli Directory Server 6.2 Linux on System z 64-bit	One DVD.
Edge Components for Linux on System z 64-bit for IPV6	One CD-ROM.

## Solaris media pack

The following table shows the 32-bit media included with WebSphere Process Server for Solaris x86.

Table 14. Contents of Solaris x86 media pack (32-bit)

Media label	How supplied
<b>Assembly 1: Images recommended for installation</b>	

Table 14. Contents of Solaris x86 media pack (32-bit) (continued)

Media label	How supplied
WebSphere Process Server 6.2 Solaris 32-bit	<p>One DVD contains the following installable components:</p> <ul style="list-style-type: none"> <li>• WebSphere Process Server in the WBI directory</li> <li>• IBM WebSphere Installation Factory in the IF directory</li> <li>• IBM Update Installer for WebSphere Software in the UpdateInstaller directory</li> <li>• IBM User Interface Help System in the IEHS directory</li> <li>• Messaging Client (Message Service Client for C/C++) in the MsgClients directory</li> <li>• Migration tool in the Migration directory</li> <li>• WebSphere Application Server Network Deployment (version 6.1.0.21) in the WAS directory.</li> </ul> <p>Use the Launchpad application in the root directory to install and view information about any of the installable components on <i>WebSphere Process Server V6.2 DVD</i>, <i>WebSphere Application Server Network Deployment Supplements V6.1 CD</i>, and <i>WebSphere Application Server Toolkit V6.1.1 Disk 1 CD</i>, except the IBM WebSphere Installation Factory, which must be installed by following the procedure in “Installing the IBM WebSphere Installation Factory” on page 570.</p>
WebSphere Application Server Network Deployment Supplements 6.1 Solaris 32-bit	<p>One CD-ROM contains the following installable components:</p> <ul style="list-style-type: none"> <li>• Application Client for WebSphere Application Server</li> <li>• IBM HTTP Server</li> <li>• IBM Support Assistant</li> <li>• Web Server Plug-ins</li> <li>• Migration tool</li> </ul>
Application Server Toolkit 6.1.1 for 32-bit Windows	Two CD-ROMs.
Application Server Toolkit 6.1.1 for 32-bit Linux on x86	Two CD-ROMs.
<b>Assembly 2: Optional installation images</b>	
WebSphere Application Server Network Deployment 6.1 for 32-bit Solaris	<p>One CD-ROM.</p> <p>This CD-ROM is only for use with IBM WebSphere Installation Factory for creating WebSphere Application Server Network Deployment Custom Install Packages (CIPs).</p>
Rational Agent Controller 6.1.5	One CD-ROM.
Edge Components 6.1 Solaris	One CD-ROM.
Edge Components 6.1 Solaris for IPV6	One CD-ROM.
Tivoli Access Manager 6.0 Solaris	One CD-ROM.
IBM DB2 Restricted Enterprise Server Edition 9.5 - Authorized User Option - Activation CD	One CD-ROM.

Table 14. Contents of Solaris x86 media pack (32-bit) (continued)

Media label	How supplied
IBM DB2 Enterprise Server Edition 9.5 for Solaris on UltraSPARC systems	One DVD.
IBM Data Server Runtime Client 9.5 for Solaris on UltraSPARC systems	One DVD.
IBM Data Server Drivers 9.5 for AIX, HP-UX, Solaris, Linux, and Windows	One DVD.
IBM Data Server Client 9.5 for Solaris on UltraSPARC systems	One DVD.
WebSphere Partner Gateway Advanced Edition 6.2 Solaris	One CD-ROM.
Data Interchange Services 6.0 for Advanced Edition	One CD-ROM.

The following table shows the 64-bit media included with WebSphere Process Server for Solaris SPARC and x86 .

Table 15. Contents of Solaris SPARC and x86 media pack (64-bit)

Media label	How supplied
<b>Assembly 1: Images recommended for installation</b>	
WebSphere Process Server 6.2 Solaris x86 64-bit	<p>One DVD contains the following installable components:</p> <ul style="list-style-type: none"> <li>• WebSphere Process Server in the WBI directory</li> <li>• IBM WebSphere Installation Factory in the IF directory</li> <li>• IBM Update Installer for WebSphere Software in the UpdateInstaller directory</li> <li>• IBM User Interface Help System in the IEHS directory</li> <li>• Messaging Client (Message Service Client for C/C++) in the MsgClients directory</li> <li>• Migration tool in the Migration directory</li> <li>• WebSphere Application Server Network Deployment (version 6.1.0.21) in the WAS directory.</li> </ul> <p>Use the Launchpad application in the root directory to install and view information about any of the installable components on <i>WebSphere Process Server V6.2 DVD</i>, <i>WebSphere Application Server Network Deployment Supplements V6.1 CD</i>, and <i>WebSphere Application Server Toolkit V6.1.1 Disk 1 CD</i>, except the IBM WebSphere Installation Factory, which must be installed by following the procedure in "Installing the IBM WebSphere Installation Factory" on page 570.</p>
WebSphere Application Server Network Deployment 6.1 Supplements Solaris Opteron 64-bit	<p>One CD-ROM contains the following installable components:</p> <ul style="list-style-type: none"> <li>• IBM HTTP Server</li> <li>• IBM Support Assistant</li> <li>• Web Server Plug-ins</li> <li>• Migration tool</li> </ul>

Table 15. Contents of Solaris SPARC and x86 media pack (64-bit) (continued)

Media label	How supplied
WebSphere Process Server 6.2 Solaris SPARC 64-bit	One DVD.
WebSphere Application Server Network Deployment 6.1 Supplements Solaris SPARC 64-bit	One CD-ROM contains the following installable components: <ul style="list-style-type: none"> <li>• IBM HTTP Server</li> <li>• IBM Support Assistant</li> <li>• Web Server Plug-ins</li> <li>• Migration tool</li> </ul>
<b>Assembly 2: Optional installation images</b>	
WebSphere Application Server Network Deployment 6.1 for Solaris Opteron 64-bit	One CD-ROM.  This CD-ROM is only for use with IBM WebSphere Installation Factory for creating WebSphere Application Server Network Deployment Custom Install Packages (CIPs).
Edge Components 6.1 Solaris x86-64	One CD-ROM.
Tivoli Directory Server 6.2 Solaris x86 64-bit	One DVD.
IBM DB2 Restricted Enterprise Server Edition 9.5 - Authorized User Option - Activation CD	One CD-ROM.
IBM DB2 Enterprise Server Edition 9.5 for Solaris on x64 systems	One DVD.
IBM Data Server Runtime Client 9.5 for Solaris x64	One DVD.
IBM Data Server Drivers 9.5 for AIX, HP-UX, Solaris, Linux, and Windows	One DVD.
IBM Data Server Client 9.5 for Solaris x64	One DVD.
WebSphere Application Server Network Deployment 6.1 for Solaris SPARC 64-bit	One CD-ROM.
Tivoli Directory Server 6.2 Solaris SPARC 64-bit	One DVD.

## Windows media pack

The following table shows the 32-bit media included with WebSphere Process Server for Windows.

Table 16. Contents of Windows media pack (32-bit)

Media label	How supplied
<b>Assembly 1: Images recommended for installation</b>	



Table 16. Contents of Windows media pack (32-bit) (continued)

Media label	How supplied
WebSphere Process Server 6.2 Windows 32-bit	<p>One DVD contains the following installable components:</p> <ul style="list-style-type: none"> <li>• WebSphere Process Server in the WBI directory</li> <li>• IBM WebSphere Installation Factory in the IF directory</li> <li>• IBM Update Installer for WebSphere Software in the UpdateInstaller directory</li> <li>• IBM User Interface Help System in the IEHS directory</li> <li>• Messaging Client (Message Service Client for C/C++ and Message Service Client for .NET) in the MsgClients directory</li> <li>• Migration tool in the Migration directory</li> <li>• WebSphere Application Server Network Deployment (version 6.1.0.21) in the WAS directory.</li> </ul> <p>Use the Launchpad application in the root directory to install and view information about any of the installable components on <i>WebSphere Process Server V6.2 DVD</i>, <i>WebSphere Application Server Network Deployment Supplements V6.1 CD</i>, and <i>WebSphere Application Server Toolkit V6.1.1 Disk 1 CD</i>, except the IBM WebSphere Installation Factory, which must be installed by following the procedure in “Installing the IBM WebSphere Installation Factory” on page 570.</p>
WebSphere Application Server Network Deployment Supplements 6.1 Windows 32-bit	<p>One CD-ROM contains the following installable components:</p> <ul style="list-style-type: none"> <li>• Application Client for WebSphere Application Server</li> <li>• IBM HTTP Server</li> <li>• IBM Support Assistant</li> <li>• Web Server Plug-ins</li> <li>• Migration tool</li> </ul>
Application Server Toolkit 6.1.1 for Windows	Two CD-ROMs.
Application Server Toolkit 6.1.1 for Linux on x86	Two CD-ROMs.
<b>Assembly 2: Optional installation images</b>	
WebSphere Application Server Network Deployment 6.1 Windows 32-bit	<p>One CD-ROM.</p> <p>This CD-ROM is only for use with IBM WebSphere Installation Factory for creating WebSphere Application Server Network Deployment Custom Install Packages (CIPs).</p>
Rational Agent Controller 6.1.5	One CD-ROM.
Edge Components 6.1	One CD-ROM.
Edge Components for IPv6 6.1 for Windows	One CD-ROM.
Tivoli Access Manager 6.0 for Windows	One CD-ROM.
Tivoli Directory Server 6.2 for Windows	One DVD.

Table 16. Contents of Windows media pack (32-bit) (continued)

Media label	How supplied
IBM DB2 Restricted Enterprise Server Edition 9.5 - Authorized User Option - Activation CD	One CD-ROM.
IBM DB2 Enterprise Server Edition 9.5 for Windows on 32-bit AMD and Intel systems (x86)	One DVD.
IBM Data Server Runtime Client 9.5 for Windows on 32-bit AMD and Intel systems (x86)	One DVD.
IBM Data Server Drivers 9.5 for Windows on 32-bit AMD and Intel systems (x86)	One DVD.
IBM Data Server Client 9.5 for Windows on 32-bit AMD and Intel systems (x86)	One DVD.
WebSphere Partner Gateway Advanced Edition 6.2 for Windows	One CD-ROM.
Data Interchange Services 6.0 for Windows	One CD-ROM.

The following table shows the 64-bit media included with WebSphere Process Server for Windows.

Table 17. Contents of Windows media pack (64-bit)

Media label	How supplied
<b>Assembly 1: Images recommended for installation</b>	
WebSphere Process Server 6.2 Windows 64-bit	<p>One DVD contains the following installable components:</p> <ul style="list-style-type: none"> <li>• WebSphere Process Server in the WBI directory</li> <li>• IBM WebSphere Installation Factory in the IF directory</li> <li>• IBM Update Installer for WebSphere Software in the UpdateInstaller directory</li> <li>• IBM User Interface Help System in the IEHS directory</li> <li>• Migration tool in the Migration directory</li> <li>• WebSphere Application Server Network Deployment (version 6.1.0.21) in the WAS directory.</li> </ul> <p>Use the Launchpad application in the root directory to install and view information about any of the installable components on <i>WebSphere Process Server V6.2 DVD</i>, <i>WebSphere Application Server Network Deployment Supplements V6.1 CD</i>, and <i>WebSphere Application Server Toolkit V6.1.1 Disk 1 CD</i>, except the IBM WebSphere Installation Factory, which must be installed by following the procedure in “Installing the IBM WebSphere Installation Factory” on page 570.</p>

Table 17. Contents of Windows media pack (64-bit) (continued)

Media label	How supplied
WebSphere Application Server Network Deployment 6.1 Windows 2k3 AMD 64-bit Supplements	One CD-ROM contains the following installable components: <ul style="list-style-type: none"> <li>• IBM HTTP Server</li> <li>• IBM Support Assistant</li> <li>• Web Server Plug-ins</li> <li>• Migration tool</li> </ul>
<b>Assembly 2: Optional installation images</b>	
WebSphere Application Server Network Deployment 6.1 Windows 2k3 AMD 64-bit	One CD-ROM.  This CD-ROM is only for use with IBM WebSphere Installation Factory for creating WebSphere Application Server Network Deployment Custom Install Packages (CIPs).
Edge Components 6.1 Windows AMD Opteron 64-bit	One CD-ROM.
Edge Components 6.1 Windows AMD Opteron 64-bit for IPv6	One CD-ROM.
Tivoli Directory Server 6.2 Windows x86 64-bit	One DVD.
IBM DB2 Restricted Enterprise Server Edition 9.5 - Authorized User Option - Activation CD	One CD-ROM.
IBM DB2 Enterprise Server Edition 9.5 for Windows on AMD64 and Intel EM64T systems (x64)	One DVD.
IBM Data Server Runtime Client 9.5 for Windows on AMD64 and Intel EM64T systems (x64)	One DVD.
IBM Data Server Drivers 9.5 for Windows on AMD64 and Intel EM64T systems (x64)	One DVD.
IBM Data Server Client 9.5 for Windows on AMD64 and Intel EM64T systems (x64)	One DVD.



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## Chapter 3. Preparing to install WebSphere Process Server

Before you install WebSphere Process Server you must ensure that your system meets all the hardware and software requirements, and prepare your operating system for installation. You also need to decide whether to create a stand-alone server or a network deployment scenario, and plan the configuration details needed.

### About this task

The sub-topics contain information about preparing to install WebSphere Process Server in new and existing environments. Use the information to choose whether to create a stand-alone server or network deployment scenario, and to consider any effects on your existing environment.

### What to do next

Follow the instructions under Chapter 4, "Installing the software," on page 67 to install the software.

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## Product compatibility

Before installing WebSphere Process Server you must be aware of the compatibility issues with some other WebSphere products.

### WebSphere Application Server and WebSphere Enterprise Service Bus

WebSphere Process Server can be installed on the same workstation as any version of WebSphere Application Server or WebSphere Enterprise Service Bus. You can install WebSphere Process Server separately or, if you have WebSphere Application Server Version 6.1 or or WebSphere Enterprise Service Bus Version 6.2 installed, you can choose to extend it to have WebSphere Process Server capability.

### WebSphere Business Integration Server Foundation

WebSphere Process Server cannot be installed on top of any version of WebSphere Business Integration Server Foundation. You can install WebSphere Process Server on the same workstation as WebSphere Business Integration Server Foundation, as a separate installation.

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## Prerequisites for installing WebSphere Process Server

Before installing WebSphere Process Server or the WebSphere Process Server Client, you must ensure that a series of prerequisites have been met.

The prerequisites are:

- Plan your installation.

For more information about planning your installation and on the databases required by WebSphere Process Server, see the topics under Planning for WebSphere Process Server.

- Ensure that your system meets all hardware and software requirements, and that you have enough space (including temporary space) for your installation. See <http://www.ibm.com/support/docview.wss?uid=swg27006205> for more information.
- An installation package (IIP) containing WebSphere Application Server Network Deployment and Feature Pack for Web Services is installed as part of the WebSphere Process Server installation. There are restrictions for the type of integrated IIP that can be used along with the WebSphere Process Server installer.
  - The IIP must contain WebSphere Application Server Network Deployment and Feature Pack for Web Services.
  - The IIP must be at the same or a higher maintenance level than required by the WebSphere Process Server installer.
  - The IIP must have only one primary offering of WebSphere Application Server Network Deployment and one additional offering of Feature Pack for Web Services.
- The WebSphere Integration Developer product comes with a default integration test client. If you plan to use this installation of WebSphere Process Server as the integration test client instead, refer to Planning to install WebSphere Process Server for use by WebSphere Integration Developer for information on how to set up this scenario.
- Prepare your operating system for installation. See “Preparing the operating system for WebSphere Process Server installation” on page 35 for links to platform-specific information.
- If you plan to install WebSphere Process Server over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment, ensure that the product architectures match. You cannot install a 32-bit version of WebSphere Process Server over a 64-bit version of WebSphere Application Server or WebSphere Application Server Network Deployment; you cannot install a 64-bit version of WebSphere Process Server over a 32-bit version of WebSphere Application Server or WebSphere Application Server Network Deployment.
- If you plan to install from images obtained from Passport Advantage, see “Special considerations when installing from Passport Advantage” on page 568 for guidelines concerning user permissions and directory setup.
- Ensure that DB2 is started by the database instance owner prior to installing WebSphere Process Server.
- Database administrator (DBA) privileges are required for the database configuration panels that are part of creating a deployment manager profile for a deployment environment. If you plan to use the deployment environment feature of the product installer or Profile Management Tool, and want to use a database other than Derby Network Server as your database product, the user ID you provide for the “User name to authenticate with the database” field on the database configuration panels must have DBA privileges.
 

The user ID requires DBA privileges even if you elect to postpone database creation during the installation or profile creation procedure. This is because electing to postpone database creation prevents creation of the Common database only. When the installer or Profile Management Tool configures a deployment environment (clustered topology), it also creates the required tables and schemas on the back-end database server for the Business Process Choreographer, the Common Event Infrastructure, and the messaging engines --

in addition to the Common database. This requires that the user ID have DBA privileges so that these schemas and tables can be created without database permission errors.

If the user ID does not have DBA privileges, use this workaround:

1. Install the product without creating a profile.
  2. Use the Profile Management Tool to create the deployment manager and the custom profiles using the Advanced path for all. Do not use the Typical or Deployment environment paths. Select the option to delay the execution of the database scripts during deployment manager profile creation.
  3. Federate the custom profiles to the deployment manager.
  4. Have the DBA create the Common DB. The information at the following site provides the necessary scripts to manually create database objects: “Creating the Common database and tables after profile creation or augmentation” on page 359.
  5. Using the administrative console, create the required deployment environment. See “Creating deployment environments” on page 371 for more information.
- If you plan to use DB2<sup>®</sup> Universal Database<sup>™</sup>, you must perform the following steps before installing:
    - If you are configuring a DB2 database on a DB2 client with the server on a remote system, make sure the client system is configured to communicate with the server and that the DB2 node is cataloged. For more information, refer to the DB2 Universal Database documentation.
    - **Linux** **UNIX** **On Linux and UNIX platforms:** If you are configuring a DB2 database on a Linux or UNIX system, source the database environment by performing the following steps:
      1. Modify `/etc/group` and make sure the user ID that installed the product is in the same group as the `db2instance`.
      2. Source the database environment by running the `db2instance/sqllib/db2profile` script (replace `db2instance` with the name of your database instance).
  - Stop all server, deployment manager, and node agent processes on any products for which you intend to add features, or that you plan to extend. For instructions on how to perform these tasks, see “Stopping servers and nodes” on page 34.
  - Uninstall all maintenance packages on products you intend to add features to or that you plan to extend. Start the Update Installer program with the `updi_root/update` command to search for and uninstall all maintenance packages. Do this because features and components necessary to convert the products have not had any maintenance applied to them. If you remove all maintenance packages, your entire product will be at the same release level. You can then reapply the maintenance packages.
  - **Linux** **On Linux platforms:** Ensure that your WebSphere Process Server installation has the following items:
    - Kernel and C runtime library
    - Current and all compatibility versions of the C++ runtime library
    - X Window libraries and runtime
    - GTK runtime libraries

If the prerequisites are satisfied, you are ready to install the product.

## Stopping servers and nodes

You must stop all server, deployment manager, and node agent processes on any products for which you intend to add features, or that you plan to extend or uninstall.

### About this task

You use specific commands to stop server, deployment manager, and node agent processes. Perform the following steps to stop these processes:

#### Procedure

1. If you have one or more deployment managers installed, stop each *dmgr* process with the **stopManager** command. For example, issue one of the following commands, depending on your platform (where *profile\_root* represents the installation directory of the deployment manager profile):

- **i5/OS** On i5/OS platforms: *profile\_root/bin/stopManager*
- **Linux** **UNIX** On Linux and UNIX platforms: *profile\_root/bin/stopManager.sh*
- **Windows** On Windows platforms: *profile\_root\bin\stopManager.bat*

If security is enabled, use one of the following commands instead:

- **i5/OS** On i5/OS platforms: *profile\_root/bin/stopManager -user user\_ID -password password*
- **Linux** **UNIX** On Linux and UNIX platforms: *profile\_root/bin/stopManager.sh -user user\_ID -password password*
- **Windows** On Windows platforms: *profile\_root\bin\stopManager.bat -user user\_ID -password password*

2. Stop node agent processes with the **stopNode** command. If you have nodes federated to deployment managers on your system, stop each node agent process that might be running on each server with a federated node. For example, issue one of the following commands to stop the node agent process, depending on your platform (where *profile\_root* represents the installation directory of the federated node):

- **i5/OS** On i5/OS platforms: *profile\_root/bin/stopNode*
- **Linux** **UNIX** On Linux and UNIX platforms: *profile\_root/bin/stopNode.sh*
- **Windows** On Windows platforms: *profile\_root\bin\stopNode.bat*

If servers are running and security is enabled, use one of the following commands instead:

- **i5/OS** On i5/OS platforms: *profile\_root/bin/stopNode -user user\_ID -password password*
- **Linux** **UNIX** On Linux and UNIX platforms: *profile\_root/bin/stopNode.sh -user user\_ID -password password*
- **Windows** On Windows platforms: *profile\_root\bin\stopNode.bat -user user\_ID -password password*

3. Stop each running stand-alone server with the **stopServer** command. Stop all server processes in all profiles on the server. For example, issue one of the



following commands to stop the server in the profile, depending on your platform. In this example, *profile\_root* represents the installation location of the profile:

- **i5/OS** On i5/OS platforms: `profile_root/bin/stopServer serverName`
- **Linux** **UNIX** On Linux and UNIX platforms: `profile_root/bin/stopServer.sh server1`
- **Windows** On Windows platforms: `profile_root\bin\stopServer.bat server1`

If servers are running and security is enabled, use one of the following commands instead:

- **i5/OS** On i5/OS platforms: `profile_root/bin/stopServer serverName -user user_ID -password password`
- **Linux** **UNIX** On Linux and UNIX platforms: `profile_root/bin/stopServer.sh server1 -user user_ID -password password`
- **Windows** On Windows platforms: `profile_root\bin\stopServer.bat server1 -user user_ID -password password`

## What to do next

You can now add features to, extend, or uninstall the WebSphere product.

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## Preparing the operating system for WebSphere Process Server installation

The installation requirements for WebSphere Process Server vary depending on the operating system. You must prepare your operating system before installing WebSphere Process Server.

Preparing the operating system involves such changes as allocating disk space and installing patches to the operating system. IBM tests products on each operating system platform. Such tests verify whether an operating system change is required for the product to run correctly. Without the required changes the products do not run correctly.

Before preparing your installation environment, review the topics in Planning for WebSphere Process Server to determine how to set up your system. Then see the specific instructions for your operating system in this section.

### Preparing AIX systems for installation

Learn how to prepare an AIX system for the installation of WebSphere Process Server.

#### About this task

The installation uses an InstallShield MultiPlatform (ISMP) wizard. You can also install the product silently. Silent mode is invoked at a command line with a parameter that identifies a response file, which you edit before installing.

If you encounter a problem such as needing more temporary space or missing prerequisite packages on your operating system, cancel the installation, make the required changes, and restart the installation.

**Restriction:** The Profile Management Tool is an Eclipse-based application and there are known issues with using Cygwin/X to run Eclipse-based applications on remote AIX machines. This affects your use of the Profile Management Tool and the Installation Factory. With Cygwin/X on remote AIX, for example, a splash screen for the Profile Management Tool appears but the Profile Management Tool never actually comes up. For details of existing Bugzilla reports on these issues, see the information at Bugzilla – Bug 36806. If a different X server (such as Hummingbird Exceed) is used, these problems do not occur.

**Note:** WebSphere Process Server prevents users from installing to a non-empty directory. If you try to install WebSphere Process Server in a directory with a lost+found sub-directory, you are prompted to use an empty directory. If you still want to install into this directory, delete the lost+found directory. However, the next time fsck is run, the lost+found directory will be created. This does not have any effect on an existing installation. During uninstallation, this directory will not be removed.

Use the following procedure to prepare the operating system for installation of WebSphere Process Server.

### Procedure

1. Optional: Install the Mozilla browser if it is not already installed. The Mozilla browser supports the launchpad console. Use the System Management Interface Tool (SMIT) to identify whether the Mozilla 1.7.8 or later package is already installed. If it is not already installed, complete the following procedure:

- a. Download the latest supported version of Mozilla (1.7.8 or later) for AIX. Mozilla for AIX is available from the following location:

Web browsers for AIX.

Download the installp image and install it from SMIT.

**Important:** IBM has not tested and does not support the Mozilla images distributed on the Mozilla Web site. Download the Mozilla images from the downloads Web site at Trials and demos to ensure that the version that you download is tested and supported.

Using Mozilla 1.7.5 or earlier can result in ISMP failing to initialize during installation. The launchpad link might seem to fail, for example. See V6.0.2: The WebSphere Application Server launchpad fails with Mozilla 1.7.5 (and earlier) on 64-bit AIX 5.2 or 5.3 for more information.

2. Optional: Export the location of the supported browser.

Export the location of the supported browser using a command that identifies the location of the browser.

For example, if the Mozilla package is in the /usr/bin/mozilla directory, use the following command:

```
export BROWSER=/usr/bin/mozilla
```

3. Optional: **For silent installation only:** Allow for a known ISMP problem that causes a call to the X Window service during a silent installation.

The DISPLAY environment variable on your AIX workstation might point to an X Server that is not logged in. Two common scenarios can cause this to occur:

- Your AIX workstation has an X Server running, but the X Server is stuck at the graphical login screen because you have not yet logged in.

- Your AIX workstation is configured to display X Window applications on a remote X Server that is not logged in.

A silent installation can hang in either case as ISMP calls X Window services.

Two solutions exist:

- Log in to the local X Server through the graphical user interface before beginning the silent installation.
- Export the DISPLAY environment variable to point to null or blank, as shown in the following example:

```
export DISPLAY=null
```

4. Log on to the system. Your user ID does not have to have root privileges.
5. Select a umask that allows the owner to read and write to the files, and allows others to access them according to the prevailing system policy. For root users, a umask of 022 is recommended. For non-root users, a umask of 002 or 022 can be used, depending on whether the users share the group.

To verify the umask setting, issue the following command:

```
umask
```

To set the umask setting to 022, issue the following command:

```
umask 022
```

6. Stop all Java processes that are related to WebSphere Application Server, WebSphere Process Server or WebSphere Enterprise Service Bus on the workstation on which you are installing the product.
7. Stop any Web server process such as the IBM HTTP Server.
8. Use the SMIT tool to display packages that are installed to determine whether you must update packages that are described in the following steps.
9. Download the most current version of the Info-ZIP product to avoid problems with zipped files. Download a current version of the Info-ZIP package from the Info-ZIP Web site.
10. Provide adequate disk space. For the space required to install WebSphere Process Server and related products, see WebSphere Process Server detailed system requirements at <http://www.ibm.com/support/docview.wss?uid=swg27006205> and select the link to your version of the product.

With the JFS file system on AIX, you can allocate expansion space for directories. If the installation wizard does not have enough space, ISMP issues a system call for more space that increases the space allocation dynamically. The message you might see when this occurs for the /usr directory is similar to the following example:

```
NOTE: The following file systems will be expanded during the installation:
/usr
```

Manually verify that the required space for creating a profile is available on AIX. A known problem in the underlying ISMP code prevents proper space checking on AIX systems.

11. Unmount file systems with broken links to avoid java.lang.NullPointerException errors.

Installation can fail with the following error when broken links to file systems exist:

```
An error occurred during wizard bean change notification:
java.lang.NullPointerException
  at com.ibm.wizard.platform.aix.AixFileUtils.
    getFileSystemData(AixFileUtils.java:388)
  at com.ibm.wizard.platform.aix.AixFileUtils.
    getPartitionDataWithExecs(AixFileUtils.java:172)
```

```

at com.ibm.wizard.platform.aix.AixFileUtils.
  getPartitionData(AixFileUtils.java:104)
at com.ibm.wizard.platform.aix.AixFileServiceImpl.
  getPartitionNames(AixFileServiceImpl.java:397)
...

```

Use the following procedure to identify and unmount problematic file systems:

- a. Use the **df -k** command to check for broken links to file systems. Look for file systems that list blank values in the 1024-blocks size column. Entries with a value of "-" (dash) are not a problem. The following example shows that problems exist with the `iw031864:/cdrom/db2_v91_aix53` file system and possibly with the `/dev/lv00` file system. The `/proc` file system is not a problem.

```

> df -k
Filesystem      1024-blocks      Free %Used    Iused %Iused Mounted on
/dev/hd4         1048576      447924   58%     2497    1% /
/dev/hd3         4259840     2835816   34%      484    1% /tmp
/proc            -             -        -         -      - /proc
/dev/lv01        2097152     229276   90%     3982    1% /storage
/dev/lv00
/dev/hd2         2097152     458632   79%    42910    9% /usr
iw031864:/cdrom/db2_v91_aix53

```

- b. First, unmount any file systems that show definite problems, such as the `iw031864:/cdrom/db2_v91_aix53` file system in the example. To do this, use one of the following commands:

```

> umount /cdrom/db2_v91_aix53
> umount /cdrom

```

- c. Start the installation again.
  - d. If the problem continues, unmount any file systems that have blank values, such as the `/dev/lv00` file system in the example.
  - e. If you cannot solve the problem by unmounting file systems with broken links, reboot the workstation and start the installation again.
12. Verify that prerequisites and corequisites are at the required release levels.

Although the installation wizard checks for prerequisite operating system patches, review the prerequisite supported hardware and software for WebSphere Process Server if you have not already done so. To access this information, see WebSphere Process Server detailed system requirements at Supported hardware and software website and select the link to your version of WebSphere Process Server.

Refer to the documentation for non-IBM prerequisite and corequisite products to learn how to migrate to their supported versions.

13. Verify that the system **cp** command is used, rather than the **cp** command provided by emacs or other freeware.

If you install the product using a **cp** command that is part of a freeware package, rather than with the system **cp** command, the installation might appear to complete successfully, but the Java 2 SDK that the product installs might have missing files in the `install_root/java` directory (where `install_root` represents the installation directory of WebSphere Process Server).

Missing files can destroy required symbolic links. You must remove the freeware **cp** command from the `PATH` in order to install the WebSphere Process Server product successfully.

If you have emacs or other freeware installed on your operating system, perform the following steps to identify which **cp** command is being used by the system, and to deactivate the freeware **cp** command if it is being used:

- a. Type which cp at the command prompt before running the installation program for the WebSphere Process Server product.
  - b. If the resulting directory output includes freeware, remove the freeware directory from your PATH. For example, if the output is similar to `.../freeware/bin/cp`, remove the directory from the PATH.
  - c. Install WebSphere Process Server.
  - d. Add the freeware directory back to the PATH.
14. Verify that the Java 2 SDK on your copy of the product discs is functioning correctly.

If you created your own product DVD by copying the product DVD, or if you created your own DVD from the electronic download image, perform the following steps to verify that the Java 2 SDK is working correctly:

- a. On your created product disc, navigate to the `/JDK/jre.pak/repository/package.java.jre/java/jre/bin` directory. To do this, issue the following command:  

```
cd /JDK/jre.pak/repository/package.java.jre/java/jre/bin
```
- b. Verify the Java 2 SDK version. To do this, issue the following command:  

```
./java -version
```

The command completes successfully with no errors when the Java 2 SDK is intact.

- c. Repeat this procedure on all other created product discs.

## Results

This procedure prepares the operating system for installation of WebSphere Process Server.

## What to do next

After preparing the operating system, you can install WebSphere Process Server. See Chapter 4, “Installing the software,” on page 67 for descriptions of the various installation alternatives available.

## Preparing HP-UX systems for installation

Learn how to prepare an HP-UX system for the installation of WebSphere Process Server.

### About this task

The installation uses an InstallShield MultiPlatform (ISMP) wizard. You can also install the product silently. Silent mode is invoked at a command line with a parameter that identifies a response file, which you edit before installing.

**Restriction:** The Profile Management Tool is an Eclipse-based application and there are known issues with using Cygwin/X to run Eclipse-based applications on remote HP-UX machines. This affects your use of the Profile Management Tool and the Installation Factory. For details of existing Bugzilla reports on these issues, see the information at Bugzilla – Bug 36806. If a different X server (such as Hummingbird Exceed) is used, these problems do not occur.

Use the following procedure to prepare the operating system for installation of WebSphere Process Server.

## Procedure

1. Log on to the system. Your user ID does not have to have root privileges.
2. Select a umask that allows the owner to read and write to the files, and allows others to access them according to the prevailing system policy. For root users, a umask of 022 is recommended. For non-root users, a umask of 002 or 022 can be used, depending on whether the users share the group.

To verify the umask setting, issue the following command:

```
umask
```

To set the umask setting to 022, issue the following command:

```
umask 022
```

3. Optional: Install the Mozilla browser if it is not already installed. The Mozilla browser supports the launchpad console.

Download and install the Mozilla browser from Mozilla.

4. Optional: Export the location of the supported browser.

Export the location of the supported browser using a command that identifies the location of the browser.

For example, if the Mozilla package is in the `/usr/bin/mozilla` directory, use the following command:

```
export BROWSER=/usr/bin/mozilla
```

5. Stop all Java processes related to WebSphere Application Server, WebSphere Application Server Network Deployment, WebSphere Process Server, or WebSphere Enterprise Service Bus on the workstation on which you are installing the product.
6. Stop any Web server process such as the IBM HTTP Server.
7. Provide adequate disk space. For the space required to install WebSphere Process Server and related products, see WebSphere Process Server detailed system requirements at <http://www.ibm.com/support/docview.wss?uid=swg27006205> and select the link to your version of the product.
8. Set kernel values to support WebSphere Process Server.  
Several HP-UX kernel values are typically too small for the product. See “Setting kernel values on HP-UX systems” on page 41 for instructions on how to set kernel values.
9. Verify that prerequisites and corequisites are at the required release levels.  
Although the installation wizard checks for prerequisite operating system patches, review the prerequisite supported hardware and software for WebSphere Process Server if you have not already done so. To access this information, see WebSphere Process Server detailed system requirements at WebSphere Process Server detailed system requirements and select the link to your version of WebSphere Process Server.  
Refer to the documentation for non-IBM prerequisite and corequisite products to learn how to migrate to their supported versions.
10. Verify that the system `cp` command is used, rather than the `cp` command provided by emacs or other freeware.

**Note:** If you install the product using a `cp` command that is part of a freeware package, rather than with the system `cp` command, the installation might appear to complete successfully, but the Java 2 SDK that the product installs might have missing files in the `install_root/java` directory (where `install_root` represents the installation directory of WebSphere Process Server).

Missing files can destroy required symbolic links. You must remove the freeware `cp` command from the `PATH` in order to install the WebSphere Process Server product successfully.

If you have emacs or other freeware installed on your operating system, perform the following steps to identify which `cp` command is being used by the system, and to deactivate the freeware `cp` command if it is being used:

- a. Type which `cp` at the command prompt before running the installation program for the WebSphere Process Server product.
  - b. If the resulting directory output includes freeware, remove the freeware directory from your `PATH`. For example, if the output is similar to `.../freeware/bin/cp`, remove the directory from the `PATH`.
  - c. Install WebSphere Process Server.
  - d. Add the freeware directory back to the `PATH`.
11. Verify that the Java 2 SDK on your copies of the product discs is functioning correctly.

If you created your own product DVD by copying the product DVD, or if you created your own DVD from the electronic download image, perform the following steps to verify that the Java 2 SDK is working correctly:

- a. On your created product disc, navigate to the `/JDK/jre.pak/repository/package.java.jre/java/jre/bin` directory. To do this, issue the following command:

```
cd /JDK/jre.pak/repository/package.java.jre/java/jre/bin
```

- b. Verify the Java 2 SDK version. To do this, issue the following command:  
`./java -version`

The command completes successfully with no errors when the Java 2 SDK is intact.

- c. Repeat this procedure on all other created product discs.

## Results

This procedure prepares the operating system for installation of WebSphere Process Server.

## What to do next

After preparing the operating system, you can install WebSphere Process Server. See Chapter 4, "Installing the software," on page 67 for descriptions of the various installation alternatives available.

## Setting kernel values on HP-UX systems

Several HP-UX kernel values are typically too small for a WebSphere Process Server installation. You must set selected kernel parameters to higher values.

## About this task

Use the following procedure to set kernel parameters for use with WebSphere Process Server:

### Procedure

1. If you are not already logged into the host workstation as root, do so.

2. Determine the physical memory. Knowing the memory limits of your machine is important in order to avoid setting certain kernel parameters higher than the available physical capacity. To determine the physical memory, perform the following steps:
  - a. Start the HP-UX System Administration Manager (SAM) utility with the `/usr/sbin/sam` command.
  - b. Select **Performance Monitors > System Properties > Memory**.
  - c. Note the value for Physical Memory and select **OK**.
  - d. Exit from the SAM utility.
3. Certain parameters such as `maxfiles` and `maxfiles_lim` need values higher than 4096. In order to do this, you must first edit the `/usr/conf/master.d/core-hpux` file so that the SAM utility can set values greater than 2048. The following table recommends 8000 and 8196, respectively. To edit this file, perform the following steps:
  - a. Open the `/usr/conf/master.d/core-hpux` file in a text editor.
  - b. Change the line `*range maxfiles<=2048` to `*range maxfiles<=60000`.
  - c. Change the line `*range maxfiles_lim<=2048` to `*range maxfiles_lim<=60000`.
  - d. Save and close the file.
4. The SAM utility stores old values in the `/var/sam/boot.config` file. To retain the new values, force the SAM utility to create a new `boot.config` file by performing the following steps:
  - a. Move the existing version of the `/var/sam/boot.config` file to another location, such as the `/tmp` directory.
  - b. Start the SAM utility.
  - c. Select **Kernel Configuration > Configurable Parameters**. When the Kernel Configuration window opens, a new `boot.config` file is created.

Alternatively, rebuild the `boot.config` file with the following command:

```
# /usr/sam/sbin/getkinfo -b
```
5. Set the new kernel parameter values by doing the following:
  - a. Start the SAM utility with the `/usr/sbin/sam` command.
  - b. In the SAM utility, select **Kernel Configuration > Configurable Parameters**.
  - c. For each of the parameters in the following table, perform this procedure:
    - 1) Highlight the parameter to change.
    - 2) Select **Actions > Modify Configurable Parameter**.
    - 3) Type the new value in the **Formula/Value** field.
    - 4) Select **OK**.

Change typical kernel settings for running WebSphere Process Server in the order shown in the following table.

Parameter	Value
<code>swchunk</code>	8192
<code>shmseg</code>	512
<code>maxdsiz</code>	3221225472
<code>maxdsiz_64bit</code>	64424509440
<code>maxfiles_lim</code>	10000 (Change this one before <code>maxfiles</code> .)
<code>maxfiles</code>	8192
<code>semume</code>	512



Parameter	Value
semmsl	3072
msgssz	512 (Change this one before msgmax)
nkthread	10000
max_thread_proc	4096
nproc	8192 (Change this one before maxuprc)
maxuprc	4096
nflocks	11585
ninode	8110
msgmap	13109
msgseg	32767 (Change this one before msgmax)
msgmnb	65535 (0x10000) (Change this one before msgmax)
msgmnb	131070 (when running multiple profiles on the same system)
msgmax	65535 (0x10000)
msgmax	131070 (when running multiple profiles on the same system)
msgmni	4634
semms	11586
semmni	8192
semmnu	8180
shmmax	185513715302
shmmni	8192
STRMSGSZ	65535
dbc_max_pc	10
nstrpty	60
cmc_plat_poll	15
msgtql	13107

When WebSphere Process Server and IBM DB2 are on the same workstation, some kernel values are higher than those shown in the table.

See the recommended HP-UX kernel configuration parameters for DB2 Universal Database, version 8.x, in the DB2 information center: DB2 Information Center.

6. Select **Actions > Process New Kernel**.
7. Select **Yes** on the information window to confirm your decision to restart the workstation.  
Follow the on-screen instructions to restart your workstation and to enable the new settings.
8. If you plan to redirect displays to non-HP workstations, perform the following steps before running the WebSphere Process Server installation wizard:
  - a. Issue the following command to obtain information on all the public locales that are accessible to your application:  
# locale -a
  - b. Choose a value for your system from the output that is displayed and set the LANG environment variable to this value. Here is an example command that sets the value of LANG to en\_US.iso88591:

```
# export LANG=en_US.iso88591
```

## Preparing i5/OS systems for installation

Learn how to prepare an i5/OS system for installation of WebSphere Process Server.

### About this task

The installation uses an InstallShield Multiplatform (ISMP) wizard. Install on i5/OS in one of three ways:

- Interactively from a Windows PC connected to an i5/OS system.
- Non-interactively with a silent installation running from a Windows PC connected to an i5/OS system.
- Non-interactively with a silent installation performed natively on an i5/OS system.

Silent mode is invoked at a command line with a parameter that identifies a response file, which you edit before installing.

Use the following procedure to prepare the operating system for installation of WebSphere Process Server.

### Procedure

1. Stop all WebSphere Application Server, WebSphere Process Server, and WebSphere Enterprise Service Bus servers that might be running under the QWAS61 subsystem from other product installations on the system.
2. Verify that the QWAS61 subsystem is ended by using the WRKACTJOB SBS command. If the subsystem is still active, end it using the endsbs command.
3. Verify that your system meets all hardware and software prerequisites, and install prerequisite software if necessary. See WebSphere Process Server detailed system requirements at <http://www.ibm.com/support/docview.wss?uid=swg27006205> and select the link to your version of the product.

If you are running a System i server with i5/OS that does not meet the minimum recommended hardware requirements for WebSphere Process Server, you can still install and run the product. However, the WebSphere Process Server environment might run slowly, and your applications might not run successfully.

4. Obtain and install the correct i5/OS cumulative PTF package. See Cumulative PTFs for System i for more information.
5. Verify that you have the latest Group PTFs for the Java, database, and HTTP Server products applied on the system.

### Results

This procedure prepares the operating system for installation of WebSphere Process Server.

### What to do next

After preparing the operating system, you can install WebSphere Process Server. See Chapter 4, "Installing the software," on page 67 for descriptions of the various installation alternatives available.

## Configuring subsystems on i5/OS

You can use the `startServer` command to change the default WebSphere Application Server subsystem and native objects to the WebSphere Business Integration (WBI) subsystem and native objects.

### About this task

By default, WebSphere Process Server runs in a subsystem that is provided by WebSphere Application Server. That subsystem is named `QWAS61` and is already provided and configured by WebSphere Application Server. In addition the WBI native objects are `QWBIJOBQ`, `QWBIOUTQ`, `QWBIJOBQD`, and `QWBI61`. By default WebSphere Process Server will not configure the WebSphere Process Server server to use them.

However, if desired, the server can be switched to use the `QWBI61` subsystem. For example, these steps will allow you to start the WebSphere Business Integration application server in the WebSphere Business Integration subsystem using WebSphere Business Integration native objects.

### Procedure

1. Go to i5/OS command line and start Qshell.
2. From Qshell, enter the following command:

```
startServer - profileName ProcSrv01 -jobd QWBI61/QWBIJOBQ -jobq  
/QWBI61/QWBIJOBQ -outq /QWBI61/QWBIOUTQ -sbs /QWBI61/QWBI61
```

## Preparing Linux systems for installation

Learn how to prepare a Linux system for installation of WebSphere Process Server.

### About this task

The installation uses an InstallShield MultiPlatform (ISMP) wizard. You can also install the product silently. Silent mode is invoked at a command line with a parameter that identifies a response file, which you edit before installing. Non-root installation support is available for both the Installation wizard and for silent installations.

While this topic lists many steps that are common to all Linux distributions, specific Linux distributions might require additional steps. Complete all common steps, as well as any additional steps that are required for your distribution. If your distribution is not listed in this topic, but is supported by WebSphere Process Server, check for any post-release technical notes that are available for your operating system at the product support site at WebSphere Process Server Support. If a technical note is not available for your distribution, additional steps might not be required.

When additional steps are required, it is typically because a default installation of the distribution does not provide required libraries or operating system features. If you install WebSphere Process Server on a customized Linux installation that has installed packages which differ significantly from the packages provided by a default installation of the distribution, ensure that your customized installation has the packages required for WebSphere Process Server to run. WebSphere Process Server does not maintain lists of the packages required for each Linux distribution or for updates to each distribution.

Use the following procedure to prepare the operating system for installation of WebSphere Process Server. For WebSphere Application Server to run adequately, your Linux installation must have the following items:

- Kernel and C runtime library
- Current and all compatibility versions of the C++ runtime library
- X Windows libraries and runtime
- GTK runtime libraries

### Procedure

1. Log on to the system. Your user ID does not need to have root privileges.
2. Select a umask that allows the owner to read and write to the files, and allows others to access them according to the prevailing system policy. For root users, a umask of 022 is recommended. For non-root users, a umask of 002 or 022 can be used, depending on whether the users share the group.

To verify the umask setting, issue the following command:

```
umask
```

To set the umask setting to 022, issue the following command:

```
umask 022
```

3. Optional: Download and install the Mozilla Firefox Web browser so that you can use the launchpad application on the product disk. If you do not have the Firefox browser, download and install the browser from Mozilla.

**Important:** You might have to start ">firefoxURL" from directories other than the one where Firefox is installed, so make sure Firefox is in the path. You can add a symbolic link to the /opt/bin directory by typing ">ln -s /locationToFirefox/firefox firefox".

4. Optional: Export the location of the supported browser.

Export the location of the supported browser using a command that identifies the location of the browser.

For example, if the Firefox package is in the /opt/bin/firefox directory, use the following command:

```
export BROWSER=/opt/bin/firefox
```

5. Stop all Java processes related to WebSphere Application Server, WebSphere Application Server Network Deployment, WebSphere Process Server, or WebSphere Enterprise Service Bus on the workstation on which you are installing the product.

6. Stop any Web server process such as the IBM HTTP Server.

7. Provide adequate disk space. For the space required to install WebSphere Process Server and related products, see WebSphere Process Server detailed system requirements at <http://www.ibm.com/support/docview.wss?uid=swg27006205> and select the link to your version of the product.

8. Verify that prerequisites and corequisites are at the required release levels.

Although the installation wizard checks for prerequisite operating system patches, review the prerequisite supported hardware and software for WebSphere Process Server if you have not already done so. To access this information, see WebSphere Process Server detailed system requirements at WebSphere Process Server detailed system requirements and select the link to your version of WebSphere Process Server.

Refer to the documentation for non-IBM prerequisite and corequisite products to learn how to migrate to their supported versions.

9. Increase the ulimit setting in the bash command shell profile to prevent problems with the addNode and importWasprofile commands and to prevent the ejbdeploy from failing when too many files are open.

The addNode command script can fail when adding a node, or the importWasprofile command can fail when importing a configuration archive. The importWasprofile command might fail during the installation of a customized installation package (CIP) when the CIP includes a customized profile.

Set a higher ulimit setting for the kernel in the bash shell profile script, which is loaded at login time for the session. Set the ulimit on your Linux command shells by adding the command to your shell profile script. The shell profile script is usually found under your home directory. To set the ulimit to 8192, issue the following commands:

- a. `cd ~`
- b. `vi .bashrc`
- c. `ulimit -n 8192`

**Note:** You need to have root privileges in order to run the ulimit command.

For more information on the addNode command, see The WebSphere Application Server addNode command or the importWasprofile command can fail on Linux systems.

10. Restore the original copy of the etc/issue file if the file is modified.

The prereqChecker program in the installation wizard uses the file to verify the version of the operating system. If you cannot restore the original version, ignore the Operating System Level Check message about the operating system being unsupported. The installation can continue successfully despite the warning.

11. Verify that the system cp command is used, rather than the cp command provided by emacs or other freeware.

If you install the product using a cp command that is part of a freeware package, rather than with the system cp command, the installation might appear to complete successfully, but the Java 2 SDK that the product installs might have missing files in the *install\_root*/java directory (where *install\_root* represents the installation directory of WebSphere Process Server).

Missing files can destroy required symbolic links. You must remove the freeware cp command from the PATH in order to install the WebSphere Process Server product successfully.

If you have emacs or other freeware installed on your operating system, perform the following steps to identify which cp command is being used by the system, and to deactivate the freeware cp command if it is being used:

- a. At the command prompt, type `which cp`.
- b. If the resulting directory output includes freeware, remove the freeware directory from your PATH. For example, if the output is similar to `.../freeware/bin/cp`, remove the directory from the PATH.

After installing WebSphere Process Server (when instructed in a later topic), add the freeware directory back to the PATH variable.

12. Complete any distribution-specific set up.

Complete the steps for your distribution: For more information, see the following WebSphere Application Server specific topics:

- Red Hat Enterprise Linux 5
- Red Hat Enterprise Linux 4

- SuSE Linux Enterprise Server 9.0 SP2 or 3
- SUSE Linux Enterprise Server (SLES) 10.0

If you are using a supported distribution other than those listed above, examine the WebSphere Application Server support site for any technical notes that are published for your distribution. If technical notes have been published, apply the fixes.

13. Verify that the Java 2 SDK on your copies of the product discs is functioning correctly.

If you created your own product DVD by copying the product DVD, or if you created your own DVD from the electronic download image, perform the following steps to verify that the Java 2 SDK is working correctly:

- a. On your created product disc, navigate to the `/JDK/jre.pak/repository/package.java.jre/java/jre/bin` directory. To do this, issue the following command:

```
cd /JDK/jre.pak/repository/package.java.jre/java/jre/bin
```

- b. Verify the Java 2 SDK version. To do this, issue the following command:

```
./java -version
```

The command completes successfully with no errors when the Java 2 SDK is intact.

- c. Repeat this procedure on all other created product discs.

## Results

This procedure prepares the operating system for installation of WebSphere Process Server.

## What to do next

After preparing the operating system, you can install WebSphere Process Server. See Chapter 4, “Installing the software,” on page 67 for descriptions of the various installation alternatives available.

## Installing and verifying Linux packages

Learn how to install and verify prerequisite libraries (packages) that WebSphere Process Server products require on Linux systems.

## Before you begin

Install the Linux operating system and complete the steps in “Preparing Linux systems for installation” on page 45 before using this procedure.

## About this task

Assume that your Linux operating system requires the `compat-libstdc++-33-3.2.3-47.3` package and that there are two versions of the package. One version is for 32-bit platforms and the other is for 64-bit platforms. This procedure shows how to query the operating system to see if the packages are installed, find the missing packages on the operating system disk, and install the packages.

This example uses Red Hat Enterprise Linux (RHEL) on a PowerPC 64-bit hardware platform. The example assumes that RHEL requires both the 32-bit version and the 64-bit version of the `compat-libstdc++-33-3.2.3-47.3` package.

## Procedure

1. Query the operating system to determine if the packages are already installed by issuing the following command:

```
rpm -qa | grep compat-libstdc++-33-3.2.3-
```

In this example, the operating system did not find any matching packages so a blank line is displayed.

You can also search without the `grep` argument to see an explicit message about the file by issuing the following command:

```
rpm -q compat-libstdc++-33-3.2.3-
```

The operating system returns the following message:

```
package compat-libstdc++-33-3.2.3- is not installed
```

2. Find all related packages on the operating system media to get the fully qualified locations.

This example assumes that the operating system media is a CD mounted at `/media/cdrom`. Your CD-ROM device might be at a different location, such as `/media/cdrecorder`, for example.

```
find /media/cdrom -name compat-libstdc++-33-3.2.3-*
```

In this example, the operating system finds two matching package names. One package is the 32-bit version and the other is the 64-bit version.

```
/media/cdrom/RedHat/RPMS/compat-libstdc++-33-3.2.3-47.3.ppc.rpm  
/media/cdrom/RedHat/RPMS/compat-libstdc++-33-3.2.3-47.3.ppc64.rpm
```

3. Install the first missing package by issuing the following command:  

```
rpm -ivh /media/cdrom/RedHat/RPMS/compat-libstdc++-33-3.2.3-47.3.ppc.rpm
```
4. Install the second missing package by issuing the following command:  

```
rpm -ivh /media/cdrom/RedHat/RPMS/compat-libstdc++-33-3.2.3-47.3.ppc64.rpm
```
5. Optional: **Alternative method to find and install packages in one command:** Use the following command to find packages and to install all packages that are found.

Find the packages as described in the earlier step to verify that the following command installs only the packages that you intend to install.

```
find /media/cdrom -name compat-libstdc++-33-3.2.3-* | xargs rpm -ivh
```

This single command installs both packages.

6. Optional: **Alternative command to update existing packages:** Use the following command to find and install missing packages or to find and update existing packages:

```
find /media/cdrom -name compat-libstdc++-33-3.2.3-* | xargs rpm -Uvh
```

This single command installs a package when the package is not installed. This command updates a package to a newer version when the package is installed.

## What to do next

Required packages vary per operating system. See “Preparing Linux systems for installation” on page 45 for a list of required packages for each Linux operating system.

## Preparing Solaris systems for installation

Learn how to prepare a Solaris system for installation of WebSphere Process Server.

## About this task

The installation uses an InstallShield MultiPlatform (ISMP) wizard. You can also install the product silently. Silent mode is invoked at a command line with a parameter that identifies a response file, which you edit before installing.

If you encounter a problem such as needing more temporary space or missing prerequisite packages on your operating system, cancel the installation, make the required changes, and restart the installation.

**Restriction:** The Profile Management Tool is an Eclipse-based application and there are known issues with using Cygwin/X to run Eclipse-based applications on remote Solaris machines. This affects your use of the Profile Management Tool and the Installation Factory. With Cygwin/X on remote AIX, for example, a splash screen for the Profile Management Tool appears but the Profile Management Tool never actually comes up. For details of existing Bugzilla reports on these issues, see the information at Bugzilla – Bug 36806. If a different X server (such as Hummingbird Exceed) is used, these problems do not occur.

Use the following procedure to prepare the operating system for installation of WebSphere Process Server.

### Procedure

1. Log on to the system. Your user ID does not need to have root privileges.
2. Select a umask that allows the owner to read and write to the files, and allows others to access them according to the prevailing system policy. For root users, a umask of 022 is recommended. For non-root users, a umask of 002 or 022 can be used, depending on whether the users share the group.

To verify the umask setting, issue the following command:

```
umask
```

To set the umask setting to 022, issue the following command:

```
umask 022
```

3. Select the **Entire Group** option on the Select Solaris Software Group panel.
4. Optional: Install the Mozilla browser if it is not already installed. The Mozilla browser supports the launchpad console. Download and install the Mozilla browser from Mozilla.
5. Optional: Export the location of the supported browser.  
Export the location of the supported browser using a command that identifies the location of the browser.

For example, if the Mozilla package is in the /usr/bin/mozilla directory, use the following commands:

```
BROWSER=/usr/bin/mozilla  
export BROWSER
```

6. Optional: Configure Exceed to disable Automatic Font Substitution. When you use the Hummingbird Exceed package to connect to a workstation running the Solaris operating system, and then invoke the Profile Management Tool, some font sizes and styles display differently than they would when performing the same operation from the native Solaris display. The font sizes and style changes are based on the font selections in the bundled Java Runtime Environment (JRE). To prevent the various font changes, configure Hummingbird Exceed to disable Automatic Font Substitution:
  - a. From the Hummingbird Exceed user interface, select **Xconfig > Font > Font Database > Disable (Automatic Font Substitution)**.



- b. Select **OK**.
  - c. Restart the Hummingbird Exceed package.
7. Stop all Java processes related to WebSphere Application Server, WebSphere Application Server Network Deployment, WebSphere Process Server, or WebSphere Enterprise Service Bus on the workstation on which you are installing the product.
  8. Stop any Web server process such as the IBM HTTP Server.
  9. Provide adequate disk space. For the space required to install WebSphere Process Server and related products, see WebSphere Process Server detailed system requirements at <http://www.ibm.com/support/docview.wss?uid=swg27006205> and select the link to your version of the product.
  10. Set kernel values to support WebSphere Process Server.  
Several Solaris kernel values are typically too small for the product. See “Setting kernel values on Solaris systems” on page 52 for instructions on how to set kernel values.
  11. Verify that prerequisites and corequisites are at the required release levels.  
Although the installation wizard checks for prerequisite operating system patches, review the prerequisite supported hardware and software for WebSphere Process Server if you have not already done so. To access this information, see WebSphere Process Server detailed system requirements at Supported Hardware and Software Website and select the link to your version of WebSphere Process Server.  
Refer to the documentation for non-IBM prerequisite and corequisite products to learn how to migrate to their supported versions.
  12. Verify that the system **cp** command is used, rather than the **cp** command provided by emacs or other freeware.  
If you install the product using a **cp** command that is part of a freeware package, rather than with the system **cp** command, the installation might appear to complete successfully, but the Java 2 SDK that the product installs might have missing files in the *install\_root*/java directory (where *install\_root* represents the installation directory of WebSphere Process Server).  
Missing files can destroy required symbolic links. You must remove the freeware **cp** command from the PATH in order to install the WebSphere Process Server product successfully.  
If you have emacs or other freeware installed on your operating system, perform the following steps to identify which **cp** command is being used by the system, and to deactivate the freeware **cp** command if it is being used:
    - a. Type which cp at the command prompt before running the installation program for the WebSphere Process Server product.
    - b. If the resulting directory output includes freeware, remove the freeware directory from your PATH. For example, if the output is similar to `.../freeware/bin/cp`, remove the directory from the PATH.
    - c. Install WebSphere Process Server.
    - d. Add the freeware directory back to the PATH.
  13. Verify that the Java 2 SDK on your copies of the product discs is functioning correctly.  
If you created your own product DVD by copying the product DVD, or if you created your own DVD from the electronic download image, perform the following steps to verify that the Java 2 SDK is working correctly:

- a. On your created product disc, navigate to the `/JDK/jre.pak/repository/package.java.jre/java/jre/bin` directory. To do this, issue the following command:

```
cd /JDK/jre.pak/repository/package.java.jre/java/jre/bin
```

- b. Verify the Java 2 SDK version. To do this, issue the following command:  
`./java -version`

The command completes successfully with no errors when the Java 2 SDK is intact.

- c. Repeat this procedure on all other created product discs.

## Results

This procedure prepares the operating system for installation of WebSphere Process Server.

## What to do next

After preparing the operating system, you can install WebSphere Process Server. See Chapter 4, “Installing the software,” on page 67 for descriptions of the various installation alternatives available.

## Setting kernel values on Solaris systems

Some Solaris kernel values are typically too small for a WebSphere Process Server installation. Learn how to set selected kernel parameters to higher values.

### About this task

Use the following procedure to set kernel parameters.

#### Procedure

1. If you are not already logged into the host workstation as root, do so.
2. Review the workstation configuration.  
Do this by entering the following command:  
`sysdef -i`
3. Set the kernel values. The kernel parameters you must change and the way you do so differ depending on which version on Solaris you have installed.

- If you have Solaris 9 installed, do the following:

- a. Edit the `/etc/system` file. Use the values shown in the following example:

```
set shmsys:shminfo_shmmax = 4294967295
set shmsys:shminfo_shmseg = 1024
set shmsys:shminfo_shmmni = 1024
set semsys:seminfo_semaem = 16384
set semsys:seminfo_semni = 1024
set semsys:seminfo_semmap = 1026
set semsys:seminfo_semns = 16384
set semsys:seminfo_semmsl = 100
set semsys:seminfo_semopm = 100
set semsys:seminfo_semnu = 2048
set semsys:seminfo_semume = 256
set msgsys:msginfo_msgmap = 1026
set msgsys:msginfo_msgmax = 65535
set rlim_fd_cur = 1024
```

- b. Reboot the operating system.

- If you have Solaris 10 installed, do the following:

- a. Alter the value of `shmmax` in the `etc/project` file by using the `projmod` command, as follows:  

```
# projmod -a -K "project.max-shm-memory=(priv,4G,deny)" default
```
- b. Reboot the operating system.

### What to do next

For more information about setting up the Solaris system, see the administration documentation on the Sun Web site at <http://docs.sun.com>.

## Preparing Windows systems for installation

Learn how to prepare a Windows system for installation of WebSphere Process Server.

### Before you begin

The installation uses an InstallShield MultiPlatform (ISMP) wizard. You can also install the product silently. Silent mode is invoked at a command line with a parameter that identifies a response file, which you edit before installing.

**Note:** Installing WebSphere Process Server from an unmapped network drive (such as `\\hostname\sharename` in Windows Explorer) or a virtual drive is not supported. You must first map the network drive to a Windows drive letter (for example, Z:) before attempting to install WebSphere Process Server.

### About this task

#### Vista

#### Notes on WebSphere Process Server support for Microsoft® Windows Vista and Windows Server 2008 operating systems:

- The Windows Vista operating system is similar to the Microsoft Windows XP operating system in that it is not a server platform; but rather, it is geared towards client-side operation.
- There are several differences in the Windows Vista and Windows Server 2008 operating systems from the Microsoft Windows 2003 and XP operating systems. From the standpoint of WebSphere Process Server installation and operation, one of the most significant changes is the introduction of User Account Control (UAC). UAC is enabled by default in the Windows Vista and Windows Server 2008 operating systems.

#### – Types of user account

With previous versions of the Microsoft Windows operating systems, it was typical for a user to install WebSphere Process Server using the built-in Administrator account. On the Windows Vista and Windows Server 2008 operating systems, however, the Administrator account is disabled by default and its use is discouraged. In place of the Administrator account, a user account with administrator group privileges is created when the operating system is installed. However, even this account runs by default with standard user (non-administrative) privileges. This documentation refers to this account as the "administrator account."

In addition to the initial administrator account, it is possible to create other accounts in the Windows Vista and Windows Server 2008 operating systems. These other accounts are not members of the administrator group by default. Both of these account types run by default with standard user privileges and do not execute with Administrator privileges. Under certain circumstances

both account types can run with Administrator privileges, but in either case the user's privileges must be elevated in order to achieve this.

– **Administrator elevation**

When the Windows Vista operating system detects that an operation requires Administrator privileges, it might present the user with an elevation prompt for Administrator privileges that requests user confirmation before continuing with the operation.

- When the elevation prompt is presented from the administrator account, the user is only required to confirm the operation.
- When this happens from an account that is not a member of the administrators group, the user is required to provide the Administrator account's password before the operation is allowed to continue.

– **Registry and directory access**

- Certain areas of the operating system's registry require Administrator privileges before keys can be created, deleted, or modified.

If a program needs to create or modify registry entries located in these protected areas, in order to configure a Windows Service, for example, that program must be running with Administrator privileges. It is not possible to perform such actions while running under standard user privileges.

- Certain areas of the operating system's file system require Administrator privileges before program files can be created, deleted, or modified.

The Program Files directory is one such area. If a program needs to modify files located under the Program Files directory (such as log files, profiles, or configuration files), that program must be running with Administrator privileges. It is not possible to perform such actions while running under standard user privileges.

Use the following procedure to prepare the operating system for installation of WebSphere Process Server.

**Procedure**

1. Log on to the system.

Your user ID need not have Administrator privileges. However, installing the product as non-Administrator does create some restrictions. For example, you will not be able to create a Windows service for WebSphere Process Server. Creating a Windows service requires the user to have the advanced user rights Act as part fo the operating system and Log on as a service.

**Tip:** Windows service creation can be disabled by launching the graphical interface from the command line with the following option: `install.exe -OPT PROF_winserviceCheck="false"`

The installation wizard grants your Windows user ID the advanced user rights if the user ID belongs to the Administrator group. The silent installation does not grant these rights. If you create a new user ID on a Windows platform to perform a silent installation, you must restart the system to activate the proper authorizations for the user ID before you can perform a successful silent installation.

When installing WebSphere Process Server as a Windows service, do not use a user ID that contains spaces. A user ID with spaces cannot be validated and the installation cannot continue.

Also, the program will not register with the operating system if you do not log onto the system as an Administrator. For more details on restrictions, see

the following topic in the WebSphere Application Server Network Deployment, version 6.1.x information center: Limitations of non-root installers.

i5/OS

**On i5/OS platforms:** If you plan to use the launchpad to install WebSphere Process Server on an i5/OS system, sign onto a Windows system. You use the Windows system as a client machine to connect to the System i server while performing the interactive installation. The launchpad runs on the Windows client. To install on an i5/OS system, you must use a valid i5/OS user profile for that system. The user profile must have \*ALLOBJ and \*SECADM authorities. Without these authorities, the installation will fail.

2. Optional: Download the latest supported version of Internet Explorer from the following location, so that you can use the Launchpad.

Download Internet Explorer 6 Service Pack 1

3. Optional: Download and install Mozilla 1.7.5 or later.
4. Stop all Java processes related to WebSphere Application Server, WebSphere Application Server Network Deployment, WebSphere Process Server, or WebSphere Enterprise Service Bus on the workstation on which you are installing the product.
5. Stop any Web server process such as the IBM HTTP Server.
6. Stop all instances of the process\_spawner.exe program.
7. Provide adequate disk space. For the space required to install WebSphere Process Server and related products, see WebSphere Process Server detailed system requirements at <http://www.ibm.com/support/docview.wss?uid=swg27006205> and select the link to your version of the product.
8. Verify that prerequisites and corequisites are at the required release levels. Although the installation wizard checks for prerequisite operating system patches, review the prerequisite supported hardware and software for WebSphere Process Server if you have not already done so. To access this information, see WebSphere Process Server detailed system requirements at WebSphere Process Server detailed system requirements and select the link to your version of WebSphere Process Server.

Refer to the documentation for non-IBM prerequisite and corequisite products to learn how to migrate to their supported versions.

9. If needed, download Microsoft Windows Script Host version 5.6 to create Start menu items correctly on Windows operating systems.

To check if you have this component already installed and to install it if you do not, open a command window and type `cscript`.

- If the component is installed, the usage and options information for it appear. Proceed to next step.
  - If the component is not installed, you must download and install it from one of the following Microsoft Web pages:
    - For Windows XP Windows Script 5.6 for Windows XP and Windows 2000
    - For Windows Server 2003: Windows Script 5.6 for Windows Server 2003
10. Verify that the Java 2 SDK on your copies of the product discs is functioning correctly.

If you created your own product DVD by copying the product DVD, or if you created your own DVD from the electronic download image, perform the following steps to verify that the Java 2 SDK is working correctly:

- a. On your created product disc, navigate to the `/JDK/jre.pak/repository/package.java.jre/java/jre/bin` directory. To do this, issue the following command:

```
cd /JDK/jre.pak/repository/package.java.jre/java/jre/bin
```

- b. Verify the Java 2 SDK version. To do this, issue the following command:  
`./java -version`

The command completes successfully with no errors when the Java 2 SDK is intact.

- c. Repeat this procedure on all other created product discs.

## Results

This procedure prepares the operating system for installation of WebSphere Process Server.

## What to do next

After preparing the operating system, you can install WebSphere Process Server. See Chapter 4, “Installing the software,” on page 67 for descriptions of the various installation alternatives available.

---

## Creating the Common database manually before product installation

Use these instructions if you decide to create the Common database manually.

### About this task

WebSphere Process Server provides default scripts that you can use to create the Common database manually. You might want to create the database manually in the following situations:

- If your organization requires that the database be created by a user with DBA privileges, that user must create the Common database before creating or augmenting profiles.
- If you intend to create or augment profiles during product installation, a user with DBA privileges must create the Common database before you install WebSphere Process Server.

### Procedure

1. Go to the directory that contains the database creation scripts. The scripts are located both on the product media and in a directory after product installation. By default, the scripts are located in the following directories:
  - Location on the product media:
    - `i5/OS` `Linux` `UNIX` `<media_root>/dbscripts` or `<extract_directory>/dbscripts`
    - `Windows` `<media_root>\dbscripts` or `<extract_directory>\dbscripts`
  - Location after installation:
    - `i5/OS` `Linux` `UNIX` `install_root/dbscripts`
    - `Windows` `install_root\dbscripts`
2. Open the directory containing the Common database scripts for your database product. The default location depends on the platform:

- `i5/OS Linux UNIX .../CommonDB/db_type`
- `Windows ... \CommonDB\db_type`

The variable `db_type` represents the supported database type. Refer to Table 18 to locate your database type and directory name.

Applicable database types and their directory names are as follows:

Table 18. Applicable database types and their directory names

Database type	Directory name	Corresponding subtopic
DB2 for i5/OS [native][toolbox]	DB2iSeries	“Creating the DB2 database for i5/OS”
DB2 Universal Database (for all operating systems except z/OS® and i5/OS)	DB2	“Creating the DB2 database” on page 59
DB2 for z/OS Version 8.x	DB2zOSV8	“Creating the DB2 database for z/OS” on page 60
DB2 for z/OS Version 9.x	DB2zOSV9	
Informix®	Informix	“Creating the Informix database” on page 61
Oracle	Oracle	“Creating the Oracle database” on page 63
Microsoft SQL Server	SQLServer	“Creating the Microsoft SQL Server database” on page 64

3. Click the Corresponding subtopic link in Table 18 to proceed with creating the common database manually.

## Creating the DB2 database for i5/OS

In order to create a Common database manually, you need to edit and run the scripts that come with WebSphere Process Server. This topic tells you how to edit and run scripts associated with the DB2iSeries database.

### About this task

Before you can run scripts to create a DB2iSeries database manually, you need to customize them for WebSphere Process Server. WebSphere Process Server comes with following scripts:

Table 19. DB2 for i5/OS scripts for WebSphere Process Server

createDatabase_CommonDB.sql
createTable_AppScheduler.sql
createTable_mediation.sql
createTable_RelationshipMetadataTable.sql
createTable_customization.sql
dropTable_AppScheduler.sql
configCommonDB
createTable_CommonDB.sql
createTable_lockmanager.sql
createTable_Recovery.sql
createTable_EsbLoggerMediation.sql

Table 19. DB2 for i5/OS scripts for WebSphere Process Server (continued)

insertTable_CommonDB.sql
configCommonDB.bat
createDBTables

### Procedure

1. Make sure that you are using a user ID with sufficient authority to update the database schema.
2. Locate the directory where the database scripts are located:
  - `<media_root>/dbscripts/CommonDB` or `<extract_directory>/dbscripts/CommonDB`
3. Locate the configCommonDB file.
  - a. Replace the `DB_NAME` variable with the database name, for example `*LOCAL` or `*SYSBAS`.
  - b. Replace the `DB_USER` variable with the DB2 for i5/OS user name, for example `db2admin`.
  - c. Replace the `DB_SCHEMA` variable with the DB2 for i5/OS schema name, for example `WPRCSDB`.

**Important:** You need to pass the `createDB` parameter to the configCommonDB script if you want to create a new local database; otherwise an existing database will be used.

Also, you need to specify a unique schema name that does not exist on the system already.

4. Locate the insertTable\_CommonDB.sql file and replace the following variables with the WebSphere Process Server version you are installing. For example, if the WebSphere Process Server version is 6.2.0.0 then:
  - a. Replace the `MajorVersion` variable with the first digit of the product version number, for example 6.
  - b. Replace the `MinorVersion` variable with the second digit of the product version number, for example 2.
  - c. Replace the `RefreshPackLevel` variable with the third digit of the product version number, for example 0.
  - d. Replace the `FixpackLevel` variable with the fourth digit of the product version number, for example 0.
5. Run the configCommonDB script in QShell. This in turn will run the createDBTables script to create the necessary schema and tables for the Common database.

**Important:** You need to have `*SECOFR` authority on the i5/OS system before you can run these scripts.

6. If there are any errors, or failure is indicated in your database client output, fix the reported errors and try again.

### Results

The schema for the Common database is created.



## Creating the DB2 database

In order to create a Common database manually, you need to edit and run the scripts that come with WebSphere Process Server. This topic tells you how to edit and run scripts associated with the DB2 database.

### About this task

Before you can run scripts to create a DB2 database manually, you need to customize them for WebSphere Process Server. WebSphere Process Server comes with following scripts:

Table 20. DB2 scripts for WebSphere Process Server

createTable_CommonDB.sql
createTable_lockmanager.sql
createTable_Recovery.sql
createTable_EsbLoggerMediation.sql
createTable_governancerepository.sql
insertTable_CommonDB.sql
createTable_Relationship.sql
createTable_AppScheduler.sql
createTable_mediation.sql
createTable_RelationshipMetadataTable.sql
createTable_RelationshipViewMetaTable.sql
createTable_customization.sql
createTable_DirectDeploy.sql

### Procedure

1. Make sure that you are using a user ID with sufficient authority to update the database schema.
2. Locate the directory where the database scripts are located:
  - **i5/OS** **Linux** **UNIX** `<media_root>/dbscripts/CommonDB` or `<extract_directory>/dbscripts/CommonDB`
  - **Windows** `<media_root>\dbscripts\CommonDB` or `<extract_directory>\dbscripts\CommonDB`
3. Locate the configCommonDB.bat or configCommonDB.sh file and perform the following subtasks:
  - a. Replace the `DB_NAME` variable with the database name, for example WPRCSDB.
  - b. Replace the `DB_USER` variable with the database user name, for example db2admin.

**Important:** You need to pass the `createDB` parameter to the configCommonDB script if you want to create a new local database; otherwise an existing database will be used.

4. Locate the createDatabase\_CommonDB.sql file and perform the following subtask.
  - a. Replace the `DB_NAME` variable with the database name, for example WPRCSDB.

5. Locate the insertTable\_CommonDB.sql file and replace the following variables with the WebSphere Process Server version you are installing. For example, if the WebSphere Process Server version is 6.2.0.0 then:
  - a. Replace the *MajorVersion* variable with the first digit of the product version number, for example 6.
  - b. Replace the *MinorVersion* variable with the second digit of the product version number, for example 2.
  - c. Replace the *RefreshPackLevel* variable with the third digit of the product version number, for example 0.
  - d. Replace the *FixpackLevel* variable with the fourth digit of the product version number, for example 0.
6. Run the configCommonDB.bat or configCommonDB.sh script. This in turn will run the createDBTables script to create the necessary schema and tables for the Common database.
7. If there are any errors, or failure is indicated in your database client output, fix the reported errors and try again.

## Results

The DB2 database is created.

## Creating the DB2 database for z/OS

In order to create a Common database manually, you need to edit and run the scripts that come with WebSphere Process Server. This topic tells you how to edit and run scripts associated with the DB2 for z/OS database.

### About this task

Before you can run scripts to create a DB2 for z/OS database manually, you need to customize them for WebSphere Process Server. WebSphere Process Server comes with following scripts:

Table 21. DB2 for z/OS scripts for WebSphere Process Server

createTable_CommonDB.sql
createTable_lockmanager.sql
createTable_Recovery.sql
createTable_EsbLoggerMediation.sql
createTable_governancerepository.sql
insertTable_CommonDB.sql
createTable_Relationship.sql
createTable_AppScheduler.sql
createTable_mediation.sql
createTable_RelationshipMetadataTable.sql
createTable_RelationshipViewMetaTable.sql
createTable_customization.sql
createTable_DirectDeploy.sql

### Procedure

1. Make sure that you are using a user ID with sufficient authority to update the database schema.
2. Locate the directory where the database scripts are located:
  - `i5/OS` `Linux` `UNIX` `<media_root>/dbscripts/CommonDB` or `<extract_directory>/dbscripts/CommonDB`
  - `Windows` `<media_root>\dbscripts\CommonDB` or `<extract_directory>\dbscripts\CommonDB`
3. Choose whether to edit the scripts in directory DB2zOSV8 or DB2zOSV9.
4. Locate the `insertTable_CommonDB.sql` file and replace the following variables with the WebSphere Process Server version you are installing. For example, if the WebSphere Process Server version is 6.2.0.0 then:
  - a. Replace the *MajorVersion* variable with the first digit of the product version number, for example 6.
  - b. Replace the *MinorVersion* variable with the second digit of the product version number, for example 2.
  - c. Replace the *RefreshPackLevel* variable with the third digit of the product version number, for example 0.
  - d. Replace the *FixpackLevel* variable with the fourth digit of the product version number, for example 0.
5. Replace the following variables in the DB2 for z/OS scripts with your database-specific information: `V_DBNAME`, `V_DBSTORAGEGROUP`, `V_SQLID`, `DBNAME`, and `STOGRP`.
6. Run the DB2 for z/OS scripts, which are listed in Table 21 on page 60. For information on how to run a `.sql` script with your database, refer to the documentation for your database product.
7. If there are any errors, or failure is indicated in your database client output, fix the reported errors and try again.

## Results

The DB2 for z/OS database is created.

## Creating the Informix database

In order to create a Common database manually, you need to edit and run the scripts that come with WebSphere Process Server. This topic tells you how to edit and run scripts associated with the Informix database.

### About this task

Before you can run scripts to create an Informix database manually, you need to customize them for WebSphere Process Server. WebSphere Process Server comes with following scripts:

Table 22. Informix scripts for WebSphere Process Server

<code>createDatabase_CommonDB.sql</code>
<code>createTable_AppScheduler.sql</code>
<code>createTable_mediation.sql</code>
<code>createTable_RelationshipMetadataTable.sql</code>
<code>createTable_customization.sql</code>
<code>dropTable_AppScheduler.sql</code>

Table 22. Informix scripts for WebSphere Process Server (continued)

configCommonDB.sh
createTable_CommonDB.sql
createTable_lockmanager.sql
createTable_Recovery.sql
createTable_EsbLoggerMediation.sql
insertTable_CommonDB.sql
configCommonDB.bat

### Procedure

1. Make sure that you are using a user ID with sufficient authority to update the database schema.
2. Locate the directory where the database scripts are located:
  - **i5/OS** **Linux** **UNIX** `<media_root>/dbscripts/CommonDB` or `<extract_directory>/dbscripts/CommonDB`
  - **Windows** `<media_root>\dbscripts\CommonDB` or `<extract_directory>\dbscripts\CommonDB`
3. Locate the createDatabase\_CommonDB.sql file and perform the following subtasks.
  - a. Replace the `DB_NAME` variable with the name of the database, for example WPRCSDB.
  - b. Replace the `DB_INSTANCE` variable with the Informix instance, for example ol\_myinstance.
  - c. Replace the `DB_LOCATION` variable with the Informix database location, for example c:\informix.
4. Locate the insertTable\_CommonDB.sql file and replace the following variables with the WebSphere Process Server version you are installing. For example, if the WebSphere Process Server version is 6.2.0.0 then:
  - a. Replace the `MajorVersion` variable with the first digit of the product version number, for example 6.
  - b. Replace the `MinorVersion` variable with the second digit of the product version number, for example 2.
  - c. Replace the `RefreshPackLevel` variable with the third digit of the product version number, for example 0.
  - d. Replace the `FixpackLevel` variable with the fourth digit of the product version number, for example 0.
5. Run the configCommonDB.bat or configCommonDB.sh script. This in turn will run the createDBTables script to create the necessary schema and tables for the Common database.
6. If there are any errors, or failure is indicated in your database client output, fix the reported errors and try again.

### Results

The Informix database is created.

## Creating the Oracle database

In order to create a Common database manually, you need to edit and run the scripts that come with the WebSphere Process Server. This topic tells you how to edit and run scripts associated with the Oracle database.

### About this task

Before you can run scripts to create an Oracle database manually, you need to customize them for WebSphere Process Server. WebSphere Process Server comes with following scripts:

Table 23. Oracle scripts for WebSphere Process Server

configCommonDB.bat
configCommonDB.sh
createDatabase_commonDB.sql
createTable_AppScheduler.sql
createTable_commonDB.sql
createTable_customization.sql
createTable_EsbLoggerMediation.sql
createTable_governancerepository.sql
createTable_lockmanager.sql
createTable_mediation.sql
createTable_Recovery.sql
createTable_RelationshipMetadataTable.sql
createTable_RelationshipViewMetaaTable.sql
insertTable_CommonDB.sql

### Procedure

1. Make sure that you are using a user ID with sufficient authority to update the database schema.
2. Locate the directory where the database scripts are located:
  - **i5/OS** **Linux** **UNIX** `media_root/dbscripts/CommonDB/oracle` or `<extract_directory>/dbscripts/CommonDB/oracle`
  - **Windows** `media_root\dbscripts\CommonDB\oracle` or `<extract_directory>\dbscripts\CommonDB\oracle`
3. Locate the configCommonDB.bat or configCommonDB.sh file and perform following subtasks:
  - a. Replace the `DB_NAME` variable with the Oracle Database name [SID], for example ORCL.
  - b. Replace the `DB_USER` variable with Oracle user, for example orauser.
4. Locate the createSchema\_CommonDB.sql file which is a template used to create required schemas. To create a database schema:
  - a. Replace the `DBUSER` variable with the database schema name. For example, orcCOMM.
  - b. Replace the `DBPASS` variable with the database schema password. For example, youNameIt.
  - c. Repeat the above steps for each additional schema.

The following components require a schema. These schemas will be generated automatically if not passed during profile creation. The default schemas are:

Table 24. Default schemas

Component	Default value
CommonDB	<i>first3CharOfSIDCOMM</i>
Business Space	IBMBUSSP
SCA.SYSTEM ME	<i>first3CharOfSIDSS00</i>
SCA.APP ME	<i>first3CharOfSIDSA00</i>
CEI ME	<i>first3CharOfSIDCM00</i>
BPC ME	<i>first3CharOfSIDBM00</i>
CEI	<i>first3CharOfSIDCEID</i>

For the above parameters, the value of the password depends on how you configure the profile. The Value can be a dbPassword or the value that is used while running the manageprofiles command. To run these scripts you must have SYSDBA privileges.

5. Locate the insertTable\_CommonDB.sql file and replace the following variables with the WebSphere Process Server version you are installing. For example, if the WebSphere Process Server version is 6.2.0.0 then:
  - a. Replace the *MajorVersion* variable with the first digit of the product version number, for example 6.
  - b. Replace the *MinorVersion* variable with the second digit of the product version number, for example 2.
  - c. Replace the *RefreshPackLevel* variable with the third digit of the product version number, for example 0.
  - d. Replace the *FixpackLevel* variable with the fourth digit of the product version number, for example 0.
6. Copy all of the scripts from the *extract\_directory\dbscripts\CommonDB* directory to the Oracle workstation and run the configCommonDB.bat or configCommonDB.sh script.
7. If there are any errors, or failure is indicated in your database client output, fix the reported errors and try again.

## Results

The Oracle database is created.

## Creating the Microsoft SQL Server database

In order to create a Common database manually, you need to edit and run the scripts that come with WebSphere Process Server. This topic tells you how to edit and run scripts associated with the Microsoft SQL Server database.

### About this task

Before you can run scripts to create a Microsoft SQL Server database manually, you need to customize them for WebSphere Process Server. WebSphere Process Server comes with following scripts:

Table 25. Microsoft SQL Server scripts for WebSphere Process Server

createDatabase_CommonDB.sql
-----------------------------

Table 25. Microsoft SQL Server scripts for WebSphere Process Server (continued)

createTable_AppScheduler.sql
createTable_mediation.sql
createTable_RelationshipMetadataTable.sql
createTable_customization.sql
dropTable_AppScheduler.sql
createTable_CommonDB.sql
createTable_lockmanager.sql
createTable_Recovery.sql
createTable_EsbLoggerMediation.sql
insertTable_CommonDB.sql
configCommonDB.sh
configCommonDB.bat

### Procedure

1. Make sure that you are using a user ID with sufficient authority to update the database schema.
2. Locate the directory where the database scripts are located:
  - **i5/OS** **Linux** **UNIX** <media\_root>/dbscripts/CommonDB or <extract\_directory>/dbscripts/CommonDB
  - **Windows** <media\_root>\dbscripts\CommonDB or <extract\_directory>\dbscripts\CommonDB
3. Locate the configCommonDB.bat or configCommonDB.sh file and perform the following subtasks:
  - a. Replace the *DB\_NAME* variable with the database name, for example MASTER.
  - b. Replace the *DB\_USER* variable with the database user name, for example sqluser.
  - c. Replace the *DB\_HOSTNAME* variable with the SQL host name, for example me.usca.ibm.com.
4. Locate the insertTable\_CommonDB.sql file and replace the following variables with the WebSphere Process Server version you are installing. For example, if the WebSphere Process Server version is 6.2.0.0 then:
  - a. Replace the *MajorVersion* variable with the first digit of the product version number, for example 6.
  - b. Replace the *MinorVersion* variable with the second digit of the product version number, for example 2.
  - c. Replace the *RefreshPackLevel* variable with the third digit of the product version number, for example 0.
  - d. Replace the *FixpackLevel* variable with the fourth digit of the product version number, for example 0.
5. Run the Microsoft SQL Server scripts, which are listed in Table 25 on page 64. For information on how to run a .sql script with your database, refer to the documentation for your database product.
6. If there are any errors, or failure is indicated in your database client output, fix the reported errors and try again.

## Results

The Microsoft SQL Server database is created.



---

## Chapter 4. Installing the software

You can obtain WebSphere Process Server product files in two ways, from the disks in the product package or by downloading installation images from the Passport Advantage site, if you are licensed to do so. You install the software using the installation wizard in graphical interface mode or in silent mode. In silent mode, the installation wizard does not display a graphical interface, but reads your responses from a response file.

Before installing the software for WebSphere Process Server, assess your current environment and your business requirements to ensure that the system you implement meets your needs. Middleware, such as WebSphere Process Server, requires that you evaluate many aspects of your enterprise information system (EIS), such as capacity and security.

For more information about planning your installation and on the databases required by WebSphere Process Server, see the topics under Planning for WebSphere Process Server.

Then review installation prerequisites in “Prerequisites for installing WebSphere Process Server” on page 31.

After planning your installation and reviewing prerequisites, install the software from the appropriate disk or distribution media. You can choose to install the software silently using a response file or interactively using the installation wizard.

- To install interactively on all platforms, see “Installing WebSphere Process Server interactively” on page 79.
- **Linux** **UNIX** **Windows** To install silently on Linux, UNIX, and Windows platforms, see “Installing silently on Linux, UNIX, and Windows” on page 123.
- **i5/OS** To install silently on i5/OS platforms from a Windows workstation command line, see “Installing silently on i5/OS from a Windows workstation command line” on page 129.
- **i5/OS** To install silently on i5/OS platforms from a System i server, see “Installing silently on i5/OS from a System i server” on page 127.

Installing the software creates a set of core product files on the workstation. These files are needed for you to configure stand-alone servers and deployment environments.

During installation your choices will include the following options:

- If you already have WebSphere Application Server or WebSphere Application Server Network Deployment installed, you can choose one of the following options:
  - Install WebSphere Process Server or the WebSphere Process Server Client as a separate installation that will coexist with the WebSphere Application Server installation on the same workstation. This is the most suitable option if you are installing WebSphere Process Server for the first time.
  - Extend WebSphere Application Server or WebSphere Application Server Network Deployment version 6.1.x, to have WebSphere Process Server capability.

- If you already have version 6.2 of WebSphere Process Server, the WebSphere Process Server Client, or WebSphere Enterprise Service Bus installed, you can choose one of the following options:
  - Install WebSphere Process Server or the WebSphere Process Server Client as a separate installation that will coexist with the existing installation on the same workstation.
  - Convert an existing WebSphere Enterprise Service Bus or WebSphere Process Server Client installation to a WebSphere Process Server installation.
  - Install additional features on an existing installation of WebSphere Process Server.

**Restriction:** You cannot install version 6.2 of WebSphere Process Server or the WebSphere Process Server Client over an existing version 6.0.x or 6.1.x installation of WebSphere Process Server, the WebSphere Process Server Client, or WebSphere Enterprise Service Bus. You must migrate the existing installation to version 6.2.

See Migrating to WebSphere Process Server for more information.

- You can choose the type of installation you want to perform from the following options:
  - **Typical installation** (the default), which if required installs WebSphere Process Server and also installs WebSphere Application Server Network Deployment with Feature Pack for Web Services using default installation selections and configurations. You can optionally install the WebSphere Process Server Samples. You can also create a stand-alone server, deployment manager, or custom profile, or bypass this option and later use the Profile Management Tool to create profiles.
  - **Deployment environment installation**, which if required installs WebSphere Process Server and also installs WebSphere Application Server Network Deployment with Feature Pack for Web Services, and guides you through setting up a deployment environment. You can create a deployment manager and choose a deployment environment pattern for it or choose a cluster or clusters to apply to a managed node.
  - **Client installation**, which installs the WebSphere Process Server Client and optionally installs WebSphere Application Server Network Deployment with Feature Pack for Web Services using default installation selections and configurations. It allows you to run client applications that interact with WebSphere Process Server.

After installing the software from the appropriate disk or distribution media, install the most recent fix pack on top. For information about installing fix packs on WebSphere Process Server, see the instructions under *Recommended fixes* on the support pages at <http://www.ibm.com/software/integration/wps/support/>.

**Note:** WebSphere Process Server interim fixes can be automatically installed by placing them in a predefined or a user defined directory location. For more information see “Automatic installation of interim fixes” on page 538.

After performing either a Typical or Deployment environment installation, you can create a stand-alone server, a deployment manager, a custom profile, or a deployment environment configuration using the Profile Management Tool. You can also use the First steps console to validate that a stand-alone server or deployment manager profile was created successfully, to start and stop the server, and to perform other tasks.

---

## Starting the launchpad

The launchpad for WebSphere Process Server is the single point of reference for installing the entire server environment, which can include WebSphere Process Server or the WebSphere Process Server Client, WebSphere Application Server Network Deployment, a set of Web development tools, a Web server, message service clients, and additional supporting software and documentation.

### Before you begin

The launchpad application is available on the product DVD and on downloaded installation images. Do the following before starting it:

- Review the list of prerequisites for installing the product in the topic “Prerequisites for installing WebSphere Process Server” on page 31.
- Because the launchpad is a Web application, ensure you have a supported version of a Web browser installed.

**Linux**   **UNIX**   **Windows**   **On Linux, UNIX, and Windows platforms:** The platform-specific topics under “Preparing the operating system for WebSphere Process Server installation” on page 35 contain detailed instructions for installing supported Web browsers on all platforms.

### About this task

Perform the following procedure to use the launchpad.

#### Procedure

1. If you have not done so already, log on to the system.

**Linux**   **UNIX**   **Windows**   **On Linux, UNIX, and Windows platforms:** Your user ID need not have root or Administrator privileges. However, installing the product as a non-root or non-Administrator user does create some restrictions. For example, you will not be able to create a Windows or Linux service for WebSphere Process Server. Also, the program will not register with the operating system. For more details on restrictions of non-root installers, see the following topic in the WebSphere Application Server Network Deployment, version 6.1.x information center: Limitations of non-root installers.

**i5/OS**   **On i5/OS platforms:** If you plan to use the launchpad to install WebSphere Process Server on an i5/OS system, sign onto a Windows system. You use the Windows system as a client machine to connect to the System i server while performing the interactive installation. The launchpad runs on the Windows client. To install on an i5/OS system, you must use a valid i5/OS user profile for that system. The user profile must have \*ALLOBJ and \*SECADM authorities. Without these authorities, the installation will fail.

2. If you have not done so already, access the media in one of the following ways, depending on whether you are installing from the product DVD or from images downloaded from Passport Advantage.
  - If you are installing from the product DVD, insert the product disk labeled *WebSphere Process Server V6.2* into the disk drive. Mount the disk drive if necessary, as described in “Mounting disk drives on Linux and UNIX operating systems” on page 551.
  - If you are installing from images downloaded from Passport Advantage, navigate to the directory into which you extracted the images.

3. Start the launchpad in one of the following ways, depending on whether you are installing from the product DVD or from images downloaded from Passport Advantage.
    - If you are installing from the product DVD:
      - **i5/OS** **On i5/OS platforms:** (You use a Windows system client machine to connect to the i5/OS system.) From a command line in the root directory of the disc drive, enter the command `launchpad.exe`.
      - **Linux** **UNIX** **On Linux and UNIX platforms:** Enter the command `mount_point/launchpad.sh` where *mount\_point* represents the mount point on the Linux or UNIX system.
      - **Windows** **On Windows platforms:** From a command line in the root directory of the disc drive, enter the command `launchpad.exe`.
    - If you are installing from images downloaded from Passport Advantage, enter the following command, where *extract\_directory* represents the directory into which you extracted the electronic image:
      - **i5/OS** **On i5/OS platforms:** (You use a Windows system client machine to connect to the i5/OS system.) From a command line, `extract_directory\launchpad.exe`.
      - **Linux** **UNIX** **On Linux and UNIX platforms:** `extract_directory/launchpad.sh`.
      - **Windows** **On Windows platforms:** From a command line, `extract_directory\launchpad.exe`.
- The launchpad is displayed. If you have a problem starting the launchpad, use the troubleshooting information in “Troubleshooting the launchpad application” on page 674 to correct the problem.
4. Optional: If the launchpad did not initialize in the language used on your system, select your language in the **Language selection** field.

## Results

You can use the launchpad to start the installation of WebSphere Process Server and related products. See “Options on the launchpad” for descriptions of the components you can install with the launchpad.

## What to do next

Return to the installation procedure from which you accessed this topic to continue.

## Options on the launchpad

The launchpad for WebSphere Process Server provides several options you can select to install the entire server environment. This environment can include WebSphere Process Server or the WebSphere Process Server Client, WebSphere Application Server Network Deployment, a set of Web development tools, a Web server, message service clients, and additional supporting software and documentation.

**Important:** **i5/OS** **On i5/OS platforms:** If you plan to use the launchpad to install WebSphere Process Server on an i5/OS system, sign onto a Windows system. You use the Windows system as a client machine to connect to the System

i server while performing the interactive installation. The launchpad runs on the Windows client and you will use all the Windows commands listed for the launchpad options.

The launchpad contains a link for each installable component from the *WebSphere Process Server V6.2 DVD*, the *WebSphere Application Server Network Deployment Supplements V6.1 CD*, and the *WebSphere Application Server Toolkit V6.1.1 Disk 1 CD* (supplied on Linux IA32 and Windows IA32 media only).

The following sections within this topic describe the various launchpad panels in more detail.

- “Welcome panel”
- “IBM WebSphere Process Server for Multiplatforms installation panel ”
- “IBM WebSphere Process Server database scripts” on page 72
- **i5/OS** “IBM WebSphere Profile Management Tool Client for i5/OS installation panel” on page 72
- **AIX** **Linux** **Solaris** **Windows** “Message service clients installation panel” on page 72
- **AIX** **Linux** **Solaris** **Windows** “Message Service Client for C/C++ installation panel” on page 73
- **Windows** “Message Service Client for .NET installation panel” on page 73
- “Additional software installation panel” on page 74
- **Linux** **UNIX** **Windows** “IBM HTTP Server installation panel” on page 74
- “Web Server plug-ins installation panel” on page 75
- “Application Clients installation panel” on page 76
- **Linux** **Windows** “Application Server Toolkit installation panel” on page 77
- “IBM Update Installer for WebSphere Software installation panel” on page 77
- “IBM WebSphere Installation Factory panel” on page 78
- “IBM WebSphere Process Server Help System installation panel” on page 78
- **Linux** **UNIX** **Windows** “IBM Support Assistant installation panel” on page 78

## Welcome panel

The Welcome panel is the first panel that is displayed when the launchpad is started. Selecting an entry in either the right or the left pane causes an individual launchpad panel to be displayed, which includes links to the installation program for the component and (for most components) to documentation that describes the product, how to install it, and how to configure it for use.

## IBM WebSphere Process Server for Multiplatforms installation panel

If you select **IBM WebSphere Process Server installation** from the left pane of the launchpad Welcome panel, the following options are presented in the right pane:

### Launch the installation wizard for WebSphere Process Server for Multiplatforms

Starts the installation wizard to install WebSphere Process Server for Multiplatforms. This program exists on the *WebSphere Process Server V6.2 DVD*, in the following location:

- **Linux** **UNIX** **On Linux, and UNIX platforms:** /WBI/install
- **Windows** **On Windows platforms:** \WBI\install.exe

### Open the information center

Links to complete technical product information, available online, in PDF book format, or as Eclipse document plug-ins, which you can download and install on a local system.

### View critical information

Provides links to the latest critical fixes for and information about this release.

## IBM WebSphere Process Server database scripts

If you select **IBM WebSphere Process Server database scripts** from the left pane of the launchpad Welcome panel, information on the right pane gives the location of scripts you can use to optionally create the database and database tables required for the WebSphere Process Server environment prior to product installation. The following option is also presented in the right pane:

### View documentation on the database scripts in the information center

Provides the latest information on how to use the database scripts.

## IBM WebSphere Profile Management Tool Client for i5/OS installation panel

**Restriction:** **i5/OS** This selection appears only on launchpads for i5/OS platforms.

If you select **IBM WebSphere Profile Management Tool Client for i5/OS installation** from the left pane of the launchpad Welcome panel, the following option is presented in the right pane:

**Launch the installation wizard for the IBM Profile Management Tool Client for i5/OS** Installs IBM WebSphere Profile Management Tool Client for i5/OS using the installation wizard. This tool is used to create and augment profiles in a WebSphere Process Server installation on an i5/OS system.

## Message service clients installation panel

**Restriction:** **AIX** **Linux** **Solaris** **Windows** This selection appears only on launchpads for AIX PPC32, AIX PPC64, Linux IA32, Linux IA64, Solaris SPARC, Solaris SPARC64, and Windows IA32 platforms.

The Message service clients extend the messaging capabilities of WebSphere Process Server to non-Java environments. These capabilities can exploit TCP/IP, SSL, HTTP, and HTTPS to support interoperation with the WebSphere family, including WebSphere Application Server, WebSphere MQ, and WebSphere Message Broker. You can use a broad range of interaction models such as request/reply, point-to-point, and publish/subscribe. To use these clients, you must install them on the systems where the related applications are running. This software is not required for using WebSphere Process Server.

If you select **Message service clients installation** from the left pane of the launchpad Welcome panel, the following options are presented in the right pane:

### Open the information center

Links to complete technical product information, available online, in PDF book format, or as Eclipse document plug-ins, which you can download and install on a local system.

### IBM Message Service Client for C/C++

Opens the launchpad panel used to start the installation wizard for the IBM Message Service Client for C/C++. For more information on this panel, see “Message Service Client for C/C++ installation panel.”

### IBM Message Service Client for .NET

Opens the launchpad panel used to start the installation wizard for the IBM Message Service Client for .NET. For more information on this panel, see “Message Service Client for .NET installation panel.”

## Message Service Client for C/C++ installation panel

**Restriction:** AIX Linux Solaris Windows This selection appears only on launchpads for AIX PPC32, AIX PPC64, Linux IA32, Linux IA64, Solaris SPARC, Solaris SPARC64, and Windows IA32 platforms.

If you select IBM Message Service Client for C/C++ from the Message service clients installation panel, the following options are presented in the right pane:

### Launch the installation wizard for IBM Message Service Client for C/C++

Starts the installation wizard to install the IBM Message Service Client for C/C++. This program exists on the *WebSphere Process Server V6.2 DVD*, in the following location:

- AIX **On AIX platforms:** /MsgClients/XMSCC/setupAix.bin
- Linux **On Linux IA32 platforms:** /MsgClients/XMSCC/setuplinuxia32
- Linux **On Linux IA64 platforms:** /MsgClients/XMSCC/setuplinux-86\_64
- Solaris **On Solaris platforms:** /MsgClients/XMSCC/setupsolaris
- Windows **On Windows platforms:** \MsgClients\XMSCC\setup.exe

### Open the information center

Links to complete technical product information, available online, in PDF book format, or as Eclipse document plug-ins, which you can download and install on a local system.

## Message Service Client for .NET installation panel

**Restriction:** Windows This selection appears only on the launchpad for the Windows IA32 platform.

This client supports .NET messaging applications.

If you select IBM Message Service Client for .NET from the Message service clients installation panel, the following options are presented in the right pane:

### Launch the installation wizard for IBM Message Service Client for .NET

Starts the installation wizard to install the IBM Message Service Client for .NET. This program exists on the *WebSphere Process Server V6.2 DVD*, in the following location:

- **Windows** On Windows platforms: \MsgClients\XMSNET\dotNETClientsetup.exe

### Open the information center

Links to complete technical product information, available online, in PDF book format, or as Eclipse document plug-ins, which you can download and install on a local system.

## Additional software installation panel

In addition to WebSphere Process Server and WebSphere Application Server Network Deployment, the product package also includes additional software to support the runtime environment: Web development tools, a Web server, and additional supporting software and documentation. This software is not required for using WebSphere Process Server.

If you select **Additional software installation** from the left pane of the launchpad Welcome panel, the following options are presented in the right pane:

#### IBM HTTP Server

Opens the launchpad panel used to start the installation wizard for the IBM HTTP Server. For more information on this panel, see “IBM HTTP Server installation panel.”

#### Web server plug-ins

Opens the launchpad panel used to start the installation wizard for the Web Server Plug-ins. For more information on this panel, see “Web Server plug-ins installation panel” on page 75.

#### Application clients

Opens the launchpad panel used to start the installation wizard for the Application Clients. For more information on this panel, see “Application Clients installation panel” on page 76.

#### Application Server Toolkit

Opens the launchpad panel used to start the installation wizard for the Application Server Toolkit. For more information on this panel, see “Application Server Toolkit installation panel” on page 77.

## IBM HTTP Server installation panel

**Restriction:** **i5/OS** This selection does not appear on the launchpad for i5/OS platforms.

IBM HTTP Server is a Web server based on the Apache HTTP server.

If you select **IBM HTTP Server** from the Additional software installation panel, the following options are presented in the right pane:

### Launch the installation wizard for IBM HTTP Server

Starts the installation wizard to install IBM HTTP Server. This program exists on the *WebSphere Application Server Network Deployment Supplements V6.1 CD*, in the following location:

- **Linux** **UNIX** On Linux and UNIX platforms: /IHS/install



- **Windows** On Windows platforms: \IHS\install.exe

#### View the installation guide for IBM HTTP Server

Provides a direct link to installation documentation for IBM HTTP Server. This file exists on the *WebSphere Application Server Network Deployment Supplements V6.1* CD, in the following location:

- **Linux** **UNIX** On Linux and UNIX platforms:  
/IHS/docs/InstallGuide\_en.html
- **Windows** On Windows platforms: \IHS\docs\InstallGuide\_en.html

#### View the readme file for IBM HTTP Server

Provides a direct link to the readme file for IBM HTTP Server. This file exists on the *WebSphere Application Server Network Deployment Supplements V6.1* CD, in the following location:

- **Linux** **UNIX** On Linux and UNIX platforms:  
/IHS/readme/readme\_en.html
- **Windows** On Windows platforms: \IHS\readme\readme\_en.html

## Web Server plug-ins installation panel

Web Server Plug-ins provide software that forwards HTTP requests from your Web server to your application server.

If you select **Web server plug-ins** from the Additional software installation panel, the following options are presented in the right pane:

#### Launch the installation wizard for Web server plug-ins

Starts the installation wizard to install and configure one or more Web server plug-ins. This program exists on the *WebSphere Application Server Network Deployment Supplements V6.1* CD, in the following location:

- **Linux** **UNIX** On Linux and UNIX platforms: /plugin/install
- **i5/OS** **Windows** On i5/OS and Windows platforms:  
\plugin\install.exe

#### View the installation roadmaps for Web server plug-ins

Provides a direct link to instructions for installing and configuring Web server plug-ins. This file exists on the *WebSphere Application Server Network Deployment Supplements V6.1* CD, in the following location:

- **Linux** **UNIX** On Linux and UNIX platforms:  
/plugin/index\_roadmap\_en.html
- **i5/OS** **Windows** On i5/OS and Windows platforms:  
\plugin\index\_roadmap\_en.html

#### View the installation guide for Web server plug-ins

Provides a direct link to installation documentation for the Web server plug-ins. This file exists on the *WebSphere Application Server Network Deployment Supplements V6.1* CD, in the following location:

- **Linux** **UNIX** On Linux, and UNIX platforms:  
/plugin/docs/InstallGuide\_en.html
- **i5/OS** **Windows** On i5/OS and Windows platforms:  
\plugin\docs\InstallGuide\_en.html

#### View the readme file for Web server plug-ins

Provides a direct link to the readme file for the Web server plug-ins. This

file exists on the *WebSphere Application Server Network Deployment Supplements V6.1* CD, in the following location:

- **Linux** **UNIX** **On Linux, and UNIX platforms:**  
/plugin/readme/readme\_en.html
- **i5/OS** **Windows** **On i5/OS and Windows platforms:**  
\plugin\readme\readme\_en.html

## Application Clients installation panel

**Restriction:** Application Clients are not supplied for Linux on System z or 64-bit platforms (except i5/OS).

Application Clients provide various application programming models for your application server.

If you select **Application clients** from the Additional software installation panel, the following options are presented in the right pane:

### Launch the installation wizard for Application Clients

Starts the installation wizard to install the WebSphere Application Server Application Clients. The Application Clients installation wizard installs environments for running client applications on the client system. A client application processes on a distributed client system and a host WebSphere Application Server system. A client might provide the GUI, but process data on the host, for example. Some environments perform all necessary handshaking and protocol. *Thin* client environments require client applications to have their own protocols for such things as JNDI lookups. This program exists on the *WebSphere Application Server Network Deployment Supplements V6.1* CD, in the following location:

- **Linux** **UNIX** **On Linux and UNIX platforms:** /AppClient/install
- **i5/OS** **Windows** **On iSeries® and Windows platforms:**  
\AppClient\install.exe

### View the installation guide for the Application Clients

Provides a direct link to installation documentation for the WebSphere Application Server Application Clients. This file exists on the *WebSphere Application Server Network Deployment Supplements V6.1* CD, in the following location:

- **Linux** **UNIX** **On Linux and UNIX platforms:**  
/AppClient/docs/InstallGuide\_en.html
- **i5/OS** **Windows** **On i5/OS and Windows platforms:**  
\AppClient\docs\InstallGuide\_en.html

### View the readme file for the Application Clients

Provides a direct link to the readme file for the WebSphere Application Server Application Clients. This file exists on the *WebSphere Application Server Network Deployment Supplements V6.1* CD, in the following location:

- **Linux** **UNIX** **On Linux and UNIX platforms:**  
/AppClient/readme/readme\_en.html
- **i5/OS** **Windows** **On i5/OS and Windows platforms:**  
\AppClient\readme\readme\_en.html

## Application Server Toolkit installation panel

**Restriction:** This selection appears only on launchpads for Linux IA32 and Windows IA32 platforms.

Application Server Toolkit provides basic assembly and deployment tooling for publishing to your application server.

If you select **Application Server Toolkit** from the Additional software installation panel, the following options are presented in the right pane:

### Launch the installation wizard for the Application Server Toolkit

Starts the installation wizard to install the WebSphere Application Server Toolkit on Windows and Linux (Intel) systems only. This program exists on *WebSphere Application Server Toolkit V6.1.1 Disk 1*, in the following location:

- **Linux** On Linux platforms: /install
- **Windows** On Windows platforms: \install.exe

### View the installation guide for the Application Server Toolkit

Provides a direct link to installation documentation for the WebSphere Application Server Toolkit. This file exists on *WebSphere Application Server Toolkit V6.1.1 Disk 1*, in the following location:

- **Linux** On Linux platforms: /readme/readme\_install\_ast.html
- **Windows** On Windows platforms: \readme\readme\_install\_ast.html

### View the readme file for the Application Server Toolkit

Provides a direct link to the readme file for the WebSphere Application Server Toolkit. This file exists on *WebSphere Application Server Toolkit V6.1.1 Disk 1*, in the following location:

- **Linux** On Linux platforms: /readme/readme\_ast.html
- **Windows** On Windows platforms: \readme\readme\_ast.html

## IBM Update Installer for WebSphere Software installation panel

Use this tool to install updates (interim fixes, fix packs and refresh packs) to WebSphere software, including WebSphere Enterprise Service Bus releases, WebSphere Process Server releases, WebSphere Application Server releases, IBM HTTP Server, Web Server plug-ins, and WebSphere Application Clients.

If you select **IBM Update Installer for WebSphere Software installation** from the left pane of the launchpad Welcome panel, the following option is presented in the right pane:

### Launch the installation wizard for IBM Update Installer

Starts the installation wizard to install IBM Update Installer. This program exists on the *WebSphere Process Server V6.2 DVD*, in the following location:

- **Linux** **UNIX** On Linux and UNIX platforms: /UpdateInstaller/install
- **i5/OS** **Windows** On i5/OS and Windows platforms: \UpdateInstaller\install.exe

## IBM WebSphere Installation Factory panel

Use this tool to create a customized WebSphere Process Server installation package. Installation packages can be customized to include updates (interim fixes, fix packs and refresh packs), profile customizations, run scripts, or to install other user-defined files.

If you select **IBM WebSphere Installation Factory** from the left pane of the launchpad Welcome panel, the following option is presented in the right pane:

### View the readme file for the IBM WebSphere Installation Factory

Provides a direct link to the readme file for IBM WebSphere Installation Factory. This file exists on the *WebSphere Process Server V6.2 DVD*, in the following location:

- **Linux** **UNIX** **On Linux and UNIX platforms:**  
/IF/readme/readme\_en.html
- **i5/OS** **Windows** **On i5/OS and Windows platforms:**  
\IF\readme\readme\_en.html

## IBM WebSphere Process Server Help System installation panel

Use this tool to install an Eclipse viewer and allow the information center for WebSphere Process Server to reside on the local computer.

If you select **IBM WebSphere Process Server Help System installation** from the left pane of the launchpad Welcome panel, the following options are presented in the right pane:

### Launch the installation wizard for IBM WebSphere Process Server Help System

Starts the installation wizard to install the IBM WebSphere Process Server Help System. This program exists on the *WebSphere Process Server V6.2 DVD*, in the following location:

- **Linux** **UNIX** **On Linux and UNIX platforms:** /IEHS/install
- **i5/OS** **Windows** **On i5/OS and Windows platforms:**  
\IEHS\install.exe

### View the readme file for the IBM WebSphere Process Server Help System

Provides a direct link to the readme file for the IBM WebSphere Process Server Help System. This file exists on the *WebSphere Process Server V6.2 DVD*, in the following location:

- **Linux** **UNIX** **On Linux and UNIX platforms:**  
/IEHS/readme/readme\_en.html
- **i5/OS** **Windows** **On i5/OS and Windows platforms:**  
\IEHS\readme\readme\_en.html

## IBM Support Assistant installation panel

**Restriction:** This selection does not appear on launchpads for i5/OS, Linux PPC32, Linux on System z, or 64-bit platforms.

Use this tool to resolve questions and problems with IBM software products. It includes searches across multiple sources, access to critical product information, troubleshooting and diagnostic tools, and automated data gathering and problem submission tools. After the ISA is installed, you can install product-specific

plug-ins for WebSphere Process Server and other IBM products by starting the ISA and clicking the **Updater** icon on the Welcome screen.

If you select **IBM Support Assistant installation** from the left pane of the launchpad Welcome panel, the following options are presented in the right pane:

#### **Launch the installation wizard for the IBM Support Assistant**

Starts the installation wizard to install the IBM Support Assistant. This program exists on the *WebSphere Application Server Network Deployment Supplements V6.1* CD, in the following location:

- **Linux** **UNIX** **On Linux and UNIX platforms:** /ISA/install.bin
- **Windows** **On Windows platforms:** \ISA\install.exe

#### **View the readme file for the IBM Support Assistant**

Provides a direct link to the readme file for the IBM Support Assistant. This file exists on the *WebSphere Application Server Network Deployment Supplements V6.1* CD, in the following location:

- **Linux** **UNIX** **On Linux and UNIX platforms:** /ISA/readme.txt
- **Windows** **On Windows platforms:** \ISA\readme.txt

#### **IBM Support Assistant Website**

Links to additional information about the IBM Support Assistant.

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## **Installing WebSphere Process Server interactively**

You can install WebSphere Process Server or the WebSphere Process Server Client using the installation wizard. A Typical installation installs WebSphere Process Server, optionally installs WebSphere Application Server Network Deployment, version 6.1 with Feature Pack for Web Services, and optionally creates a stand-alone server, a deployment manager, or a custom profile. A Deployment environment installation guides you through setting up a new deployment environment or refining an existing one. A Client installation installs the WebSphere Process Server Client.

### **Before you begin**

Ensure that you have reviewed the list of prerequisites for installing the product at “Prerequisites for installing WebSphere Process Server” on page 31.

### **About this task**

If you plan to install from images downloaded from Passport Advantage, see “Special considerations when installing from Passport Advantage” on page 568 for important information.

The language of the installation wizard is determined by the default language on the system. If the default language on the system is not one of the supported languages, English is used. You can override the system’s default language by starting the installation wizard from the command line and using the `java user.language` setting to replace the default language. Use the following command, which can be run from the WBI directory on the product DVD or from an electronic installation image. In this example, the variable `lang` represents the language.

- **i5/OS** **On i5/OS platform:** (You use a Windows system client machine to connect to the i5/OS system.) `..\JDK\jre.pak\repository\package.java.jre\java\jre\bin\java -Duser.language=lang -cp setup.jar run -os400was`

- **Linux** **UNIX** **On Linux and UNIX platforms:** `../JDK/jre.pak/repository/package.java.jre/java/jre/bin/java -Duser.language=lang -cp setup.jar run`
- **Windows** **On Windows platforms:** `..\JDK\jre.pak\repository\package.java.jre\java\jre\bin\java -Duser.language=lang -cp setup.jar run`

For example, to start the installation wizard in the German language on a Windows system, type the following command:

```
..\JDK\jre.pak\repository\package.java.jre\java\jre\bin\java
-Duser.language=de -cp setup.jar run
```

**Restriction:** Do not run two instances of the installation wizard concurrently. If you do so, you will receive a warning about an installation already being in progress.

The installer program does not support console-mode installation.

To install WebSphere Process Server using the installation wizard, complete the following steps.

### Procedure

1. Log on to the system.

**Linux** **UNIX** **Windows** **On Linux, UNIX, and Windows platforms:** Your user ID need not have root or Administrator privileges. However, installing the product as a non-root or non-Administrator user does create some restrictions. For example, you will not be able to create a Windows or Linux service for WebSphere Process Server. Also, the program will not register with the operating system. For more details on restrictions of non-root installers, see the following topic in the WebSphere Application Server Network Deployment, version 6.1.x information center: Limitations of non-root installers.

**i5/OS** **On i5/OS platforms:** If you plan to use the launchpad to install WebSphere Process Server on an i5/OS system, sign onto a Windows system. You use the Windows system as a client machine to connect to the System i server while performing the interactive installation. The launchpad runs on the Windows client. To install on an i5/OS system, you must use a valid i5/OS user profile for that system. The user profile must have \*ALLOBJ and \*SECADM authorities. Without these authorities, the installation will fail.

2. Access the media in one of the following ways, depending on whether you are installing from the product DVD or from images downloaded from Passport Advantage.
  - If you are installing from the product DVD, insert the product disk labeled *WebSphere Process Server V6.2 DVD* into the disk drive. Mount the disk drive if necessary, as described in “Mounting disk drives on Linux and UNIX operating systems” on page 551.
  - If you are installing from images downloaded from Passport Advantage, navigate to the directory into which you extracted the images.
3. Start the installation wizard from the launchpad or a command line.
  - To start the installation from the launchpad:
    - a. Start the launchpad by following the procedure in “Starting the launchpad” on page 69.
    - b. Click **IBM WebSphere Process Server installation**.

c. Click **Launch the installation wizard for WebSphere Process Server for Multiplatforms**.

- To start the installation from a command line, issue the install command as follows, depending on whether you are installing from the product DVD or from images downloaded from Passport Advantage:

When installing from the product DVD, enter the following command:

- **i5/OS** **On i5/OS platforms:** (You use a Windows system client machine to connect to the i5/OS system.) From the root directory of the disk drive, \WBI\install.exe
- **Linux** **UNIX** **On Linux and UNIX platforms:** `mount_point/WBI/install`, where `mount_point` is the mount point on the Linux or UNIX system.
- **Windows** **On Windows platforms:** From the root directory of the disk drive, \WBI\install.exe

When installing from images downloaded from Passport Advantage, enter the following command, where `extract_directory` represents the directory into which you extracted the electronic image:

- **i5/OS** **On i5/OS platforms:** (You use a Windows system client machine to connect to the i5/OS system.) `extract_directory\WBI\install.exe`
- **Linux** **UNIX** **On Linux and UNIX platforms:** `extract_directory/WBI/install`
- **Windows** **On Windows platforms:** `extract_directory\WBI\install.exe`

The next step depends on which platform you are using:

Platform you are installing on	Next step
i5/OS	The i5/OS signon panel is displayed. Go to step 4.
Linux, UNIX, or Windows	The Welcome panel is displayed. Go to step 5.

4. **i5/OS** **On i5/OS platforms:** On the i5/OS signon panel, enter the following information:
  - The target i5/OS system name or IP address.
  - An i5/OS user profile that is valid on the target system. This profile must have \*ALLOBJ and \*SECADM special authorities.
  - The password for the i5/OS user profile.

Click **Next**. The Welcome panel is displayed.

5. On the Welcome panel, click **Next**. The Software license agreement panel is displayed.
6. In the Software license agreement panel, review the IBM and non-IBM licensing terms and, if you agree, select **I accept both the IBM and the non-IBM terms**, and click **Next**.

The installation wizard checks for a supported operating system with prerequisite patches. At the end of the process, the System prerequisites check panel is displayed and indicates whether your system passed the check.

If your system did not pass, cancel the installation, make the required changes, and restart the installation.

7. In the System prerequisites check panel, click **Next**.

**Restriction:** If your user ID does not have root or Administrator privileges, a warning panel is displayed, which describes the restrictions you will encounter during product installation. For example, you will not be able to create a Windows or Linux service for WebSphere Process Server. Also, the program will not register with the operating system. To continue the installation, click **Next**.

The installation wizard checks for existing installations of the following products:

- WebSphere Application Server, Version 6.1.x
- WebSphere Application Server Network Deployment, Version 6.1.x
- WebSphere Process Server, Version 6.2
- WebSphere Process Server Client, Version 6.2
- WebSphere Enterprise Service Bus, Version 6.2

**Important:** The installation wizard also detects unregistered instances of WebSphere Application Server or WebSphere Application Server Network Deployment if they have entries in the .nifregistry file. See “.nifregistry and vpd.properties files” on page 561 for the location of this file based on platform for root, Administrator, or non-root users. Using an unregistered installation of one of these products with your WebSphere Process Server installation is not supported.

If the installation wizard finds existing installations of any WebSphere products, the wizard reports which product or products it found. You must then make choices for your new installation. Do one of the following depending on whether you have existing installations of WebSphere products on your system:

- If you have no existing installations of any WebSphere products on your system, the Installation type panel is displayed. Go to step 9 on page 83.
  - If you have existing installations of any WebSphere products on your system, go to step 8.
8. The panel that is displayed and your next step depend on which WebSphere products the installer found on your system. Choose the next step from Table 26 based on which panel is displayed on your system.

*Table 26. Next step based on existing installations of WebSphere products*

Panel that is displayed	Product found and next step
Detected IBM WebSphere Process Server	An existing installation of WebSphere Process Server by itself or together with installations of other WebSphere products. Go to the topic “Installing with existing WebSphere Process Server installations” on page 84 for instructions to complete your installation.
Detected an installation of an existing product or component	An existing installation of WebSphere Enterprise Service Bus or the WebSphere Process Server Client and no existing installations of WebSphere Process Server. Go to the topic “Installing with existing WebSphere Enterprise Service Bus or WebSphere Process Server Client installations” on page 87 for instructions to complete your installation.



Table 26. Next step based on existing installations of WebSphere products (continued)

Panel that is displayed	Product found and next step
Detected WebSphere Application Server	An existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment, and no existing installations of WebSphere Process Server, WebSphere Process Server Client, or WebSphere Enterprise Service Bus. Go to the topic "Installing with existing WebSphere Application Server or WebSphere Application Server Network Deployment installations" on page 90 for instructions to complete your installation.

- On the Installation type panel, select the type of installation you want to perform and click **Next**.

The installation wizard provides a choice of installation paths (not all might appear based on selections you made on previous panels). The next step depends on the type of installation you want.

Installation type	Next step
<p><b>Typical Installation</b> (the default): installs WebSphere Process Server and optionally installs WebSphere Application Server Network Deployment with Feature Pack for Web Services using default installation selections and configurations. You can optionally install the WebSphere Process Server samples. You can also create a stand-alone server, deployment manager, or custom profile, or choose <b>None</b> to bypass this option and later use the Profile Management Tool to create profiles, which is recommended for production environments.</p> <p><b>Important:</b> If you select to create a stand-alone server profile during a Typical installation and enable security, the installer creates a sample Business Process Choreographer configuration for the profile. If you do not enable security, the sample configuration is not created. If you plan to federate the stand-alone server to a deployment manager, you will first have to delete this sample configuration.</p>	The Features selection panel is displayed. Go to the topic "Installing WebSphere Process Server and creating a profile interactively" on page 93.
<p><b>Deployment Environment Installation:</b> installs WebSphere Process Server and optionally installs WebSphere Application Server Network Deployment with Feature Pack for Web Services, and guides you through setting up a deployment environment. You can create a deployment manager and choose a deployment environment pattern for it or choose a cluster or clusters to apply to a managed node.</p>	The Features selection panel is displayed. Go to the topic "Installing WebSphere Process Server with a deployment environment interactively" on page 100.

Installation type	Next step
<b>Client Installation:</b> installs the WebSphere Process Server Client and optionally installs WebSphere Application Server Network Deployment with Feature Pack for Web Services using default installation selections and configurations. It allows you to run client applications that interact with WebSphere Process Server.	The Installation location panel is displayed. Go to the topic “Installing the WebSphere Process Server Client interactively” on page 112.

## Results

You have started the installation wizard, accepted the licensing agreement, checked prerequisites, and identified any existing installations of WebSphere products that could impact your installation. If no existing installations of WebSphere products impact your installation, you have also chosen the type of installation you want to perform (Typical, Deployment environment, or Client).

## What to do next

Continue your installation by following the instructions from the appropriate link depending on the choices you have made.

## Installing with existing WebSphere Process Server installations

The installation wizard found an existing installation of WebSphere Process Server by itself or together with installations of other WebSphere products on your system. You must decide whether to install a new installation of WebSphere Process Server to coexist with the current one or to instead add features or new profiles to the existing installation.

## About this task

Perform the following procedure to make those choices. This topic assumes that you have already started the installation wizard, accepted the licensing agreement, and checked prerequisites, by following the procedure in “Installing WebSphere Process Server interactively” on page 79. The Detected IBM WebSphere Process Server panel is displayed.

## Procedure

1. On the Detected IBM WebSphere Process Server panel, select an option based on how you want to handle your new WebSphere Process Server installation and click **Next**. The panel that is displayed and your next step depend on the option you select:

Option you select	Next step
<b>Add features to IBM WebSphere Process Server:</b> adds features to an existing installation of WebSphere Process Server, which you select from a list on the panel. <b>Tip:</b> This option is available only when the existing installation of WebSphere Process Server does not have all features installed.	The Features selection panel is displayed. Go to the topic “Installing additional features on an existing installation” on page 116 for instructions to complete your installation.

Option you select	Next step
<p><b>Install a new copy of WebSphere Process Server:</b> installs a new copy of WebSphere Process Server to coexist with the existing version.</p> <p><b>Tip:</b> Also choose this option if you want to install WebSphere Process Server over an existing installation of WebSphere Enterprise Service Bus, WebSphere Process Server Client, WebSphere Application Server or WebSphere Application Server Network Deployment. Succeeding detection panels will identify installations of those products and allow you to install over them.</p>	<p>The next panel depends on whether you have an existing installation of another WebSphere product on your system:</p> <ul style="list-style-type: none"> <li>• If you have no other existing installations of WebSphere products, the Installation type panel is displayed. Go to step 2.</li> <li>• If you have an existing installation of WebSphere Enterprise Service Bus or WebSphere Process Server Client, the "Detected an installation of an existing product or component" panel is displayed. Go to the topic "Installing with existing WebSphere Enterprise Service Bus or WebSphere Process Server Client installations" on page 87.</li> <li>• If you have an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment, and no existing installations of WebSphere Enterprise Service Bus or WebSphere Process Server Client, the Detected WebSphere Application Server panel is displayed. Go to the topic "Installing with existing WebSphere Application Server or WebSphere Application Server Network Deployment installations" on page 90.</li> </ul>
<p><b>Create a new WebSphere Process Server profile using the Profile Management Tool:</b> opens the Profile Management Tool to let you create a new WebSphere Process Server profile in an existing installation you select from a list on the panel.</p>	<p>The Installation results panel is displayed and the Profile Management Tool starts. Click <b>Finish</b> to close the installation wizard.</p>

2. On the Installation type panel, select the type of installation you want to perform and click **Next**.

The installation wizard provides a choice of installation paths (the choice of installation path is based on selections you made on previous panels). The next step depends on the type of installation you want and (in the case of the WebSphere Process Server Client) on whether you are installing over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment.

Option you select	Next step
<p><b>Typical Installation</b> (the default): installs WebSphere Process Server and optionally installs WebSphere Application Server Network Deployment with Web Services Feature Pack using default installation selections and configurations. You can optionally install the WebSphere Process Server samples. You can also create a stand-alone server, deployment manager, or custom profile, or bypass this option and later use the Profile Management Tool to create profiles.</p> <p><b>Important:</b> If you select to create a stand-alone server profile during a Typical installation and enable security, the installer creates a sample Business Process Choreographer configuration for the profile. If you do not enable security, the sample configuration is not created. If you plan to federate the stand-alone server to a deployment manager, you will first have to delete this sample configuration.</p>	<p>The Features selection panel is displayed. Go to the topic “Installing WebSphere Process Server and creating a profile interactively” on page 93 for instructions to complete your installation.</p>
<p><b>Deployment Environment Installation:</b> installs WebSphere Process Server and optionally installs WebSphere Application Server Network Deployment with Web Services Feature Pack, and guides you through setting up a deployment environment. You can create a deployment manager and choose a deployment environment pattern for it or choose a cluster or clusters to apply to a managed node.</p>	<p>The Features selection panel is displayed. Go to the topic “Installing WebSphere Process Server with a deployment environment interactively” on page 100 for instructions to complete your installation.</p>

Option you select	Next step
<p><b>Client Installation:</b> installs the WebSphere Process Server Client and optionally installs WebSphere Application Server Network Deployment with Web Services Feature Pack using default installation selections and configurations. It allows you to run client applications that interact with WebSphere Process Server.</p>	<p>The panel that is displayed depends on whether or not you are installing over an existing WebSphere Application Server or WebSphere Application Server Network Deployment installation:</p> <ul style="list-style-type: none"> <li>• If you are <i>not</i> installing over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment, the Installation location panel is displayed. Go to the topic “Installing the WebSphere Process Server Client interactively” on page 112 for instructions to complete your installation.</li> <li>• If you <i>are</i> installing over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment, the Installation summary panel is displayed. Go to the topic “Installing the WebSphere Process Server Client interactively” on page 112 for instructions to complete your installation.</li> </ul> <p><b>Important:</b> The user who installs WebSphere Process Server must be the same user who installed WebSphere Application Server or WebSphere Application Server Network Deployment.</p>

## Results

You have identified any existing installations of WebSphere Process Server that might impact your new installation. If you have installations of other WebSphere products on your system, you have been directed to other topics that explain how to install the product with those existing installations. If you do not have additional WebSphere products installed on your system, you have chosen the type of installation you want to perform (Typical, Deployment environment, or Client).

## What to do next

Continue your installation by following the instructions from the appropriate link depending on the choices you have made.

## Installing with existing WebSphere Enterprise Service Bus or WebSphere Process Server Client installations

The installation wizard found an existing installation of WebSphere Enterprise Service Bus or WebSphere Process Server Client by itself or together with installations of other WebSphere products on your system. You must decide whether to install a new installation of WebSphere Process Server to coexist with the WebSphere Enterprise Service Bus or WebSphere Process Server Client installation or to instead add WebSphere Process Server functionality to the existing installation.

## About this task

Perform the following procedure to make those choices. This topic assumes that you already have started the installation wizard, accepted the licensing agreement, and checked prerequisites, by following the procedure in “Installing WebSphere Process Server interactively” on page 79. The “Detected an installation of an existing product or component” panel is displayed.

### Procedure

1. On the “Detected an installation of an existing product or component” panel, select an option based on how you want to handle your new WebSphere Process Server installation and click **Next**. The panel that is displayed and your next step depend on the option you select:

Option you select	Next step
<p><b>Install a new copy of WebSphere Process Server:</b> installs a new copy of WebSphere Process Server to coexist with the WebSphere Enterprise Service Bus or WebSphere Process Server Client installation.</p> <p><b>Tip:</b> Also choose this option if you want to install WebSphere Process Server over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment. A succeeding detection panel will identify installations of those products and allow you to install over them.</p>	<p>The next panel depends on whether you have an existing installation of another WebSphere product on your system:</p> <ul style="list-style-type: none"><li>• If you have no other existing installations of WebSphere products, the Installation type panel is displayed. Go to step 2.</li><li>• If you have an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment, the Detected WebSphere Application Server panel is displayed. Go to the topic “Installing with existing WebSphere Application Server or WebSphere Application Server Network Deployment installations” on page 90.</li></ul>
<p><b>Use an existing installation of WebSphere Enterprise Service Bus or Use an existing installation of Client:</b> installs WebSphere Process Server over an existing installation of WebSphere Enterprise Service Bus or WebSphere Process Server Client, version you select from a drop-down list on the panel.</p>	<p>The Features selection panel is displayed. Go to the topic “Converting a WebSphere Enterprise Service Bus or WebSphere Process Server Client installation into a WebSphere Process Server installation” on page 120 for instructions to complete your installation.</p>

2. On the Installation type panel, select the type of installation you want to perform and click **Next**.

The installation wizard provides a choice of installation paths (the choice of installation path is based on selections you made on previous panels). The next step depends on the type of installation you want and (in the case of the WebSphere Process Server Client) on whether you are installing over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment.

Option you select	Next step
<p><b>Typical Installation</b> (the default): installs WebSphere Process Server and optionally installs WebSphere Application Server Network Deployment with Web Services Feature Pack using default installation selections and configurations. You can optionally install the WebSphere Process Server samples. You can also create a stand-alone server, deployment manager, or custom profile, or bypass this option and later use the Profile Management Tool to create profiles.</p> <p><b>Important:</b> If you select to create a stand-alone server profile during a Typical installation and enable security, the installer creates a sample Business Process Choreographer configuration for the profile. If you do not enable security, the sample configuration is not created. If you plan to federate the stand-alone server to a deployment manager, you will first have to delete this sample configuration.</p>	<p>The Features selection panel is displayed. Go to the topic “Installing WebSphere Process Server and creating a profile interactively” on page 93 for instructions to complete your installation.</p>
<p><b>Deployment Environment Installation:</b> installs WebSphere Process Server and optionally installs WebSphere Application Server Network Deployment with Web Services Feature Pack, and guides you through setting up a deployment environment. You can create a deployment manager and choose a deployment environment pattern for it or choose a cluster or clusters to apply to a managed node.</p>	<p>The Features selection panel is displayed. Go to the topic “Installing WebSphere Process Server with a deployment environment interactively” on page 100 for instructions to complete your installation.</p>

Option you select	Next step
<p><b>Client Installation:</b> installs the WebSphere Process Server Client and optionally installs WebSphere Application Server Network Deployment with Web Services Feature Pack using default installation selections and configurations. It allows you to run client applications that interact with WebSphere Process Server.</p>	<p>The panel that is displayed depends on whether or not you are installing over an existing WebSphere Application Server or WebSphere Application Server Network Deployment installation:</p> <ul style="list-style-type: none"> <li>• If you are <i>not</i> installing over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment, the Installation location panel is displayed. Go to the topic “Installing the WebSphere Process Server Client interactively” on page 112 for instructions to complete your installation.</li> <li>• If you <i>are</i> installing over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment, the Installation summary panel is displayed. Go to the topic “Installing the WebSphere Process Server Client interactively” on page 112 for instructions to complete your installation.</li> </ul> <p><b>Important:</b> The user who installs WebSphere Process Server must be the same user who installed WebSphere Application Server or WebSphere Application Server Network Deployment.</p>

## Results

You have identified any existing installations of WebSphere Enterprise Service Bus or WebSphere Process Server Client that might impact your new installation. If you have installations of other WebSphere products on your system, you have been directed to other topics that explain how to install the product with those existing installations. If you do not have additional WebSphere products installed on your system, you have chosen the type of installation you want to perform (Typical, Deployment environment, or Client).

## What to do next

Continue your installation by following the instructions from the appropriate link depending on the choices you have made.

## Installing with existing WebSphere Application Server or WebSphere Application Server Network Deployment installations

The installation wizard found an existing installation of WebSphere Application Server, WebSphere Application Server Network Deployment, or WebSphere Application Server Network Deployment with Web Services Feature Pack. You must decide whether to install a new installation of WebSphere Process Server (with a new underlying installation of WebSphere Application Server Network Deployment with Web Services Feature Pack) or to instead add WebSphere Process Server functionality to the WebSphere Application Server, WebSphere Application Server Network Deployment installation or WebSphere Application Server Network Deployment with Web Services Feature Pack.




## About this task

Perform the following procedure to make those choices. This topic assumes that you already have started the installation wizard, accepted the licensing agreement, and checked prerequisites, by following the procedure in “Installing WebSphere Process Server interactively” on page 79. The Detected WebSphere Application Server panel is displayed.

### Procedure

1. On the Detected WebSphere Application Server panel, select an option based on how you want to handle your new WebSphere Process Server installation:
  - **Install a new copy of WebSphere Application Server Network Deployment with Feature Pack for Web Services:** installs a new copy of WebSphere Application Server Network Deployment with Feature Pack for Web Services during WebSphere Process Server installation.
  - **Use an existing installation of WebSphere Application Server Network Deployment or WebSphere Application Server Network Deployment with Feature Pack for Web Services:** installs WebSphere Process Server over an existing installation of WebSphere Application Server Network Deployment or WebSphere Application Server Network Deployment with Feature Pack for Web Services you select from the list on the panel. (This option is also relevant if you are installing WebSphere Process Server over an existing installation of WebSphere Application Server.)

**Important:** The user who installs WebSphere Process Server must be the same user who installed WebSphere Application Server or WebSphere Application Server Network Deployment.

**Restriction:**  If the selected WebSphere Application Server Network Deployment installation is at an earlier service level and the WebSphere Process Server installation is being done remotely from a Windows client, then the WebSphere Application Server Network Deployment must be updated using a local silent installation from the i5/OS system before continuing with this installation.

After you make your selection, click **Next**. The Installation type panel is displayed.

2. On the Installation type panel, select the type of installation you want to perform and click **Next**.

The installation wizard provides a choice of installation paths (the choice of installation path is based on selections you made on previous panels). The next step depends on the type of installation you want and (in the case of the WebSphere Process Server Client) on whether you are installing over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment.

Option you select	Next step
<p><b>Typical Installation</b> (the default): installs WebSphere Process Server and optionally installs WebSphere Application Server Network Deployment with Web Services Feature Pack using default installation selections and configurations. You can optionally install the WebSphere Process Server samples. You can also create a stand-alone server, deployment manager, or custom profile, or bypass this option and later use the Profile Management Tool to create profiles.</p> <p><b>Important:</b> If you select to create a stand-alone server profile during a Typical installation and enable security, the installer creates a sample Business Process Choreographer configuration for the profile. If you do not enable security, the sample configuration is not created. If you plan to federate the stand-alone server to a deployment manager, you will first have to delete this sample configuration.</p>	<p>The Features selection panel is displayed. Go to the topic “Installing WebSphere Process Server and creating a profile interactively” on page 93 for instructions to complete your installation.</p>
<p><b>Deployment Environment Installation:</b> installs WebSphere Process Server and optionally installs WebSphere Application Server Network Deployment with Web Services Feature Pack, and guides you through setting up a deployment environment. You can create a deployment manager and choose a deployment environment pattern for it or choose a cluster or clusters to apply to a managed node.</p>	<p>The Features selection panel is displayed. Go to the topic “Installing WebSphere Process Server with a deployment environment interactively” on page 100 for instructions to complete your installation.</p>
<p><b>Client Installation:</b> installs the WebSphere Process Server Client and optionally installs WebSphere Application Server Network Deployment with Web Services Feature Pack using default installation selections and configurations. It allows you to run client applications that interact with WebSphere Process Server.</p>	<p>The panel that is displayed depends on whether or not you are installing over an existing WebSphere Application Server or WebSphere Application Server Network Deployment installation:</p> <ul style="list-style-type: none"> <li>• If you are <i>not</i> installing over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment, the Installation location panel is displayed. Go to the topic “Installing the WebSphere Process Server Client interactively” on page 112 for instructions to complete your installation.</li> <li>• If you <i>are</i> installing over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment, the Installation summary panel is displayed. Go to the topic “Installing the WebSphere Process Server Client interactively” on page 112 for instructions to complete your installation.</li> </ul>

## Results

You have identified any existing installations of WebSphere Application Server or WebSphere Application Server Network Deployment that might impact your new installation. You have also chosen the type of installation you want to perform (Typical, Deployment environment, or Client).

## What to do next

Continue your installation by following the instructions from the appropriate link depending on the choices you have made.

## Installing WebSphere Process Server and creating a profile interactively

Use this procedure to install WebSphere Process Server and create a profile using the installation wizard graphical user interface (GUI). You can install WebSphere Application Server Network Deployment with Web Services Feature Pack as part of your installation. You can also install WebSphere Process Server over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment, version 6.1.x.

## About this task

Perform the following procedure to make those choices. This topic assumes that you have started the installation wizard, checked for prerequisites and existing WebSphere installations, and chosen to perform a Typical installation, by following the procedure in “Installing WebSphere Process Server interactively” on page 79. The Features selection panel is displayed.

## Procedure

1. From the Features selection panel, select the feature you want to install and click **Next**.

See “Installable features of WebSphere Process Server” on page 565 for a description of the feature you can select from this panel.

The next step depends on whether or not you are installing over an existing WebSphere Application Server or WebSphere Application Server Network Deployment installation.

Installation status	Next step
You <i>are</i> installing over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment. <b>Important:</b> The user who installs WebSphere Process Server must be the same user who installed WebSphere Application Server or WebSphere Application Server Network Deployment. You cannot install over an existing installation that contains parenthesis in the installation path.	The WebSphere Process Server environments panel is displayed. Proceed to step 3 on page 94.
You are <i>not</i> installing over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment.	The Installation location panel is displayed. Proceed to step 2 on page 94.

- In the Installation location panel, accept the default installation root directory for the products, or specify a different directory, and click **Next**.

**Note:** The installation path cannot contain parentheses.

**i5/OS** **On i5/OS platforms:** The Installation location panel on i5/OS systems also lets you specify the profile installation directory.

**Linux** **UNIX** **Windows** **On Linux, UNIX, and Windows platforms:** The installation wizard presents a system-owned, default installation root directory for root or Administrator users. It presents a different user-owned, default installation root directory for non-root users.

See “Default installation directories for the product, profiles, and tools” on page 539 for information on default installation directories and how they are determined by the installation wizard.

The installation wizard verifies that the installation location is fully qualified, formed correctly, can be written to by the user ID performing the installation, and has sufficient disk space (including any required temporary space) to complete the installation successfully. If you do not have enough space, stop the installation program, free space by deleting unused files and emptying the recycle bin, and restart the installation.

**Important:**

- You must provide a value for the installation root directory to continue.
- i5/OS** **On i5/OS platforms:** The maximum length of each component in the path name is 255 characters. The maximum length of the path name is 16 MB.
- i5/OS** **Linux** **UNIX** **On i5/OS, Linux, and UNIX platforms:** Do not use symbolic links as the installation root directory; they are not supported. Also, do not use spaces in the directory path.
- Windows** **On Windows platforms:** Do not use a semicolon in the directory name on Windows systems (a semicolon is the character used to construct the class path on Windows systems). WebSphere Process Server cannot install properly on a Windows platform if the target directory includes a semicolon.

On completion of this step the WebSphere Process Server environments panel is displayed.

- In the WebSphere Process Server environments panel, choose the type of profile you want to create (or **None** if you do not want to create a profile at this time), and then click **Next**. The next step depends on your selection.

Profile type	Next step
Stand-alone server or Deployment manager	The Administrative security panel is displayed. Proceed to step 5 on page 96.
Custom	The Federation panel is displayed. (A custom profile has an empty node that you must federate to use it.) Proceed to step 4 on page 95.

Profile type	Next step
<p><b>None</b>  <b>Tip:</b> If you are creating a production environment, select <b>None</b> and create profiles later either with the Profile Management Tool or silently.</p>	<p>A warning panel alerts you that your installation cannot function without at least one profile. Do one of the following:</p> <ul style="list-style-type: none"> <li>• Click <b>Yes</b> to continue without creating a profile. The Installation summary panel is displayed. Proceed to step 6 on page 97. After you complete your installation, the final panel of the installation wizard will provide you with a link to open the Profile Management Tool, which provides several options for creating or augmenting new profiles.</li> <li>• Click <b>No</b> to return to the WebSphere Process Server environments panel.</li> </ul>

4. **For custom profiles only:** In the Federation panel, choose to federate the node into the deployment manager now as part of the profile creation, or at a later time and apart from profile creation.

**Important:** Federate the custom node at this time only if all of the following are true:

- No other node is being federated at the same time. (Node federation must be serialized.)
- The deployment manager is running.
- The deployment manager is a WebSphere Process Server deployment manager at the same version level or higher as the custom profile you are creating. WebSphere Process Server profiles cannot use a WebSphere Enterprise Service Bus deployment manager, but WebSphere Enterprise Service Bus profiles can use a WebSphere Process Server deployment manager.
- The deployment manager has a JMX administrative port enabled. The default protocol is SOAP.
- You do not plan to use this custom node as a migration target.

Do *not* federate the custom node at this time if any one of the following is true:

- Another profile is being federated. (Node federation must be serialized.)
- The deployment manager is not running or you are not sure if it is running.
- The deployment manager has not yet been augmented into a WebSphere Process Server deployment manager.
- The deployment manager does not have a JMX administrative port enabled.
- The deployment manager is reconfigured to use the non-default remote method invocation (RMI) as the preferred Java Management Extensions (JMX) connector. (Select **System administration > Deployment manager > Administration services** in the administrative console of the deployment manager to verify the preferred connector type.)
- You plan to use the profile as a migration target profile.

To federate the node now as part of the profile creation, perform the following steps:

- a. Specify the host name or IP address and SOAP port of the deployment manager, and an authentication user ID and password if administrative security is enabled on the deployment manager. To find the SOAP port

number, open the AboutThisProfile.txt file for the deployment manager located in *profile\_root/logs/*, and review the value for "SOAP connector port."

- b. Leave the **Federate this managed node later using the addNode command** check box cleared.
- c. Click **Next**. The installation wizard verifies that the deployment manager exists, can be contacted, and that the authentication user ID and password are valid for that deployment manager (if it is secured). The Installation summary panel is displayed.
- d. Proceed to step 6 on page 97.

If you attempt to federate a custom node when the deployment manager is not running or is not available for other reasons, a warning panel prevents you from continuing. If this warning panel appears, click **OK** to exit from it, and then make different selections on the Federation panel.

To federate the node at a later time and apart from profile creation, perform the following steps:

- a. Select the **Federate this managed node later using the addNode command** check box.
- b. Click **Next**. The Installation summary panel is displayed.
- c. Proceed to step 6 on page 97.

See "Federating custom nodes to a deployment manager" on page 333 for more information on how to federate a node by using the addNode command. Read more about this command in the addNode command topic in the WebSphere Application Server Network Deployment information center.

5. **For WebSphere Process Server stand-alone server and deployment manager profiles only:** In the Administrative security panel, configure administrative security for your installation. Leave the **Enable administrative security** check box selected and supply an administrative ID and password to enable security, or clear the check box to disable security. Then click **Next**.

**For WebSphere Process Server stand-alone profiles only:** If you chose to install the WebSphere Process Server Samples, you must supply a password for the user account. Also, if you enable security, the installer creates a sample Business Process Choreographer configuration for the profile. If you do not enable security, the sample configuration is not created. If you plan to federate the stand-alone server to a deployment manager, you will first have to delete this sample configuration. See Removing the Business Process Choreographer configuration. For stand-alone server profiles, the installer configures Business Space using Derby Embedded.

**Tip:** Record the administrative ID and password and store in a secured area. You cannot log onto the administrative console or use WebSphere Process Server unless you know these values.

In environments where you plan to have multiple stand-alone servers, the security policy of each server profile is independent of the others. Changes to the security policies in one server profile are not synchronized with the other profiles.

The Installation summary panel is displayed.

**Note:** An integrated installation package (IIP) containing WebSphere Application Server Network Deployment and Feature Pack for Web Services is

installed as part of the WebSphere Process Server installation. If IIP validation fails, an error panel displays and provides information on how to correct the problem.

6. In the Installation summary panel, review the components that will be installed, the amount of space they will consume, and where they will be located on the system, and click **Next** to install or **Back** to change your specifications.

The installation wizard creates the uninstaller program and shows a progress panel to indicate that components are being installed.

If you chose to install WebSphere Process Server over an existing version of WebSphere Application Server or WebSphere Application Server Network Deployment, the installation wizard examines it and takes one of the following actions:

- If the installation is at the correct service level, the installation wizard does nothing.
- If the installation is at an earlier service level, the installation wizard applies the necessary fixes to bring the installation up to the appropriate level and also applies any necessary interim fixes.
- If you selected the WebSphere Process Server Samples feature, and you are installing over an installation of WebSphere Application Server Network Deployment that does not have its Samples gallery feature installed, the installation wizard adds the Samples gallery feature silently to the WebSphere Application Server Network Deployment installation.

**Restriction:** The WebSphere Process Server Samples feature can be incrementally installed only over a WebSphere Application Server Network Deployment installation, not over a WebSphere Application Server installation. Thus, if you select the WebSphere Process Server Samples feature, and you are installing WebSphere Process Server over an installation of WebSphere Application Server that does not have its Samples gallery feature installed, the Sample applications gallery feature is *not* added silently to the WebSphere Application Server installation.

**Restriction:** i5/OS **On i5/OS platforms:** If the WebSphere Application Server Network Deployment installation is at an earlier service level and the WebSphere Process Server installation is being performed remotely from a Windows client, then WebSphere Application Server Network Deployment must be updated using a local silent installation from the i5/OS system before continuing with this installation. If you selected the WebSphere Process Server Samples feature and you are installing over an installation of WebSphere Application Server Network Deployment that does not have its Samples gallery feature installed, then the Samples Gallery feature must be added to WebSphere Application Server Network Deployment using a local silent installation from the i5/OS system before continuing with this installation.

At the end of the installation, the Installation results panel is displayed with a **Success** indication.

### Attention:

If errors are detected during installation, other messages might appear in place of **Success**.

A message of **Partial success** indicates that the installation completed but errors were generated. If an installation is partially successful, the Installation results panel identifies the exact log files required to troubleshoot the problems, together with their locations in your installation. The log files include the following:

- `install_error.log`
- `log.txt`

Both files are located by default in the following directory:

- **i5/OS** **Linux** **UNIX** **On i5/OS, Linux, and UNIX platforms:**  
`install_root/logs/wbi/install`
- **Windows** **On Windows platforms:** `install_root\logs\wbi\install`

See descriptions of these log files in “Installation and profile creation log files” on page 669.

A message of **Failed** indicates that the installation failed completely. If an installation fails completely, the Installation results panel identifies the locations of log files useful in troubleshooting problems:

- Log files related to installation, located by default in the following directory:
  - **i5/OS** **Linux** **UNIX** **On i5/OS, Linux, and UNIX platforms:**  
`install_root/logs/wbi/install`
  - **Windows** **On Windows platforms:** `install_root\logs\wbi\install`
- Temporary log files, located by default in the following directory:
  - **i5/OS** **Linux** **UNIX** **On i5/OS, Linux, and UNIX platforms:**  
`user_home/wbilogs`
  - **Windows** **On Windows platforms:** `user_home\wbilogs`

See descriptions of relevant log files in “Installation and profile creation log files” on page 669.

You can review other useful troubleshooting information in the following topics:

- Chapter 15, “Troubleshooting installation and configuration,” on page 665
  - “Troubleshooting the launchpad application” on page 674
  - “Troubleshooting a silent installation” on page 675
  - “Diagnosing a failing Ant configuration script” on page 677
  - **i5/OS** “i5/OS installation troubleshooting tips” on page 676
  - “Messages: installation and profile creation” on page 668
  - “Recovering from profile creation or augmentation failure” on page 678
7. Complete the installation. The actions you take to complete the installation differ depending on whether you created a profile during installation. On the Installation results panel, take one of the following actions depending on whether you created a profile during installation:



Profile status	Next step
You created a profile	Ensure the check box to launch the First steps console is selected, and click <b>Finish</b> to close the installation wizard and start the First steps console.
You did <i>not</i> create a profile	<p>The next step depends on whether you want to create a new profile now:</p> <ul style="list-style-type: none"> <li>• If you want to create a new profile, leave the check box beside <b>Create a new WebSphere Process Server profile using the Profile Management Tool</b> selected and click <b>Finish</b>. The installation wizard closes and the Profile Management Tool starts. See “Creating profiles using the Profile Management Tool” on page 198 or “Augmenting profiles using the Profile Management Tool” on page 231 for instructions on how to use this tool to create new WebSphere Process Server profiles or augment existing profiles into WebSphere Process Server profiles.</li> <li>• If you do <i>not</i> want to create a new profile, clear the check box beside <b>Create a new WebSphere Process Server profile using the Profile Management Tool</b> and click <b>Finish</b>.</li> </ul> <p><b>Attention:</b> To have an operational environment, a WebSphere Process Server stand-alone server profile or deployment manager profile with managed nodes must exist.</p>

## Results

If the Installation results panel indicates **Success**, the components you selected were installed successfully, and if you created a profile, it was created successfully.

## What to do next

Install the most recent WebSphere Process Server fix pack on top of the installation (if any fix packs exist at the time of installation). For information about installing fix packs on WebSphere Process Server, see the instructions under *Recommended Fixes* on the support pages at <http://www.ibm.com/software/integration/wps/support/>.

**Linux** **UNIX** **On Linux and UNIX, platforms:** If you removed the freeware directory from your PATH (instructed in an earlier topic), add the freeware directory back to the PATH variable.

Start the WebSphere Process Server stand-alone server or deployment manager profile from its First steps console to verify that your installation is operating properly. See “Options on the First steps console” on page 136 for more details.

You can also use the installation verification tools to verify your installation. See Chapter 6, “Verifying the product installation,” on page 159 for more information.

## Related concepts



Business Space powered by WebSphere

WebSphere Process Server includes Business Space powered by WebSphere, which provides a common interface for application users to create, manage and integrate Web interfaces across the IBM WebSphere Business Process Management portfolio.

## Related information



Configuring Business Space

# Installing WebSphere Process Server with a deployment environment interactively

Use this procedure to install WebSphere Process Server using the installation wizard graphical user interface (GUI). In addition to installing the product, this procedure guides you through setting up a deployment environment. You can create a deployment manager and choose a deployment environment pattern or create a custom profile and choose the cluster members within the deployment environment. You can install WebSphere Application Server Network Deployment with Web Services Feature Pack as part of your installation. You can also install WebSphere Process Server over an existing installation of WebSphere Application Server Network Deployment, version 6.1.x.

## About this task

Perform the following procedure to make those choices. This topic assumes that you have started the installation wizard, checked for prerequisites and existing WebSphere installations, and chosen to perform a Deployment environment installation, by following the procedure in “Installing WebSphere Process Server interactively” on page 79. The Features selection panel is displayed.

## Procedure

1. From the Features selection panel, select the feature you want to install and click **Next**.

See “Installable features of WebSphere Process Server” on page 565 for a description of the feature you can select from this panel.

The next step depends on whether or not you are installing over an existing WebSphere Application Server Network Deployment installation.

Installation status	Next step
You <i>are</i> installing over an existing installation of WebSphere Application Server Network Deployment. <b>Important:</b> The user who installs WebSphere Process Server must be the same user who installed WebSphere Application Server or WebSphere Application Server Network Deployment. You cannot install over an existing installation that contains parenthesis in the installation path.	The Deployment environment installation panel is displayed. Proceed to step 3 on page 101.
You are <i>not</i> installing over an existing installation of WebSphere Application Server Network Deployment.	The Installation location panel is displayed. Proceed to step 2.

2. In the Installation location panel, accept the default installation root directory for the products, or specify a different directory, and click **Next**.

**Note:** The installation path cannot contain parentheses.

**i5/OS** On **i5/OS platforms:** The Installation location panel on i5/OS systems also lets you specify the profile installation directory.

**Linux** **UNIX** **Windows** On **Linux, UNIX, and Windows platforms:** The installation wizard presents a system-owned, default installation root directory for root or Administrator users. It presents a different user-owned, default installation root directory for non-root users.

See “Default installation directories for the product, profiles, and tools” on page 539 for information on default installation directories and how they are determined by the installation wizard.

The installation wizard verifies that the installation location is fully qualified, formed correctly, can be written to by the user ID performing the installation, and has sufficient disk space (including any required temporary space) to complete the installation successfully. If you do not have enough space, stop the installation program, free space by deleting unused files and emptying the recycle bin, and restart the installation.

**Important:**

- You must provide a value for the installation root directory to continue.
- **i5/OS** On **i5/OS platforms:** The maximum length of each component in the path name is 255 characters. The maximum length of the path name is 16 MB.
- **i5/OS** **Linux** **UNIX** On **i5/OS, Linux, and UNIX platforms:** Do not use symbolic links as the installation root directory; they are not supported. Also, do not use spaces in the directory path.
- **Windows** On **Windows platforms:** Do not use a semicolon in the directory name on Windows systems (a semicolon is the character used to construct the class path on Windows systems). WebSphere Process Server cannot install properly on a Windows platform if the target directory includes a semicolon.

On completion of this step the Deployment environment installation panel is displayed.

3. In the Deployment environment installation panel, decide whether to create a deployment manager and choose a deployment environment pattern or create a custom profile and choose the cluster members within the deployment environment. Then click **Next**.

If you do not have an existing deployment manager and deployment environment pattern, be sure to choose the option **Create a deployment manager and choose a deployment environment pattern** when installing on your first workstation. Choose the **Create a custom profile and choose the cluster members within the deployment environment** option when you install on subsequent workstations and want those installations to be part of a deployment environment that already has a deployment manager. The next step depends on your selection.

Selected profile type	Next step
<p><b>Create a deployment manager and choose a deployment environment pattern:</b> the wizard guides you through creating a new deployment environment based on the deployment environment pattern you choose later in the installation.</p> <p><b>Restriction:</b></p> <p>Database administrator (DBA) privileges are required for the database configuration panels that are part of creating a deployment manager profile for a deployment environment. If you plan to use the deployment environment feature of the product installer or Profile Management Tool, and want to use a database other than Derby Network Server as your database product, the user ID you provide for the "User name to authenticate with the database" field on the database configuration panels must have DBA privileges.</p>	<p>The Administrative security panel is displayed. Proceed to the topic "Creating a deployment manager and choosing a deployment environment pattern."</p>
<p><b>Create a custom profile and choose the cluster members within the deployment environment:</b> the wizard guides you through creating a custom profile on a deployment environment that you have already defined. You choose the cluster members to create for this custom profile. You must be able to connect to the running deployment manager on that deployment environment.</p>	<p>The Deployment manager connection panel is displayed. Proceed to the topic "Creating a custom profile and choosing cluster members in a deployment environment" on page 108.</p>

## Results

You have selected the feature to install, specified the installation directory if you are not installing over an existing installation of WebSphere Application Server Network Deployment, and selected whether to create a deployment manager and choose a deployment environment pattern or create a custom profile and choose the cluster members within an existing deployment environment.

## What to do next

Continue your installation by following instructions from the appropriate link depending on the choices you have made.

### Creating a deployment manager and choosing a deployment environment pattern

Learn how to create a new deployment manager and choose a deployment environment pattern.

### About this task

This procedure assumes that you want to create a new deployment manager and choose a deployment environment pattern. As a result of following the procedure in "Installing WebSphere Process Server with a deployment environment interactively" on page 100, you are viewing the Administrative security panel.

Perform the following steps to complete your installation.

### Procedure

1. In the Administrative security panel, configure administrative security for your installation. You must use administrative security for a Deployment environment installation. Supply an administrative ID and password to log into the administrative tools and click **Next**. The administrative user is created in a repository within WebSphere Process Server. After installation completes, you can add more users, groups, or external repositories.

The "Deployment manager and deployment environment pattern" panel is displayed.

2. On the "Deployment manager and deployment environment pattern" panel, choose the deployment environment pattern to use with your installation.

Perform the following steps:

- a. Select the deployment environment pattern you want for your installation:
  - **Remote Messaging and Remote Support:** defines one cluster for the application deployment, one remote cluster for the messaging infrastructure, and one remote cluster for the Common Event Infrastructure and other support applications. This pattern configures a setup that performs well for most of your business integration needs. When in doubt, select this pattern.
  - **Remote Messaging:** defines one cluster for the application deployment and one remote cluster for the messaging infrastructure. The Common Event Infrastructure and other support applications are configured on the application deployment cluster.
  - **Single Cluster:** defines one cluster for the application deployment. Both messaging infrastructure and Common Event Infrastructure with support applications are also configured on the application deployment target cluster.

See the following topics for more information:

- Deployment environment patterns – A deployment environment pattern specifies the constraints and requirements of the components and resources involved in a deployment environment. The patterns are designed to meet the needs of most business requirements and are intended to help you create a deployment environment in the most straightforward way.
- Deployment environment functions – To design a robust deployment environment, you need to understand the functionality each cluster can provide in a particular IBM-supplied deployment environment pattern or a custom deployment environment. This knowledge can help you make the correct decisions as to which deployment environment pattern best meets your needs.

- b. Click **Next**. The Deployment manager database configuration pattern panel is displayed.
3. On the Deployment manager database configuration pattern panel, choose the database to use with your installation.

Perform the following steps:

- a. Select the database product to use with your installation from the drop-down list.

**Important:** When you perform a Deployment environment installation with the installation wizard, you are limited to using only the following subset of the total supported database products for WebSphere Process Server:

- Derby Network Server
- DB2 Universal Database
- Oracle 9i, 10g, or 11g

You can use other supported database products not in this list (with the exception of Informix and Microsoft SQL Server – these are not supported in deployment environment configurations). However, to use other database products, you must create your deployment manager using the Profile Management Tool. See “Creating profiles” on page 197 for more information. Also i5/OS systems cannot use databases created with the DB2 Universal Database product on local i5/OS systems. The DB2 Universal Database product can be used *only* on remote servers that reside on non-i5/OS systems. This requires a JDBC driver type 4.

- b. In the **Database name** field, accept the default value of WPRCSDB or enter the name of the Common database to be used with your installation.
- c. Click **Next**. The Additional database configuration panel is displayed with fields specific to the database product you selected.
- d. Review the topic “Additional database configuration panel” on page 107 for information on how to complete this panel. When you’ve completed entering information on the Additional database configuration panel, click **Next**. The Installation summary panel is displayed.

**Note:** An integrated installation package (IIP) containing WebSphere Application Server Network Deployment and Feature Pack for Web Services is installed as part of the WebSphere Process Server installation. If IIP validation fails, an error panel displays and provides information on how to correct the problem.

4. In the Installation summary panel, review the components that will be installed, the amount of space they will consume, and where they will be located on the system, and click **Next** to install or **Back** to change your specifications.


The installation wizard creates the uninstaller program and shows a progress panel to indicate that components are being installed.

If you chose to install WebSphere Process Server over an existing version of WebSphere Application Server Network Deployment with Web Services Feature Pack, the installation wizard examines it and takes one of the following actions:

- If the installation is at the correct service level, the installation wizard does nothing.
- If the installation is at an earlier service level, the installation wizard applies the necessary fixes to bring the installation up to the appropriate level and also applies any necessary interim fixes.

**Restriction:** i5/OS **On i5/OS platforms:** If the WebSphere Application Server Network Deployment installation with Web Services Feature Pack is at an earlier service level and the WebSphere Process Server installation is being done remotely from a Windows client, then the WebSphere Application Server Network Deployment with Web Services Feature Pack must be updated using a local silent installation from the i5/OS system before continuing with this installation.

- If you selected the WebSphere Process Server samples feature, and you are installing over an installation of WebSphere Application Server Network Deployment Web Services Feature Pack that does not have its Samples gallery feature installed, the installation wizard adds the Samples gallery feature silently to the WebSphere Application Server Network Deployment Web Services Feature Pack installation.

**Restriction:**  **On i5/OS platforms:** If you selected the WebSphere Process Server samples feature and you are installing over an installation of WebSphere Application Server Network Deployment Web Services Feature Pack that does not have the Samples gallery feature installed, then the Samples Gallery feature must be added to WebSphere Application Server Network Deployment Web Services Feature Pack using a local silent installation from the i5/OS system before continuing with this installation.

If you chose to install WebSphere Process Server over an existing version of WebSphere Application Server Network Deployment, the installation wizard first installs the Web Services Feature Pack and then takes one or more actions mentioned above to bring the installation up to the appropriate level.

At the end of the installation, the Installation results panel is displayed with a **Success** indication.

### Attention:

If errors are detected during installation, other messages might appear in place of **Success**.

A message of **Partial success** indicates that the installation completed but errors were generated. If an installation is partially successful, the Installation results panel identifies the exact log files required to troubleshoot the problems, together with their locations in your installation. The log files include the following:

- `install_error.log`
- `log.txt`

Both files are located by default in the following directory:

- **i5/OS Linux UNIX On i5/OS, Linux, and UNIX platforms:**  
`install_root/logs/wbi/install`
- **Windows On Windows platforms:** `install_root\logs\wbi\install`

See descriptions of these log files in “Installation and profile creation log files” on page 669.

A message of **Failed** indicates that the installation failed completely. If an installation fails completely, the Installation results panel identifies the locations of log files useful in troubleshooting problems:

- Log files related to installation, located by default in the following directory:
  - **i5/OS Linux UNIX On i5/OS, Linux, and UNIX platforms:**  
`install_root/logs/wbi/install`
  - **Windows On Windows platforms:** `install_root\logs\wbi\install`
- Temporary log files, located by default in the following directory:
  - **i5/OS Linux UNIX On i5/OS, Linux, and UNIX platforms:**  
`user_home/wbilogs`
  - **Windows On Windows platforms:** `user_home\wbilogs`

See descriptions of relevant log files in “Installation and profile creation log files” on page 669.

You can review other useful troubleshooting information in the following topics:

- Chapter 15, “Troubleshooting installation and configuration,” on page 665
  - “Troubleshooting the launchpad application” on page 674
  - “Troubleshooting a silent installation” on page 675
  - “Diagnosing a failing Ant configuration script” on page 677
  - **i5/OS** “i5/OS installation troubleshooting tips” on page 676
  - “Messages: installation and profile creation” on page 668
  - “Recovering from profile creation or augmentation failure” on page 678
5. Ensure that the check box to start the First steps console is selected, and click **Finish** to close the installation wizard and start the First steps console.



## Results

If the Installation results panel indicates **Success**, the components you selected were installed successfully, and your deployment environment was created successfully.

## What to do next

Install the most recent WebSphere Process Server fix pack on top of the installation (if any fix packs exist at the time of installation). For information about installing fix packs on WebSphere Process Server, see the instructions on the support pages at <http://www.ibm.com/software/integration/wps/support/>.

**Linux** **UNIX** **On Linux and UNIX, platforms:** If you removed the freeware directory from your PATH (instructed in an earlier topic), add the freeware directory back to the PATH variable.

Start your database if it is not already active. Then start the WebSphere Process Server deployment manager from its First steps console to verify that your installation is operating properly. See “Options on the First steps console” on page 136 for more details. The First steps console also includes links to perform verification tests and to start the Profile Management Tool, with which you can create WebSphere Process Server custom profiles to define additional cluster members in the deployment environment.

### Additional database configuration panel:

When you select your database product on the Deployment manager database configuration panel in the installation wizard, a follow-up panel asks you for database-specific information. This panel, called the Additional database configuration panel, contains slightly different fields and default values, depending on your database product selection.

When you have completed entering the information on the Additional database configuration panel, return to “Creating a deployment manager and choosing a deployment environment pattern” on page 102.

### Derby Network Server

Enter values for the fields **Database server host name (for example, IP address)** and **Server port** (or accept the default values of localhost and 1527, respectively).

### DB2 Universal Database

**Note:** **i5/OS** **On i5/OS platforms:** i5/OS systems cannot use databases created with the DB2 Universal Database product on local i5/OS systems. The DB2 Universal Database product can be used *only* on remote servers that reside on non-i5/OS systems. This requires a JDBC driver type 4.

Enter values for the fields **User name to authenticate with the database**, **Password for database authentication**, **Confirm password**, and **Location (directory) of the JDBC driver classpath**.

The **Location (directory) of the JDBC driver classpath** field must point to the location on your system that contains the following files:

- db2jcc.jar

- db2jcc\_license\_cu.jar or db2jcc\_license\_cisuz.jar
- **i5/OS** jt400.jar

An error message is displayed if the files cannot be found at the specified location.

Select the radio button beside **2** or **4**, depending on your JDBC driver type.

Enter values for the fields **Database server host name (for example, IP address)** and **Server port** (or accept the default values of localhost and 50000, respectively).

### Oracle 9i, 10g, and 11g

**Note:** **i5/OS** **On i5/OS platforms:** i5/OS systems cannot use databases created with the Oracle database product on local i5/OS systems. The Oracle database product can be used on a remote server, but only with the thin JDBC driver. The Oracle Call Interface (oci) JDBC driver is only for local servers and i5/OS cannot use Oracle locally.

Enter values for the fields **User name with database administrative privileges** (this ID must have SYSDBA privileges and permission to create schemas in the Oracle database) , **Password for database authentication**, **Confirm password**, and **Location (directory) of the JDBC driver classpath**.

The **Location (directory) of the JDBC driver classpath** field must point to the directory that contains the file ojdbc14.jar. An error message is displayed if the file cannot be found at the specified location.

Select the radio button beside **OCI** or **thin**, depending on your JDBC driver type.

Enter values for the fields **Database server host name (for example, IP address)** and **Server port**. For **Database server host name (for example, IP address)**, use the value configured on the Oracle instance even when running Oracle locally. For **Server port**, accept the default value of 1521 or indicate your port number if different.

## Creating a custom profile and choosing cluster members in a deployment environment

Learn how to create a custom profile and choose cluster members within an existing deployment environment.

### About this task

This topic assumes that you want to create a custom profile and choose cluster members within an existing deployment environment. As a result of following the procedure in “Installing WebSphere Process Server with a deployment environment interactively” on page 100, you are viewing the Deployment manager connection panel. Perform the following steps to complete your installation.

#### Procedure

1. On the Deployment manager connection panel, specify the host name or IP address and SOAP port of the deployment manager that has the deployment environment to which you want to add clusters. Also supply an authentication user ID and password (administrative security is always enabled on the deployment manager of a deployment environment). Then click **Next**. The

deployment manager must be a WebSphere Process Server deployment manager at the same version level or higher as the custom profile you are creating.

WebSphere Process Server profiles cannot use a WebSphere Enterprise Service Bus deployment manager, but WebSphere Enterprise Service Bus profiles can use a WebSphere Process Server deployment manager.

To find the SOAP port number of the deployment manager, open the AboutThisProfile.txt file for the deployment manager located in *profile\_root/logs/*, and review the value for "SOAP connector port."

The installation wizard verifies that the deployment manager exists, can be contacted, that the authentication user ID and password are valid for that deployment manager, and that it has a deployment environment defined.

The Cluster and database configuration (part 1) panel is displayed, which identifies the deployment environment pattern of the deployment manager.

2. On the Cluster and database configuration panel (part 1), select at least one cluster to assign this node to on the deployment environment pattern and click **Next**. The panel offers one to three clusters based on the deployment environment pattern the installation wizard identified on the deployment manager:

*Table 27. Clusters offered per deployment environment pattern on existing deployment manager*

Deployment environment pattern on deployment manager	Clusters offered
Remote messaging and remote support	<ul style="list-style-type: none"> <li>• <b>Application deployment target:</b> consists of a cluster to which user applications need to be deployed.</li> <li>• <b>Messaging infrastructure:</b> consists of a cluster where messaging engines are located.</li> <li>• <b>Support infrastructure:</b> consists of a cluster that hosts the Common Event Infrastructure server and other infrastructure services that are used to manage your system.</li> </ul>
Remote messaging	<ul style="list-style-type: none"> <li>• <b>Application deployment target:</b> consists of a cluster to which user applications need to be deployed. With a remote messaging deployment environment pattern, the application deployment target cluster also assumes the functionality of the supporting infrastructure cluster.</li> <li>• <b>Messaging infrastructure:</b> consists of a cluster where messaging engines are located.</li> </ul>
Single cluster	<ul style="list-style-type: none"> <li>• <b>Application deployment target:</b> consists of a cluster to which user applications need to be deployed. With a single cluster deployment environment pattern, the application deployment target cluster also assumes the functionality of the messaging and the supporting infrastructure clusters.</li> </ul>

See the following topics for more information:

The Cluster and database configuration (part 2) panel is displayed, which identifies the database used by the deployment manager.

3. On the Cluster and database configuration (part 2) panel, indicate the location of the JDBC driver classpath files (or accept the default), and click **Next**.

The Installation summary panel is displayed.

**Note:** An integrated installation package (IIP) containing WebSphere Application Server Network Deployment and Feature Pack for Web Services is installed as part of the WebSphere Process Server installation. If IIP validation fails, an error panel displays and provides information on how to correct the problem.

4. In the Installation summary panel, review the components that will be installed, the amount of space they will consume, and where they will be located on the system, and click **Next** to install or **Back** to change your specifications.

The installation wizard creates the uninstaller program and shows a progress panel to indicate that components are being installed.

If you chose to install WebSphere Process Server over an existing version of WebSphere Application Server Network Deployment with Web Services Feature Pack, the installation wizard examines it and takes one of the following actions:

- If the installation is at the correct service level, the installation wizard does nothing.
- If the installation is at an earlier service level, the installation wizard applies the necessary fixes to bring the installation up to the appropriate level and also applies any necessary interim fixes.

**Restriction:** i5/OS If the WebSphere Application Server Network Deployment with Web Services Feature Pack installation is at an earlier service level and the WebSphere Process Server installation is being done remotely from a Windows client, then the WebSphere Application Server Network Deployment with Web Services Feature Pack needs to be updated using a local silent install from the i5/OS system before continuing with this installation.

- If you selected the WebSphere Process Server Samples feature, and you are installing over an installation of WebSphere Application Server Network Deployment with Web Services Feature Pack that does not have its Samples gallery feature installed, the installation wizard adds the Samples gallery feature silently to the WebSphere Application Server Network Deployment with Web Services Feature Pack installation.

**Restriction:** i5/OS **On i5/OS platforms:** If you selected the WebSphere Process Server Samples feature and you are installing over an installation of WebSphere Application Server Network Deployment with Web Services Feature Pack that does not have the Samples gallery feature installed, then the Samples Gallery feature needs to be added to WebSphere Application Server Network Deployment with Web Services Feature Pack using a local silent installation from the i5/OS system before continuing with this installation.

If you chose to install WebSphere Process Server over an existing version of WebSphere Application Server Network Deployment, the installation wizard first installs the Web Services Feature Pack and then takes one or more actions mentioned above to bring the installation up to the appropriate level.

At the end of the installation, the Installation results panel is displayed with a **Success** indication.

### Attention:

If errors are detected during installation, other messages might appear in place of **Success**.

A message of **Partial success** indicates that the installation completed but errors were generated. If an installation is partially successful, the Installation results panel identifies the exact log files required to troubleshoot the problems, together with their locations in your installation. The log files include the following:

- `install_error.log`
- `log.txt`

Both files are located by default in the following directory:

- **i5/OS Linux UNIX** On i5/OS, Linux, and UNIX platforms: `install_root/logs/wbi/install`
- **Windows** On Windows platforms: `install_root\logs\wbi\install`

See descriptions of these log files in “Installation and profile creation log files” on page 669.

A message of **Failed** indicates that the installation failed completely. If an installation fails completely, the Installation results panel identifies the locations of log files useful in troubleshooting problems:

- Log files related to installation, located by default in the following directory:
  - **i5/OS Linux UNIX** On i5/OS, Linux, and UNIX platforms: `install_root/logs/wbi/install`
  - **Windows** On Windows platforms: `install_root\logs\wbi\install`
- Temporary log files, located by default in the following directory:
  - **i5/OS Linux UNIX** On i5/OS, Linux, and UNIX platforms: `user_home/wbilogs`
  - **Windows** On Windows platforms: `user_home\wbilogs`

See descriptions of relevant log files in “Installation and profile creation log files” on page 669.

You can review other useful troubleshooting information in the following topics:

- Chapter 15, “Troubleshooting installation and configuration,” on page 665
  - “Troubleshooting the launchpad application” on page 674
  - “Troubleshooting a silent installation” on page 675
  - “Diagnosing a failing Ant configuration script” on page 677
  - **i5/OS** “i5/OS installation troubleshooting tips” on page 676
  - “Messages: installation and profile creation” on page 668
  - “Recovering from profile creation or augmentation failure” on page 678
5. Ensure that the check box to launch the First steps console is selected, and click **Finish** to close the installation wizard and start the First steps console.

## Results

If the Installation results panel indicates **Success**, the components you selected were installed successfully, and your deployment environment was updated successfully. The custom profile was federated to the running deployment manager of the deployment environment.

## What to do next

Install the most recent WebSphere Process Server fix pack on top of the installation (if any fix packs exist at the time of installation). For information about installing fix packs on WebSphere Process Server, see the instructions on the support pages at <http://www.ibm.com/software/integration/wps/support/>.

**Linux** **UNIX** **On Linux and UNIX, platforms:** If you removed the freeware directory from your PATH (instructed in an earlier topic), add the freeware directory back to the PATH variable.

If the WebSphere Process Server deployment manager is not already running, start it from its First steps console so you can add additional clusters to the deployment environment. After the deployment manager is started, you can administer the nodes that belong to that cell.

## Installing the WebSphere Process Server Client interactively

Use this procedure to install the WebSphere Process Server Client using the installation wizard graphical user interface (GUI). You can install WebSphere Application Server Network Deployment with Web Services Feature Pack as part of your installation. You can also install the WebSphere Process Server Client over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment, version 6.1.x.

### About this task

Before continuing, review the WebSphere Process Server Client information in Planning for a remote client application and Accessing the remote interface of the session bean.

This topic assumes that you have started the installation wizard, checked for prerequisites and existing WebSphere installations, and chosen to perform a Client installation, by following the procedure in “Installing WebSphere Process Server interactively” on page 79. Either the Installation summary panel or the Installation location panel is displayed, depending on whether or not you are installing the WebSphere Process Server Client over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment.

### Procedure

1. Complete the installation. The next step depends on whether or not you are installing the WebSphere Process Server Client over an existing WebSphere Application Server or WebSphere Application Server Network Deployment installation.

Installation status	Next step
<p>You <i>are</i> installing over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment.</p> <p><b>Important:</b> The user who installs WebSphere Process Server must be the same user who installed WebSphere Application Server or WebSphere Application Server Network Deployment. You cannot install over an existing installation that contains parenthesis in the installation path.</p>	<p>The Installation summary panel is displayed. Go to step 3 on page 114.</p>
<p>You are <i>not</i> installing over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment.</p>	<p>The Installation location panel is displayed. Go to step 2.</p>

- In the Installation location panel, accept the default installation root directory for the products, or specify a different directory, and click **Next**.

**Note:** The installation path cannot contain parentheses.

**i5/OS** **On i5/OS platforms:** The Installation location panel on i5/OS systems also lets you specify the profile installation directory.

**Linux** **UNIX** **Windows** **On Linux, UNIX, and Windows platforms:** The installation wizard presents a system-owned, default installation root directory for root or Administrator users. It presents a different user-owned, default installation root directory for non-root users.

See “Default installation directories for the product, profiles, and tools” on page 539 for information on default installation directories and how they are determined by the installation wizard.

The installation wizard verifies that the installation location is fully qualified, formed correctly, can be written to by the user ID performing the installation, and has sufficient disk space (including any required temporary space) to complete the installation successfully. If you do not have enough space, stop the installation program, free space by deleting unused files and emptying the recycle bin, and restart the installation.

**Important:**

- You must provide a value for the installation root directory to continue.
- i5/OS** **On i5/OS platforms:** The maximum length of each component in the path name is 255 characters. The maximum length of the path name is 16 MB.
- i5/OS** **Linux** **UNIX** **On i5/OS, Linux, and UNIX platforms:** Do not use symbolic links as the installation root directory; they are not supported. Also, do not use spaces in the directory path.
- Windows** **On Windows platforms:** Do not use a semicolon in the directory name on Windows systems (a semicolon is the character used to construct the class path on Windows systems). WebSphere Process Server cannot install properly on a Windows platform if the target directory includes a semicolon.

On completion of this step, the Installation summary panel is displayed.

**Note:** An integrated installation package (IIP) containing WebSphere Application Server Network Deployment and Feature Pack for Web Services is installed as part of the WebSphere Process Server installation. If IIP validation fails, an error panel displays and provides information on how to correct the problem.

3. In the Installation summary panel, review the components that will be installed, the amount of space they will consume, and where they will be located on the system, and select **Next** to install or **Back** to change your specifications.


The installation wizard creates the uninstaller program and shows a progress panel to indicate that components are being installed.

If you elected to install the WebSphere Process Server Client over an existing version of WebSphere Application Server or WebSphere Application Server Network Deployment with Web Services Feature Pack, the installation wizard examines it and takes one of the following actions:

- If the installation is at the correct service level, the installation wizard does nothing.
- If the installation is at an earlier service level, the installation wizard applies the necessary fixes to bring the installation up to the appropriate level and also applies any necessary interim fixes.

**Restriction:**  **On i5/OS platforms:** If the WebSphere Application Server Network Deployment with Web Services Feature Pack installation is at an earlier service level and the WebSphere Process Server installation is being done remotely from a Windows client, then the WebSphere Application Server Network Deployment with Web Services Feature Pack must be updated using a local silent installation from the i5/OS system before continuing with this installation.

- If you selected the WebSphere Process Server Samples feature, and you are installing over an installation of WebSphere Application Server Network Deployment with Web Services Feature Pack that does not have its Samples gallery feature installed, the installation wizard adds the Samples gallery feature silently to the WebSphere Application Server Network Deployment with Web Services Feature Pack installation.

**Restriction:**  **On i5/OS platforms:** If you selected the WebSphere Process Server Samples feature and you are installing over an installation of WebSphere Application Server Network Deployment with Web Services Feature Pack that does not have the Samples gallery feature installed, then the Samples gallery feature must be added to WebSphere Application Server Network Deployment with Web Services Feature Pack using a local silent installation from the i5/OS system before continuing with this installation.

If you chose to install the WebSphere Process Server Client over an existing version of WebSphere Application Server Network Deployment, the installation wizard first installs the Web Services Feature Pack and then takes one or more actions mentioned above to bring the installation up to the appropriate level.

At the end of the installation, the Installation results panel is displayed with a **Success** indication.



### Attention:

If errors are detected during installation, other messages might appear in place of **Success**.

A message of **Partial success** indicates that the installation completed but errors were generated. If an installation is partially successful, the Installation results panel identifies the exact log files required to troubleshoot the problems, together with their locations in your installation. The log files include the following:

- `install_error.log`
- `log.txt`

Both files are located by default in the following directory:

- **i5/OS** **Linux** **UNIX** **On i5/OS, Linux, and UNIX platforms:**  
`install_root/logs/wbi/install`
- **Windows** **On Windows platforms:** `install_root\logs\wbi\install`

See descriptions of these log files in “Installation and profile creation log files” on page 669.

A message of **Failed** indicates that the installation failed completely. If an installation fails completely, the Installation results panel identifies the locations of log files useful in troubleshooting problems:

- Log files related to installation, located by default in the following directory:
  - **i5/OS** **Linux** **UNIX** **On i5/OS, Linux, and UNIX platforms:**  
`install_root/logs/wbi/install`
  - **Windows** **On Windows platforms:** `install_root\logs\wbi\install`
- Temporary log files, located by default in the following directory:
  - **i5/OS** **Linux** **UNIX** **On i5/OS, Linux, and UNIX platforms:**  
`user_home/wbilogs`
  - **Windows** **On Windows platforms:** `user_home\wbilogs`

See descriptions of relevant log files in “Installation and profile creation log files” on page 669.

You can review other useful troubleshooting information in the following topics:

- Chapter 15, “Troubleshooting installation and configuration,” on page 665
  - “Troubleshooting the launchpad application” on page 674
  - “Troubleshooting a silent installation” on page 675
  - “Diagnosing a failing Ant configuration script” on page 677
  - **i5/OS** “i5/OS installation troubleshooting tips” on page 676
  - “Messages: installation and profile creation” on page 668
  - “Recovering from profile creation or augmentation failure” on page 678
4. Select **Finish** to close the installation wizard.

## Results

If the Installation results panel indicates **Success**, the WebSphere Process Server Client was installed successfully.

## What to do next

Install the most recent WebSphere Process Server fix pack on top of the installation (if any exist at the time of installation). For information about installing fix packs on WebSphere Process Server, see the instructions on the support pages at <http://www.ibm.com/software/integration/wps/support/>.

**Linux** **UNIX** **On Linux and UNIX, platforms:** If you removed the freeware directory from your PATH (instructed in an earlier topic), add the freeware directory back to the PATH variable.

Run the `installver_wbi` command to verify that all WebSphere Process Server Client files are correctly installed. For more information, see “Verifying checksums of installed files” on page 159.

## Installing additional features on an existing installation

Use this procedure to install additional features on an existing installation of WebSphere Process Server using the installation wizard graphical user interface (GUI).

### About this task

This topic assumes that you have started the installation wizard and checked for prerequisites and existing WebSphere installations, by following the procedure in “Installing WebSphere Process Server interactively” on page 79. You have an installation of WebSphere Process Server on your system and you want to add features to it using an interactive interface. You do not have to have an existing WebSphere Process Server profile. Following this procedure does not modify features or profiles that are already installed, or affect any updates made to the original installation. The Features selection panel is displayed.

### Procedure

1. From the Features selection panel, select the feature you want to install and click **Next**. A feature that is already installed is not available for selection. See “Installable features of WebSphere Process Server” on page 565 for a description of the feature you can select from this panel.

**Tip:** Adding the WebSphere Process Server samples feature does not automatically deploy the samples to existing profiles. You must create a new profile to deploy the samples.

The Installation summary panel is displayed.

2. In the Installation summary panel, review the components that will be installed and where they will be located on the system, and click **Next** to install or **Back** to change your specifications.

The installation wizard creates the uninstaller program and shows a progress panel to indicate that components are being installed.

The installation wizard examines the underlying WebSphere Application Server or WebSphere Application Server Network Deployment with Web Services Feature Pack installation and takes one of the following actions:

- If the installation is at the correct service level, the installation wizard does nothing.
- If the installation is at an earlier service level, the installation wizard applies the necessary fixes to bring the installation up to the appropriate level and also applies any necessary interim fixes.

**Restriction:** i5/OS If the WebSphere Application Server Network Deployment with Web Services Feature Pack installation is at an earlier service level and the WebSphere Process Server installation is being done remotely from a Windows client, then WebSphere Application Server Network Deployment with Web Services Feature Pack must be updated using a local silent install from the i5/OS system before continuing with this installation.

- If you selected the WebSphere Process Server samples feature, and you are installing over an installation of WebSphere Application Server Network Deployment with Web Services Feature Pack that does not have its Samples gallery feature installed, the installation wizard adds the Samples gallery feature silently to the WebSphere Application Server Network Deployment installation.

**Restriction:** You can install the WebSphere Process Server samples incrementally only over a WebSphere Application Server Network Deployment with Web Services Feature Pack installation, not a WebSphere Application Server installation. Thus, if you select the WebSphere Process Server samples feature, and you are installing WebSphere Process Server over an installation of WebSphere Application Server that does not have its Samples gallery feature installed, the Sample applications gallery feature is *not* added silently to the WebSphere Application Server installation.

**Restriction:** i5/OS **On i5/OS platforms:** If you selected the WebSphere Process Server samples feature and you are installing over an installation of WebSphere Application Server Network Deployment with Web Services Feature Pack that does not have the Samples gallery feature installed, then the Samples gallery feature must be added to WebSphere Application Server Network Deployment with Web Services Feature Pack using a local silent installation from the i5/OS system before continuing with this installation.

At the end of the installation, the Installation results panel is displayed with a **Success** indication.

### Attention:

If errors are detected during installation, other messages might appear in place of **Success**.

A message of **Partial success** indicates that the installation completed but errors were generated. If an installation is partially successful, the Installation results panel identifies the exact log files required to troubleshoot the problems, together with their locations in your installation. The log files include the following:

- `install_error.log`
- `log.txt`

Both files are located by default in the following directory:

- **i5/OS Linux UNIX On i5/OS, Linux, and UNIX platforms:**  
`install_root/logs/wbi/install`
- **Windows On Windows platforms:** `install_root\logs\wbi\install`

See descriptions of these log files in “Installation and profile creation log files” on page 669.

A message of **Failed** indicates that the installation failed completely. If an installation fails completely, the Installation results panel identifies the locations of log files useful in troubleshooting problems:

- Log files related to installation, located by default in the following directory:
  - **i5/OS Linux UNIX On i5/OS, Linux, and UNIX platforms:**  
`install_root/logs/wbi/install`
  - **Windows On Windows platforms:** `install_root\logs\wbi\install`
- Temporary log files, located by default in the following directory:
  - **i5/OS Linux UNIX On i5/OS, Linux, and UNIX platforms:**  
`user_home/wbilogs`
  - **Windows On Windows platforms:** `user_home\wbilogs`

See descriptions of relevant log files in “Installation and profile creation log files” on page 669.

You can review other useful troubleshooting information in the following topics:

- Chapter 15, “Troubleshooting installation and configuration,” on page 665
  - “Troubleshooting the launchpad application” on page 674
  - “Troubleshooting a silent installation” on page 675
  - “Diagnosing a failing Ant configuration script” on page 677
  - **i5/OS** “i5/OS installation troubleshooting tips” on page 676
  - “Messages: installation and profile creation” on page 668
  - “Recovering from profile creation or augmentation failure” on page 678
3. In the Installation results panel, take one of the following actions, depending on whether you want to create a new profile now:

Profile status	Next step
You want to create a profile	Leave the check box beside <b>Create a new WebSphere Process Server profile using the Profile Management Tool</b> selected and click <b>Finish</b> . The installation wizard closes and the Profile Management Tool starts. See “Creating profiles using the Profile Management Tool” on page 198 and “Augmenting profiles using the Profile Management Tool” on page 231 for instructions on how to use this tool to create new WebSphere Process Server profiles or augment existing application server or WebSphere Enterprise Service Bus profiles into WebSphere Process Server profiles.
You do <i>not</i> want to create a profile	Clear the check box beside <b>Create a new WebSphere Process Server profile using the Profile Management Tool</b> and click <b>Finish</b> to close the installation wizard.  <b>Attention:</b> To have an operational environment, a WebSphere Process Server stand-alone server profile or deployment manager profile with managed nodes must exist.

## Results

If the Installation results panel indicates **Success**, the additional features were installed successfully.

## What to do next

Install the most recent WebSphere Process Server fix pack on top of the installation (if any fix packs exist at the time of installation). For information about installing fix packs on WebSphere Process Server, see the instructions on the support pages at <http://www.ibm.com/software/integration/wps/support/>.

**Linux** **UNIX** **On Linux and UNIX, platforms:** If you removed the freeware directory from your PATH (instructed in an earlier topic), add the freeware directory back to the PATH variable.

If you have not created a profile, see “Creating profiles using the Profile Management Tool” on page 198 or “Augmenting profiles using the Profile Management Tool” on page 231 for instructions on how to use the Profile Management Tool to create new WebSphere Process Server profiles or augment existing application server or WebSphere Enterprise Service Bus profiles into WebSphere Process Server profiles.

For more information on the WebSphere Process Server Samples gallery, see [Accessing the Samples \(Samples Gallery\)](#).

# Converting a WebSphere Enterprise Service Bus or WebSphere Process Server Client installation into a WebSphere Process Server installation

Use this procedure to convert a WebSphere Enterprise Service Bus or WebSphere Process Server Client version 6.2 installation into a WebSphere Process Server version 6.2 installation, using the installation wizard graphical user interface (GUI).

## About this task

This topic assumes that you have started the installation wizard and checked for prerequisites and existing WebSphere installations, by following the procedure in “Installing WebSphere Process Server interactively” on page 79. You want to install WebSphere Process Server interactively over an existing installation of WebSphere Enterprise Service Bus or WebSphere Process Server Client. The Features selection panel is displayed.

## Procedure

1. In the Features selection panel, select the feature you want to install and select **Next**. A feature that is already installed is not available for selection.  
See “Installable features of WebSphere Process Server” on page 565 for a description of the feature you can select from this panel. The Installation summary panel is displayed.
2. In the Installation summary panel, review the components that will be installed and where they will be located on the system, and select **Next** to install or **Back** to change your specifications.

The installation wizard creates the uninstaller program and shows a progress panel to indicate that components are being installed.

The installation wizard examines the underlying WebSphere Application Server or WebSphere Application Server Network Deployment installation with Web Services Feature Pack and takes one of the following actions:

- If the installation is at the correct service level, the installation wizard does nothing.
- If the installation is at an earlier service level, the installation wizard applies the necessary fixes to bring the installation up to the appropriate level and also applies any necessary interim fixes.

**Restriction:** i5/OS If the WebSphere Application Server Network Deployment installation with Web Services Feature Pack is at an earlier service level and the WebSphere Process Server installation is being done remotely from a Windows client, then WebSphere Application Server Network Deployment with Web Services Feature Pack needs to be updated using a local silent install from the i5/OS system before continuing with this installation.

- If you selected the WebSphere Process Server Samples feature, and you are installing over an installation of WebSphere Application Server Network Deployment with Web Services Feature Pack that does not have its Samples gallery feature installed, the installation wizard adds the Samples gallery feature silently to the WebSphere Application Server Network Deployment with Web Services Feature Pack installation.

**Restriction:** The WebSphere Process Server Samples feature can be incrementally installed only over a WebSphere Application Server Network Deployment installation with Web Services Feature Pack, not over a

WebSphere Application Server installation . Thus, if you select the WebSphere Process Server Samples feature, and you are installing WebSphere Process Server over an installation of WebSphere Application Server that does not have its Samples gallery feature installed, the Sample applications gallery feature is *not* added silently to the WebSphere Application Server installation.

**Restriction:** i5/OS **On i5/OS platforms:** If you selected the WebSphere Process Server Samples feature and you are installing over an installation of WebSphere Application Server Network Deployment with Web Services Feature Pack that does not have the Samples gallery feature installed, then the Samples gallery feature must be added to WebSphere Application Server Network Deployment with Web Services Feature Pack using a local silent installation from the i5/OS system before continuing with this installation.

At the end of the installation, the Installation results panel is displayed with a **Success** indication.

### Attention:

If errors are detected during installation, other messages might appear in place of **Success**.

A message of **Partial success** indicates that the installation completed but errors were generated. If an installation is partially successful, the Installation results panel identifies the exact log files required to troubleshoot the problems, together with their locations in your installation. The log files include the following:

- `install_error.log`
- `log.txt`

Both files are located by default in the following directory:

- **i5/OS Linux UNIX On i5/OS, Linux, and UNIX platforms:**  
`install_root/logs/wbi/install`
- **Windows On Windows platforms:** `install_root\logs\wbi\install`

See descriptions of these log files in “Installation and profile creation log files” on page 669.

A message of **Failed** indicates that the installation failed completely. If an installation fails completely, the Installation results panel identifies the locations of log files useful in troubleshooting problems:

- Log files related to installation, located by default in the following directory:
  - **i5/OS Linux UNIX On i5/OS, Linux, and UNIX platforms:**  
`install_root/logs/wbi/install`
  - **Windows On Windows platforms:** `install_root\logs\wbi\install`
- Temporary log files, located by default in the following directory:
  - **i5/OS Linux UNIX On i5/OS, Linux, and UNIX platforms:**  
`user_home/wbilogs`
  - **Windows On Windows platforms:** `user_home\wbilogs`

See descriptions of relevant log files in “Installation and profile creation log files” on page 669.

You can review other useful troubleshooting information in the following topics:

- Chapter 15, “Troubleshooting installation and configuration,” on page 665
  - “Troubleshooting the launchpad application” on page 674
  - “Troubleshooting a silent installation” on page 675
  - “Diagnosing a failing Ant configuration script” on page 677
  - **i5/OS** “i5/OS installation troubleshooting tips” on page 676
  - “Messages: installation and profile creation” on page 668
  - “Recovering from profile creation or augmentation failure” on page 678
3. Click **Finish** to close the installation wizard.



## Results

If the Installation results panel indicates **Success**, the product was installed successfully.

## What to do next

Install the most recent WebSphere Process Server fix pack on top of the installation (if any exist at the time of installation). For information about installing fix packs on WebSphere Process Server, see the instructions on the support pages at <http://www.ibm.com/software/integration/wps/support/>.

**Linux** **UNIX** **On Linux and UNIX, platforms:** If you removed the freeware directory from your PATH (instructed in an earlier topic), add the freeware directory back to the PATH variable.

If you have not created a profile, see “Creating profiles using the Profile Management Tool” on page 198 or “Augmenting profiles using the Profile Management Tool” on page 231 for instructions on how to use the Profile Management Tool to create new WebSphere Process Server profiles or augment existing application server or WebSphere Enterprise Service Bus profiles into WebSphere Process Server profiles.

You can then start the server or deployment manager you create from its First steps console to verify that your installation is operating properly. See “Options on the First steps console” on page 136 for more details.

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## Installing silently on Linux, UNIX, and Windows

If you do not want to use the graphical user interface to install WebSphere Process Server, you can perform a silent, or background, installation on a distributed system by using files called response files. Instead of displaying a graphical user interface, or a “wizard,” the silent installation causes the installation program to read all of your responses from a file that you provide. An example response file, `responsefile.wbis.txt`, is shipped with default values and can be used to silently install WebSphere Process Server.

Response files, also called options files, are used to pass command-line options to the installation program.

### Before you begin

- Make sure that you have reviewed the list of prerequisites for installing the product at “Prerequisites for installing WebSphere Process Server” on page 31.
- Make sure that you are logged in as an administrator when security and role-based authorization are enabled. Security is enabled by default during silent installation. To disable security change the **PROF\_enableAdminSecurity** value in the response file to “false”.

**Important:** The installation path cannot contain parentheses. You cannot install over an existing WebSphere Application Server installation that contains parentheses in the installation path.

**Note:** If you select to create a stand-alone server profile during a Typical installation and enable security, the installer creates a sample Business Process Choreographer configuration for the profile. If you do not enable security, the

sample configuration is not created. If you plan to federate the stand-alone server to a deployment manager, you will first have to delete this sample configuration.

**Vista** **Windows Vista™ and Windows 2008 operating systems:** Performing a silent installation of WebSphere Process Server Version 6.2 on these operating systems requires Administrator privileges. If you launch the silent installation using standard user privileges, you are presented with an elevation prompt for Administrator privileges before you are allowed to continue. You can avoid this prompt by running the silent installation from a Command Prompt window that is opened by performing the following actions:

- Right-click a Command Prompt shortcut.
- Click **Run As Administrator**.

**Important:** **AIX** **On AIX platforms:** To prepare the file for a silent installation on AIX, use UNIX line-end characters (0x0D0A) to end each line of the response file. The safest method of preparing the file is to edit the file on the target operating system.

For more information about installing from the command line, see the WebSphere Process Server Technote Additional Information for Silent Installation of WebSphere Process Server.

## Procedure

To install silently using the response file, perform the following steps.

1. Log on to the operating system.
2. **Linux** **UNIX** **On Linux and UNIX platforms:** After inserting a DVD into a drive, some Linux and UNIX operating systems require you to mount the drive.
3. Copy the sample response file `responsefile.wbis.txt` from the WBI directory on the disc labeled *WebSphere Process Server V6.2 DVD* to a place that you can easily identify on your system, and save it with a new name, such as `myoptionsfile.txt`.
4. Edit the file using a flat file editor of your choice on the target operating system, customizing it with the parameters for your system. Read the directions in the response file to choose appropriate values for all of the options you must set for your specific silent installation.

You can modify all of the parameters in the response file, but pay attention to the following options and values:

- 

**Important:** Make sure that you change the License Acceptance statement in the file to a value of "true". Leaving it with a value of "false" causes the installation to fail.

For example, the License Acceptance should be: `-OPT silentInstallLicenseAcceptance="true"`

- Change the value of the `wpsInstallType` option to designate one of the following types of installation:
  - "typical" - a full installation of WebSphere Process Server that allows you to define an initial WebSphere Process Server environment of stand-alone server, deployment manager, custom or none.

By default, the Installation Type Settings in responsefile.wbis.txt are set for a typical installation: `-OPT wpsInstallType="typical"`

- "client" - a partial installation of WebSphere Process Server that allows you to run client applications that interact with a process server within the same cell.

To create an operational WebSphere Process Server Client environment, don't select any optional features (such as samples) and don't create a profile as part of the installation. Doing so will cause the installation to fail. For an example of how to create a client installation, see the sample response file.

- "ndGuided" - a full installation of WebSphere Process Server that guides you through setting up a deployment environment, creating a deployment manager based on a deployment environment pattern or defining a deployment environment that you have previously created.
- For a typical installation you must have a profile to create an operational WebSphere Process Server environment. You can create a profile silently by specifying certain values in your response file that will create a profile during the installation process. Change the value of the option `profileType` to one of the following values:
  - `deploymentManager` - creates a profile with a deployment manager. For example:  
`-OPT profileType="deploymentManager"`
  - `standAlone` - creates a profile with a stand-alone server. For example:  
`-OPT profileType="standAlone"`
  - `custom` - creates a profile with an empty node, which you can configure after installation.  
`-OPT profileType="custom"`
  - `none` - does not create a profile during installation. Use this value if you do not want to create a profile during the silent installation process. After installation, you will need to run the Profile Management Tool in order to create a profile.  
`-OPT profileType="none"`

All profile-related options in the responsefile.wbis.txt file begin with `PROF_`. (The options are the same as parameters for the `manageprofiles` command, but in the response file, they begin with the prefix `PROF_` to designate them as profile options.) You can modify these profile options depending on what you have selected for `profileType`. For more information, read the descriptions in the response file.

**Note:** If you want to use the response file to create a new profile for an existing installation, comment out the `-OPT installType="installNew"` section of your response file, remove the comments from the `-OPT createProfile` section of the response file, and change the value of the option `-createProfile` to `true`. For example:

```
#-OPT installType="installNew"  
-OPT createProfile="true"
```

**Note:** For an alternate way to create profiles silently, see "Creating profiles using the `manageprofiles` command" on page 203.

- If you designated a deployment environment installation (`-OPT wpsInstallType="ndGuided"`), you must designate additional options to define that installation. Change the value of the `ndGuidedInstallType` option to one of the following values:

- deploymentManager - guides you through the creation of a deployment manager in order to create a new deployment environment based on the pattern that you choose. For example:  
-OPT ndGuidedInstallType="deploymentManager"

If you use the deploymentManager value, you must change several other values in the response file to further define the creation of the deployment manager server during the silent installation.

- additionalRoles - guides you through the creation of a custom profile for a deployment environment that you have already defined. You must be able to connect to the running deployment manager on that deployment environment. For example:  
-OPT ndGuidedInstallType="additionalRoles"

For more information about the deployment environment, see Planning for WebSphere Process Server and Implementing a deployment environment.

**Note:** You can always go back to the *WebSphere Process Server V6.2* DVD in the WBI directory to view the example response file responsefile.wbis.txt and review the default options and values.

5. Save your changes in your copy of the response file.
6. Run the command to install WebSphere Process Server using your custom response file. The commands shown assume that you have copied your response file into a temporary directory and renamed it as myoptions.txt before customizing the file.

Run the following command from either the product DVD or from the temporary location where you have saved the contents of the electronic image from Passport Advantage.

- **Linux** **UNIX** **On Linux and UNIX platforms:** install -options /tmp/WBI/myoptions.txt -silent
- **Windows** **On Windows platforms:** install.exe -options "C:\temp\WBI\myoptions.txt" -silent

## What to do next

Verify the success of the installation by examining the log.txt log file. The log file is located as follows, where *install\_root* represents the location of the WebSphere Process Server or WebSphere Process Server Client installation:

- **Linux** **UNIX** **On Linux and UNIX platforms:** *install\_root*/logs/wbi/install/log.txt
- **Windows** **On Windows platforms:** *install\_root*\logs\wbi\install\log.txt

If this log file contains the string INSTCONFSUCCESS on the last line, then the installation was successful. Note that other terms such as INSTCONFPARTIALSUCCESS or INSTCONFFAILED can occur on other lines within the file, or even on the last line, but if INSTCONFSUCCESS is included in the last line, the installation was successful.

If the string INSTCONFPARTIALSUCCESS or INSTCONFFAILED appears in the last line of the file without INSTCONFSUCCESS, problems were detected during installation. INSTCONFPARTIALSUCCESS indicates that the installation completed but errors were generated; INSTCONFFAILED, that the installation failed completely.

If the installation was unsuccessful, examine the `install_error.log` file to determine why. This log file is located by default as follows:

- **Linux** **UNIX** **On Linux and UNIX platforms:** `install_root/logs/wbi/install/install_error.log`
- **Windows** **On Windows platforms:** `install_root\logs\wbi\install\install_error.log`

If the installation failed completely, also examine any temporary log files located by default in the following directory:

- **Linux** **UNIX** **On Linux and UNIX platforms:** `user_home/wbilogs`
- **Windows** **On Windows platforms:** `user_home\wbilogs`

See the description of all log files in “Installation and profile creation log files” on page 669.

You can review other useful troubleshooting information in the following topics:

- Chapter 15, “Troubleshooting installation and configuration,” on page 665
- “Troubleshooting the launchpad application” on page 674
- “Troubleshooting a silent installation” on page 675
- “Diagnosing a failing Ant configuration script” on page 677
- **i5/OS** “i5/OS installation troubleshooting tips” on page 676
- “Messages: installation and profile creation” on page 668
- “Recovering from profile creation or augmentation failure” on page 678

If the installation was successful, and you chose to create a stand-alone profile or deployment manager profile, you can start the server or deployment manager from its First steps console to verify that your installation is operational. See Options on the First Steps console for more details. You can also use the installation verification tools to verify your installation. For more information, see Verifying the installation.

---

## Installing silently on i5/OS from a System i server

If you do not want to use the graphical user interface to install WebSphere Process Server, you can perform a silent, or background, installation on a System i server by using a file called a response file. Instead of displaying a graphical user interface, or a “wizard,” the silent installation causes the installation program to read all of your responses from a file that you provide. An example response file, `responsefile.wbis.txt`, is shipped with default values and can be used to silently install WebSphere Process Server.

### Before you begin

Prepare for the installation before using this procedure. See “Prerequisites for installing WebSphere Process Server” on page 31 and “Preparing i5/OS systems for installation” on page 44 for more information.

Before you install WebSphere Process Server, ensure that your user profile has `*ALLOBJ` and `*SECADM` special authorities.

**Note:** The installation path cannot contain parenthesis. You cannot install over an existing WebSphere Application Server installation that contains parenthesis in the installation path.

## About this task

You can install WebSphere Process Server from Qshell using the **INSTALL** command. You can also use the **RUNJVA** command to invoke the installation wizard.

Response files, also called options files, are used to pass command-line options to an installation or uninstallation program.

### Procedure

1. Sign on to the System i server with a user profile that has \*ALLOBJ and \*SECADM special authorities.
2. Place the WebSphere Process Server for i5/OS disk in the disk drive of your System i server.  
Do not use the WebSphere Process Server, Version 6.2 for Windows disk or any other operating system disk other than the disk for i5/OS.
3. Use the Copy (CPY) command to create a copy of the responsefile.wbis.txt file from the disk.  
For example:  

```
CPY OBJ('/QOPT/WEBSHERE') TOOBJ('/my_dir/new_dir') SUBTREE(*ALL) REPLACE(*YES)
```

QOPT is the disk mount point.  
WEBSHERE is the disk volume label.  
/WBI is the product directory on the disk. This will be referred to in later steps.
4. If you have not already done so, read the IBM International Program License Agreement located in the /WBI/lafiles directory.  
If you agree to the terms of the agreement, continue with the installation process.
5. Edit the /MYDIR/responsefile.base.txt file.
  - a. Change the value for -OPT silentInstallLicenseAcceptance from false to true.  
A value of true indicates that you have read and accept the terms of the license agreement. This change is required to run the installation.
  - b. By default, the PROF\_enableAdminSecurity option is set to true. If you want to enable administrative security for the default profile created during install, you must specify values for the PROF\_adminUserName and PROF\_adminPassword options.  
The user ID and password do not need to be a system user ID and password or an LDAP user ID and password. The ID-and-password pair specified are stored in the user registry and used for administrative security for the default profile. Write down the user ID and password.  
If you do not want to enable administrative security for the default profile, change the value for the PROF\_enableAdminSecurity option from true to false.
6. Invoke the installation program for WebSphere Process Server for i5/OS.  
  
**Note:** The Samples feature is not installed with the product by default. If you want to use the samples, perform the following actions:
  - Specify sampleSelected for the -OPT addFeature option.
  - Specify a value for the -OPT samplesPassword option if you are enabling security.

To invoke the installation program for WebSphere Process Server for i5/OS, run the **INSTALL** command from Qshell or use the **RUNJAVA** command from the CL command line.

In the following example commands, *path/responsefile* represents the fully qualified path of the responsefile.wbis.txt file that you edited.

- Run the **INSTALL** command from Qshell.
  - a. On a CL command line, issue the STRQSH command to start the Qshell command shell.
  - b. Issue the **INSTALL** command from the /WBI directory to start the installation program.

```
INSTALL -options path/responsefile -silent
```

**Important:** Do not exit the Qshell session (PF3) until the installation has completed. Doing so might cause the installation to stop prematurely.

- Issue the **RUNJAVA** command from the CL command line:

At the CL command line, change back to the */my\_dir/new\_dir/WBI/install* directory before issuing the following commands. Enter the **RUNJAVA** command on one line. The command is shown on more lines for formatting clarity.

```
RUNJAVA
CLASS(run) PARM('-options' 'path/responsefile')
CLASSPATH('setup.jar')
PROP(
  ('Xbootclasspath/p' '../JDK/jre.pak/repository/package.java.jre/
   java/jre/lib/xml.jar')
  (java.version 1.5)
  (is.debug 1)
)
```

## Results

After you invoke the installation, messages are displayed that indicate the progress of the installation process. When the setup program completes, press **F3** to exit.

## What to do next

---

## Installing silently on i5/OS from a Windows workstation command line

One installation alternative is to install WebSphere Process Server for i5/OS from a Windows workstation command line.

### Before you begin

Prepare for the installation before using this procedure. See “Prerequisites for installing WebSphere Process Server” on page 31 and “Preparing i5/OS systems for installation” on page 44 for more information.

**Note:** The installation path cannot contain parentheses. You cannot install over an existing WebSphere Application Server installation that contains parentheses in the installation path.

### About this task

The remote silent mode allows you to install the product with a single command from a remote Windows workstation. Installation options must be specified in a

response file. During the installation, you are unable to change the installation options. The parameters and default values are described in responsefile.wbis.txt for command-line installation.

### Procedure

1. If TCP/IP is not started on your System i server, enter the Start TCP/IP (STRTCP) command on the Control Language (CL) command line.
2. Verify that the host server jobs are started on your System i server. The host server jobs allow the installation code to run on i5/OS.  
On a CL command line, enter the following command:  
STRHOSTSVR SERVER(\*ALL)
3. Verify that your user profile has the \*ALLOBJ and \*SECADM special authorities.
4. Place the WebSphere Process Server for i5/OS disk in the disk drive of your Windows workstation. The autorun feature brings up the GUI. Click Cancel to exit the GUI.

Do not use the WebSphere Process Server for Windows disk or any other operating system disk other than the disk for i5/OS.

5. On your Windows workstation, open a command prompt.
6. Access the disk drive of your Windows workstation by switching to the disk drive. For example, enter e: where e: is the letter assigned to your DVD drive.
7. Change to the WBI directory. For example: cd WBI.
8. Copy the response file from the disk directory to a directory on your Windows workstation, such as the C:\temp directory.

For example:

```
copy responsefile.wbis.txt C:\temp\RESPONSEFILE
```

9. If you have not already done so, read the IBM International Program License Agreement located in the \LICENSES directory.  
If you agree to the terms of the agreement, continue with the installation process.
10. Edit the RESPONSEFILE file.
  - a. Change the value for -OPT silentInstallLicenseAcceptance from false to true.  
A value of true indicates that you have read and accept the terms of the license agreement. This change is required to run the installation.
  - b. By default, the PROF\_enableAdminSecurity option is set to true. If you want to enable administrative security for the default profile created during install, you must specify values for the PROF\_adminUserName and PROF\_adminPassword options.  
The user ID and password do not need to be a system user ID and password or an LDAP user ID and password. The ID-and-password pair specified are stored in the user registry and used for administrative security for the default profile. If you specify WebSphere local security, the userid must be a valid user profile. If you specify an LDAP registry, the userid must be a member of that registry. Write down the user ID and password.  
If you do not want to enable administrative security for the default profile, change the value for the PROF\_enableAdminSecurity option from true to false.



**Note:** The Samples feature is not installed with the product by default. If you want to use the samples, perform the following actions:

- Specify `sampleSelected` for the `-OPT addFeature` option.
- Specify a value for the `-OPT samplesPassword` option if you are enabling security.

11. Run the `install.exe` command. Specify the response file to use during the installation. Specify the i5/OS system name and a valid i5/OS user profile and password when you run this command.

Your user profile must have `*ALLOBJ` and `*SECADM` special authorities for this step.

```
install.exe system_name user_name password -options response_file -silent
```

The `system_name` variable is the name of your System i server. The `user_name` variable and the password variable are your user profile login credentials, and the `response_file` variable is the name of your response file.

The password used in this command is displayed in clear text on the command line. For example:

```
install.exe MYISERIES myUserName myPassword  
-options C:\temp\RESPONSEFILE -silent
```

After you issue the command, control returns to the command prompt while the installation process runs.

## Results

This procedure results in installing WebSphere Process Server from a Windows workstation command line.

## What to do next

Verify the success of the installation by examining the `log.txt` log file. The log file is located in the directory `install_root/logs/wbi/install/log.txt` on the System i server, where `install_root` represents the location of the WebSphere Process Server or WebSphere Process Server Client installation.

If this log file contains the string `INSTCONFSUCCESS` on the last line, then the installation was successful. Note that other terms such as `INSTCONFPARTIALSUCCESS` or `INSTCONFFAILED` can occur on other lines within the file, or even on the last line, but if `INSTCONFSUCCESS` is included in the last line, the installation was successful.

If the string `INSTCONFPARTIALSUCCESS` or `INSTCONFFAILED` appears in the last line of the file without `INSTCONFSUCCESS`, problems were detected during installation. `INSTCONFPARTIALSUCCESS` indicates that the installation completed but errors were generated; `INSTCONFFAILED`, that the installation failed completely.

If the installation was unsuccessful, examine the `install_error.log` file to determine why. This log file is located by default on the System i server in the directory `install_root/logs/wbi/install/install_error.log`.

If the installation failed completely, also examine any temporary log files located by default in the directory `user_home/wbilogs`.

See the description of all log files in “Installation and profile creation log files” on page 669.

You can review other useful troubleshooting information in the following topics:

- Chapter 15, “Troubleshooting installation and configuration,” on page 665
- “Troubleshooting the launchpad application” on page 674
- “Troubleshooting a silent installation” on page 675
- “Diagnosing a failing Ant configuration script” on page 677
- **i5/OS** “i5/OS installation troubleshooting tips” on page 676
- “Messages: installation and profile creation” on page 668
- “Recovering from profile creation or augmentation failure” on page 678

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## Replacing the underlying integrated installation package

You can replace the IBM-supplied integrated installation package (IIP) with a user-defined IIP. The IIP contains WebSphere Application Server Network Deployment, version 6.1 and the Feature Pack for Web Services.

### About this task

An IIP is an aggregated installation package created with the IBM WebSphere Installation Factory that can include one or more generally available installation packages, one or more customized installation packages (CIPs), and other user-specified files and directories. The IIP invokes these *contributions* one after the other in a predefined sequence and in a coordinated manner to complete an end-to-end installation.

The WebSphere Application Server V6.1 Feature Pack for Web Services extends the capabilities of WebSphere Application Server V6.1 to enable Web services messages to be sent asynchronously, reliably, and securely, focusing on interoperability with other vendors and to provide support for the Java API for XML Web Services (JAX-WS) 2.0 programming model.

IBM supplies the IIP in the installation image found on the WebSphere Process Server V6.2 DVD. Customers can also create their own IIP to replace the IBM-supplied IIP.

To replace the IBM-supplied IIP follow these steps:

### Procedure

1. Generate an IIP to replace the underlying IIP.

The IIP that you generate:

- must contain WebSphere Application Server Network Deployment, version 6.1 and the Feature Pack for Web Services.
- must be at the same or a higher maintenance level than required by the WebSphere Process Server installer which may be a CIP.
- must have WebSphere Application Server Network Deployment as the primary offering and only one additional offering of Feature Pack for Web Services.

See “Developing and installing integrated installation packages” on page 625 for more information on how to generate an IIP.

2. Copy the installation directories and files that are provided on the WebSphere Process Server V6.2 DVD to `<user_root_dir>`, where `<user_root_dir>` is a user-specified directory that emulates the directory structure found on the

WebSphere Process Server V6.2 DVD. Replace the contents of the /iip folder with the user created IIP. Make sure the following directories are at the same root directory level:

```
<user_root_dir>
/iip
/JDK
/WBI
```

**Note:** The WBI directory installation files may be a CIP or the installer from the DVD image. In case of a CIP, an additional folder, custom.wbi, needs to be copied over.

3. Start the launchpad. From the launchpad:
  - a. Click **WebSphere Process Server installation**.
  - b. Click **Launch the installation wizard for WebSphere Process Server for Multiplatforms**.
4. Perform an interactive installation following the procedure in “Installing WebSphere Process Server interactively” on page 79.

## What to do next

After the installation completes, the Installation Results panel should indicate that the WebSphere Application Server Network Deployment and the Feature Pack for Web Services have been successfully installed. If a problem occurs during installation, an error message will appear with information on how to resolve the problem.

---

## Running scripts on i5/OS

On an i5/OS platform, scripts are run in the *Qshell* command environment.

### Before you begin

Many of the scripts shipped with i5/OS require the user profile to have \*ALLOBJ special authority or explicit authority. This is akin to root authority on a UNIX platform.

### About this task

To run a script on i5/OS, follow these steps:

#### Procedure

1. Go to the i5/OS command line.
2. On the command line, start the Qshell. Enter: STRQSH
3. In Qshell, change the directory to the location where the script resides and then run the appropriate script. Example, `cd /QIBM/ProdData/WebSphere/ProcServer/bin`

---

## Starting the First steps console

After installing WebSphere Process Server, use the First steps console to start product tooling, access product documentation, or direct elements such as servers and administrative consoles related to individual profiles. A generic version of the console, plus a version for each profile in your installation are available.

Options on each console are displayed dynamically, depending on features you install and the availability of certain elements on particular operating systems. Options include verifying your installation, starting or stopping the server or deployment manager, accessing the administrative console, starting the Profile Management Tool, accessing the Samples gallery, accessing the product documentation, or starting the migration wizard. Methods for starting the First steps console differ depending on whether it is a generic or profile-specific version.

The following sections provide detailed information on starting a First steps console based on its version and the platform used on the system:

- “Starting the generic version of the First steps console”
- “Starting a First steps console associated with a profile on i5/OS platforms” on page 135
- “Starting a First steps console associated with a profile on Linux, UNIX, and Windows platforms” on page 136

#### Restrictions:

- **i5/OS** **On i5/OS platforms:** The i5/OS version of the First steps console does not have a migration wizard option.
- The WebSphere Process Server Client does not have an associated First steps console. The underlying WebSphere Application Server or WebSphere Application Server Network Deployment installation has its own First steps console.
- **Windows** **i5/OS** **On Windows platforms:** The First steps console might not start if you use Mozilla 2.x as your default browser and it is installed in a location containing a space in the path name. This problem can also occur if you use Windows to start the First steps console associated with profiles installed on i5/OS platforms. To rectify this problem, perform one of these actions:
  - Install Mozilla into a location without a space in the path name.
  - Alter the registry key to remove the space.
  - Temporarily set Internet Explorer as the default browser and then set Mozilla as the default browser. This automatically removes the space from the registry key.

## Starting the generic version of the First steps console

Start the generic version of the First steps console by performing the following steps. Because an i5/OS system does not have a graphical user interface (GUI), a First steps console on this platform must be started from a Windows workstation.

1. Open a command window.
2. Change to the following directory:
  - **i5/OS** **On i5/OS platforms:** *first\_steps\_location*\firststeps\wbi\noprofile
  - **Linux** **UNIX** **On Linux and UNIX platforms:** *install\_root*/firststeps/wbi
  - **Windows** **On Windows platforms:** *install\_root*\firststeps\wbi

The variable *install\_root* represents the location of the WebSphere Process Server installation on Linux, UNIX, and Windows systems; *first\_steps\_location*, the location of the i5/OS First steps console on the Windows workstation. The *first\_steps\_location* is in one of the following locations:

- *install\_image\_location*\WBI\iSeries, where *install\_image\_location* is the path to the disc media or the location of the Passport Advantage image.
  - *pmt\_client\_installation*, which is C:\Program Files\IBM\WebSphere\PMTCClient by default.
3. Issue the firststeps or run command (depending on platform) to start the console:
- **i5/OS** On i5/OS platforms: run.bat
  - **Linux** **UNIX** On Linux and UNIX platforms: ./firststeps.sh
  - **Windows** On Windows platforms: firststeps.bat

#### Fast path:

**Windows** On Windows platforms: You can also start the generic version of the console on Windows platforms by selecting **Start** → **Programs** → **IBM WebSphere** → **Process Server 6.2** → **First steps**.

### Starting a First steps console associated with a profile on i5/OS platforms

**i5/OS** You can launch the First steps console associated with a profile by performing the following tasks. Because an i5/OS system does not have a graphical user interface (GUI), a First steps console on this platform must be started from a Windows workstation. Use the firststeps.bat command to open the First steps console. This command is located in one of the following locations:

- From the installation media (which may be either the installation disc or the installation image that was downloaded to the server): *install\_image\_location*\WBI\iSeries\firststeps.
- From the client associated with the i5/OS profile: *pmt\_client\_installation*\PMT\firststeps, where *pmt\_client\_installation* is C:\ProgramFiles\IBM\WebSphere\PMTCClient by default.

You will be presented with a panel to log onto the target i5/OS server. Enter the name of the i5/OS server where the profile is located, your user name, and your password, and click **OK**. You will be presented with one of the following situations, depending on what is installed and configured in the target i5/OS server:

1. An error message will be displayed if WebSphere Process Server is not installed on the target i5/OS server.
2. An error message will be displayed if WebSphere Process Server is installed, but no profile exists on the target i5/OS server.
3. The First steps console is launched for a profile on the target i5/OS server if it contains more than one WebSphere Process Server installation, but has only a single profile configured on that server.
4. A profile selection panel will be opened if there is a single installation of WebSphere Process Server with multiple profiles configured on the target i5/OS server. Select one of the profiles and click **OK** to launch the First steps console for that profile.
5. An installation selection panel will appear if there are multiple installations of WebSphere Process Server on the target i5/OS server, where some or all of those installations have at least a one profile configured. Select the installation and click **OK**. Depending on the number of profiles configured for the selected installation, you will see one of the following appear:

- The profile selection panel described in step 4 above if the installation contains multiple profiles. Select one of the profiles and click **OK** to launch the First steps console for that profile.
- The First steps console for the profile if the selected installation contains only a single configured profile.

## Starting a First steps console associated with a profile on Linux, UNIX, and Windows platforms

**Linux** **UNIX** **Windows** Start a First steps console associated with a profile by performing the following steps:

1. Open a command window.
2. Change to the following directory (where *profile\_root* represents the installation location of the WebSphere Process Server or WebSphere Enterprise Service Bus profile):
  - For WebSphere Process Server profiles:
    - **Linux** **UNIX** **On Linux and UNIX platforms:** *profile\_root/firststeps/wbi*
    - **Windows** **On Windows platforms:** *profile\_root\firststeps\wbi*
  - For WebSphere Enterprise Service Bus profiles:
    - **Linux** **UNIX** **On Linux and UNIX platforms:** *profile\_root/firststeps/esb*
    - **Windows** **On Windows platforms:** *profile\_root\firststeps\esb*
3. Issue the **firststeps** command to start the console:
  - **Linux** **UNIX** **On Linux and UNIX platforms:** *./firststeps.sh*
  - **Windows** **On Windows platforms:** *firststeps.bat*

### Fast path:

You can also start a version of the First steps console associated with a profile by performing one of the following tasks:

- When performing selected installation procedures, by checking the First steps console check box on the Installation complete panel at the end of the installation process.
- Checking the First steps console check box on the Profile creation complete or Profile augmentation complete panel at the end of the profile creation or augmentation process.
- **Windows** **On Windows platforms:** When starting a First steps console associated with a WebSphere Process Server or WebSphere Enterprise Service Bus profile, by selecting **Start** → **Programs** → **IBM WebSphere** → **Process Server 6.2** → *profile\_name* → **First steps**.

See “Options on the First steps console” for descriptions of the options you can select from the First steps console.

## Options on the First steps console

After installing WebSphere Process Server, use the First steps console to start product tooling, access product documentation, or direct elements such as servers and administrative consoles related to individual profiles. A generic version of the console, plus a version for each profile in your installation are available. Options

on each console are displayed dynamically, depending on features you install and the availability of certain elements on particular operating systems. Options include verifying your installation, starting or stopping the server or deployment manager, accessing the administrative console, starting the Profile Management Tool, accessing the Samples gallery, accessing the product documentation, or starting the migration wizard.

**Restrictions:**

- **i5/OS On i5/OS platforms:** The i5/OS version of the First steps console does not have a migration wizard option.
- The WebSphere Process Server Client does not have an associated First steps console. The underlying WebSphere Application Server installation has its own First steps console.

Options that are displayed on the various types of First steps consoles are summarized in Table 28. Each option is defined in “Option descriptions.” “Usage tips” on page 140 describes which commands each option calls.

*Table 28. Available options on First steps consoles*

Option	Generic version	Stand-alone server profile version	Deployment manager profile version	Custom profile version
Installation verification	No	Yes	Yes	No
Start and stop the server	No	Yes	No	No
Start and stop the deployment manager	No	No	Yes	No
Administrative console	No	Yes	Yes	No
Profile Management Tool	Yes	Yes	Yes	Yes
Samples gallery	No	Yes	No	No
Information center	Yes	Yes	Yes	Yes
Migration wizard	Yes (except on i5/OS)	Yes (except on i5/OS)	Yes (except on i5/OS)	Yes (except on i5/OS)
Copyright and trademark information	Yes	No	No	No
Exit	Yes	Yes	Yes	Yes

**Option descriptions**

Options that are displayed on the various versions of the First steps consoles are described here:

**Installation verification**

Starts the installation verification test. The test consists of starting and monitoring the stand-alone server or deployment manager during its start up.

If this is the first time that you have used the First steps console since creating a stand-alone server or deployment manager profile, select **Installation verification** to verify your installation. The verification process starts the stand-alone server or deployment manager.

The **Start the server** and **Start the deployment manager** options are unavailable while the Installation Verification Tool (IVT) runs.

The IVT provides the following useful information about the stand-alone server or deployment manager:

- The name of the server process
- The name of the profile
- The profile path, which is the file path and the name of the profile
- The type of profile
- The cell name
- The node name
- The current encoding
- The port number for the administrative console
- Various informational messages that include the location of the `SystemOut.log` file and how many errors are listed within the file
- A Health Monitor Report (only for stand-alone servers)
- A completion message

Review more information about verifying your installation in Chapter 6, “Verifying the product installation,” on page 159 and its child topics.

#### **Start the server**

Toggles to **Stop the server** when the server runs.

After selecting the **Start the server** option, an output screen is displayed with status messages. The success message informs you that the server is open for e-business. Then the menu item changes to **Stop the server** and both the **Administrative console** and **Samples gallery** options are enabled (if you installed them).

If you select the **Start the server** option, the **Installation verification** option is unavailable while the server is starting.

#### **Start the deployment manager**

Toggles to **Stop the deployment manager** when the deployment manager runs.

After selecting the **Start the deployment manager** option, an output screen is displayed with status messages. The success message informs you that the deployment manager is open for e-business. Then the menu item changes to **Stop the deployment manager** and the **Administrative console** option is enabled (if you installed it).

If you select the **Start the deployment manager** option, the **Installation verification** option is unavailable while the deployment manager runs.

#### **Administrative console**

Displayed only if you deployed the Administrative console during profile creation or augmentation. This option is unavailable until you start the stand-alone server or deployment manager.



The administrative console is a configuration editor that runs in a Web browser. The administrative console lets you work with XML configuration files for the stand-alone server or deployment manager, and all of the applications that are in the cell.

To start the administrative console, select **Administrative console**.

The administrative console prompts for a login name. This is not a security item, but merely a tag to identify configuration changes that you make during the session. Secure signon is also available when administrative security is enabled.

The installation procedures in the information center caution you to write down the administrative user ID and password when security is enabled during installation. Without the ID and password, you cannot use the administrative console or scripting.

### **Profile Management Tool**

Not available on 64-bit Linux or Linux on System z platforms. Starts the Profile Management Tool. The tool lets you create a stand-alone server, deployment manager, or custom profile.

A *profile* consists of files that define the runtime environment for the stand-alone server or deployment manager. Each profile has its own administrative interface. A custom profile is an exception. A custom profile is an empty node that you federate into a deployment manager cell and customize. No default server processes or applications are created for a custom profile.

Each profile has its own First steps console. The location of the command to start the First steps console is within the set of files in the profile. A prompt to start the First steps console that is associated with a profile is displayed on the last panel of the Profile Management Tool.

### **Samples gallery**

Displayed only if you installed the WebSphere Process Server samples during profile creation or augmentation. This option starts the WebSphere Process Server Samples gallery in the administrative console. The option is unavailable until you start the server.

To start the Samples gallery, select **Samples gallery**.

If you did not install the WebSphere Process Server samples during the initial installation of the product, the option does not display on the First steps console. You can perform an incremental installation to add the Samples feature. After adding the Samples, the option is displayed on the First steps console.

### **Information center**

Links you to the online information center at <http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r2mx/>.

### **Migration wizard**

Starts the WebSphere Process Server version-to-version migration wizard, which is the graphical interface to the migration tools. The version-to-version migration wizard is a graphical interface that guides you through migrating from an older version to a newer version of WebSphere Process Server. See the topic Migration wizard for more information about this interface.

## Copyright and trademark information

Shows the copyright and trademark information for WebSphere Process Server.

**Exit** Closes the First steps console.

## Usage tips

Table 29 shows which commands the options on the various WebSphere Process Server First steps consoles call. For more information on selected individual commands, look up the command in the Command-line utilities section in the WebSphere Application Server Network Deployment information center:

- startServer command
- stopServer command
- startManager command
- stopManager command

The commands used to start the installation verification test, the First steps console, the Profile Management Tool, and the Migration wizard included in the WebSphere Process Server product have different names, exist in different directory locations, or perform different functions than the equivalent WebSphere Application Server Network Deployment commands. Therefore, links to those commands in the WebSphere Application Server Network Deployment information center are not provided here.

Table 29. Commands called by First steps console options

Option	Link
Installation verification	<p>Calls the wbi_ivt command.</p> <p>The location of the installation verification test command is:</p> <ul style="list-style-type: none"><li>• <b>i5/OS</b> On i5/OS platforms: <code>profile_root/bin/wbi_ivt -username <i>username</i> -password <i>password</i></code> <b>Note:</b> The <b>username</b> and <b>password</b> parameters are mandatory for the iSeries platform if security is enabled. They are optional for Linux, UNIX, and Windows platforms, but you will be prompted for their values if security is enabled.</li><li>• <b>Linux</b> <b>UNIX</b> On Linux and UNIX platforms: <code>profile_root/bin/wbi_ivt.sh</code></li><li>• <b>Windows</b> On Windows platforms: <code>profile_root\bin\wbi_ivt.bat</code></li></ul>
Start the server	<p>Calls the startServer command.</p> <p>The location of the startServer command is:</p> <ul style="list-style-type: none"><li>• <b>i5/OS</b> On i5/OS platforms: <code>profile_root/bin/startServer</code></li><li>• <b>Linux</b> <b>UNIX</b> On Linux and UNIX platforms: <code>profile_root/bin/startServer.sh</code></li><li>• <b>Windows</b> On Windows platforms: <code>profile_root\bin\startServer.bat</code></li></ul> <p>When you have more than one stand-alone server on the same workstation, the command starts the stand-alone server that is associated with the same profile as in the First steps console.</p>

Table 29. Commands called by First steps console options (continued)

Option	Link
<b>Stop the server</b>	<p>Calls the stopServer command.</p> <p>The location of the stopServer command is:</p> <ul style="list-style-type: none"> <li>• <b>i5/OS</b> On i5/OS platforms: <i>profile_root/bin/stopServer</i></li> <li>• <b>Linux</b> <b>UNIX</b> On Linux and UNIX platforms: <i>profile_root/bin/stopServer.sh</i></li> <li>• <b>Windows</b> On Windows platforms: <i>profile_root\bin\stopServer.bat</i></li> </ul>
<b>Start the deployment manager</b>	<p>Calls the startManager command.</p> <p>The location of the startManager command is:</p> <ul style="list-style-type: none"> <li>• <b>i5/OS</b> On i5/OS platforms: <i>profile_root/bin/startManager</i></li> <li>• <b>Linux</b> <b>UNIX</b> On Linux and UNIX platforms: <i>profile_root/bin/startManager.sh</i></li> <li>• <b>Windows</b> On Windows platforms: <i>profile_root\bin\startManager.bat</i></li> </ul> <p>When you have more than one deployment manager on the same workstation, the command starts the deployment manager that is associated with the same profile as in the First steps console.</p>
<b>Stop the deployment manager</b>	<p>Calls the stopManager command.</p> <p>The location of the stopManager command is:</p> <ul style="list-style-type: none"> <li>• <b>i5/OS</b> On i5/OS platforms: <i>profile_root/bin/stopManager</i></li> <li>• <b>Linux</b> <b>UNIX</b> On Linux and UNIX platforms: <i>profile_root/bin/stopManager.sh</i></li> <li>• <b>Windows</b> On Windows platforms: <i>profile_root\bin\stopManager.bat</i></li> </ul>
<b>Administrative console</b>	<p>Opens the default browser to the administrative console Web address.</p> <p>When you have more than one server on the same workstation (or on the same logical partition on i5/OS), the port varies. The First steps console starts the administrative console that is associated with the same profile as in the First steps console.</p>
<b>Profile Management Tool</b>	<p>Calls the pmt command.</p> <p>The location of the pmt command is:</p> <ul style="list-style-type: none"> <li>• <b>i5/OS</b> On i5/OS platforms: The pmt command is run from the Windows workstation. The command is found in one of two locations: <ul style="list-style-type: none"> <li>– <i>install_image_location\WBI\iSeries\PMT\pmt.bat</i>, where the <i>install_image_location</i> is either the path to the disc media or the location into which the Passport Advantage image was downloaded</li> <li>– <i>pmt_client_installation\PMT\pmt.bat</i>, which is by default <i>C:\ProgramFiles\IBM\WebSphere\PMTCClient</i></li> </ul> </li> <li>• <b>Linux</b> <b>UNIX</b> On Linux and UNIX platforms: <i>install_root/bin/ProfileManagement/pmt.sh</i></li> <li>• On Windows platforms: <i>install_root\bin\ProfileManagement\pmt.bat</i></li> </ul>
<b>Samples gallery</b>	<p>Opens the default browser to the Samples Web address.</p>
<b>Information center</b>	<p>Opens the default browser to the online information center at the <a href="http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r2mx/">http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r2mx/</a> Web address.</p>

Table 29. Commands called by First steps console options (continued)

Option	Link
Migration wizard	<p>Calls the WebSphere Process Server version-to-version migration script to start the migration wizard.</p> <p>The location of the version-to-version migration script is:</p> <ul style="list-style-type: none"> <li>• <b>Linux</b> <b>UNIX</b> <b>On Linux and UNIX platforms:</b> <code>install_root/bin/wbi_migration.sh</code></li> <li>• <b>Windows</b> <b>On Windows platforms:</b> <code>install_root\bin\wbi_migration.bat</code></li> </ul>

### Related information

wbi\_ivt command-line utility

The wbi\_ivt command starts the installation verification test (IVT) program. The IVT verifies that the installation of the stand-alone profile or deployment manager profile was successful. A *profile* consists of files that define the runtime environment for a deployment manager or stand-alone profile. Each profile has its own IVT command.

## wbi\_ivt command-line utility

The wbi\_ivt command starts the installation verification test (IVT) program. The IVT verifies that the installation of the stand-alone profile or deployment manager profile was successful. A *profile* consists of files that define the runtime environment for a deployment manager or stand-alone profile. Each profile has its own IVT command.

The IVT program starts the stand-alone profile or deployment manager automatically if the server process is not already running. After the server initializes, the IVT runs a series of verification tests and displays pass or fail status in a console window.

The IVT program scans the SystemOut.log file for errors and verifies core functionality of the profile.

**Note:** For stand-alone profile profiles, the IVT also performs a Health Monitor check and generates a snapshot report of the overall health of your system. This report is included in the IVT log file. You can view this report to check the status of the application servers, nodes, deployment environments, messaging engines and their queues, databases, system applications, and failed events on your system. The status can be running, stopped, or unavailable. Ensure that for your stand-alone profile, all components have the status of running.

You can start the IVT program from the command line or from the First steps console.

### Location of the command file

The location of the installation verification test script for a profile is the *profile\_root*/bin directory. The script file name is:

- **AIX** **HP-UX** **Linux** **Solaris** `wbi_ivt.sh`
- **Windows** `wbi_ivt.bat`
- **i5/OS** `wbi_ivt`

## Parameters

The following parameters are associated with this command.

### **server\_name**

Required parameter that identifies the name of the server process, such as server1 or dmgr.

### **profile\_name**

Required parameter that identifies the name of the profile that contains the server definition.

### **-p** *server\_port\_number*

Optional parameter that identifies the default\_host port when the port is not 9080, which is the default.

### **-host** *machine\_host\_name*

Optional parameter that identifies the host machine of the profile to test. The default is localhost.

## Syntax for the wbi\_ivt command

Use the following syntax for the command:

- **AIX** **HP-UX** **Linux** **Solaris** `profile_root/bin/wbi_ivt.sh`
- **Windows** `profile_root\bin\wbi_ivt.bat`
- **i5/OS** `profile_root/bin/wbi_ivt -username username -password password`

**Note:** The **username** and **password** parameters are mandatory for the i5/OS platform when security has been enabled. They are optional for Linux, UNIX, and Windows platforms, but you will be prompted for them if security has been enabled.

## Logging

The wbi\_ivt command logs results to the `profile_root/logs/wbi_ivtClient.log` file.

## Example

The following examples test the server1 process in the profile01 profile on the myhost machine using the default\_host on port 9081.

**AIX** **HP-UX** **Linux** **Solaris**  
`wbi_ivt.sh server1 profile01 -p 9081 -host myhost`

**Windows**  
`wbi_ivt.bat server1 profile01 -p 9081 -host myhost`

**i5/OS**  
`wbi_ivt server1 profile01 -p 9081 -host myhost -username username -password password`

### Related concepts

Options on the First steps console

After installing WebSphere Process Server, use the First steps console to start product tooling, access product documentation, or direct elements such as servers and administrative consoles related to individual profiles. A generic version of the console, plus a version for each profile in your installation are available. Options on each console are displayed dynamically, depending on features you install and the availability of certain elements on particular operating systems. Options include verifying your installation, starting or stopping the server or deployment manager, accessing the administrative console, starting the Profile Management Tool, accessing the Samples gallery, accessing the product documentation, or starting the migration wizard.

---

## Installing Message Service clients

If you want to enable C, C++, or .NET applications to participate in interactions with WebSphere Process Server, you can use the Message Service clients provided with WebSphere Process Server. This section describes how to install the Message Service clients.

### About this task

You can extend interaction between applications and WebSphere Process Server by using the Message Service clients provided with WebSphere Process Server:

- IBM Message Service Client for C/C++ extends the JMS model for messaging to C and C++ applications.
- IBM Message Service Client for .NET enables .NET applications to participate in JMS-based information flows.

The way you start the installation can vary depending on the type of installation you are using. The details for each method are described in the topic *Starting the installation*. You can find further information about installing Message Service clients on Linux, AIX, Solaris, or Windows platforms in the sub-topics.

You can also install and use the J2EE client support from WebSphere Application Server, including Web services Client, EJB Client, and JMS Client. For information about installing J2EE client support, see *Installing Application Client for WebSphere Application Server*.

## Starting the installation

The way you install the Message Service clients will depend on the type of installation you are using.

### About this task

Choose your method of starting the installation from the sub-topics below.

### What to do next

If you are using the administered JMS objects provided by WebSphere Process Server with Message Service Clients for C/C++ and .NET, you must configure the JNDILookup Web Service that WebSphere Process Server provides to enable non-Java clients to access administered JMS objects from a non-Java environment.

## Starting installation from the launchpad

This section describes how to start the installation of the Message Service clients from the WebSphere Process Server launchpad.

### Before you begin

Before you install the Message Service clients you must:

- Ensure that your system meets all the hardware and software requirements. See <http://www.ibm.com/support/docview.wss?uid=swg27006205>.
- Ensure that you are logged on as root on a Linux system, or as a member of the Administrator group on a Windows system.
- If you are installing the Message Service clients from the product DVD, ensure that you have the *WebSphere Process Server V6.2* DVD for your platform. If you are installing the Message Service clients from another location, ensure that you know the location of the contents of the disk.

### About this task

This topic provides information about installing the following Message Service clients with WebSphere Process Server on Linux or Windows platforms.

- Message Service Client for C/C++
- Message Service Client for .NET

This task assumes that you have already opened the WebSphere Process Server launchpad as described in “Starting the launchpad” on page 69.

### Procedure

1. From the launchpad, open the installation wizard for the client that you are installing. To open the wizard, select the following options:
  - a. On the Welcome page, click **Message service clients installation**.
  - b. On the Message service clients installation page, click the name of the client that you want to install, for example **IBM Message Service Client for C/C++**.
  - c. On the installation page for the selected client, select the option for launching the installation wizard. For example, to start the wizard for Message Service Client for C/C++, click **Launch the installation wizard for Message Service Client for C/C++**.

The installation wizard displays a welcome message and you are now ready to begin installing the selected client.

2. Install the client by completing one of the following tasks:
  - Installing Message Service Client for C/C++ using the installation wizard
  - Installing Message Service Client for .NET using the installation wizard

## Starting installation from a DVD

This section describes how to start the installation of the Message Service clients from a disk without using the WebSphere Process Server launchpad.

### Before you begin

Before you install the Message Service clients you must:

- Ensure that your system meets all the hardware and software requirements. See <http://www.ibm.com/support/docview.wss?uid=swg27006205>.

- Ensure that you are logged on as root on a Linux system, or as a member of the Administrator group on a Windows system.
- Ensure that you have the supplied *WebSphere Process Server V6.2* DVD for your platform.

### **About this task**

This topic provides information about installing the following Message Service clients with WebSphere Process Server on Linux or Windows platforms.

- Message Service Client for C/C++
- Message Service Client for .NET

### **Procedure**

1. Insert the disk in the drive and run the installation program. The installation wizard displays a welcome message and you are now ready to begin installing the selected client.
2. Install the client by completing one of the following tasks:
  - Installing Message Service Client for C/C++ using the installation wizard
  - Installing Message Service Client for .NET using the installation wizard

### **Starting installation from a download**

This section describes how to start the installation of the WebSphere Process Server Message Service clients from a fix pack or service download.

### **Before you begin**

Before you install the Message Service clients you must:

- Ensure that your system meets all the hardware and software requirements. See <http://www.ibm.com/support/docview.wss?uid=swg27006205>.
- Ensure that you are logged on as root on a Linux system, or as a member of the Administrator group on a Windows system.

### **About this task**

This topic provides information about installing the following Message Service clients with WebSphere Process Server on Linux or Windows platforms.

- Message Service Client for C/C++
- Message Service Client for .NET

### **Procedure**

1. Download the .zip or tar.gz file relevant to your platform. Extract the contents into a temporary directory.
2. Run the installation program. The installation wizard displays a welcome message and you are now ready to begin installing the selected client.
3. Install the client by completing one of the following tasks:
  - Installing Message Service Client for C/C++ using the installation wizard
  - Installing Message Service Client for .NET using the installation wizard

## **Installing the JNDILookup Web Service application**

WebSphere Process Server maintains administered JMS objects which cannot be interpreted by non-Java clients. To allow non-Java clients to access administered



objects, WebSphere Process Server provides a JNDILookup Web Service. This Web service acts as a proxy to allow non-Java clients to retrieve JMS administered objects.

## Before you begin

Before installing the JNDILookup Web Service application you must ensure you have a running installation of WebSphere Process Server on your system.

## About this task

If your WebSphere Process Server installation is going to be accessed by non-Java clients, you need to install the JNDILookup Web Service. This application can be installed using the administrative console as described below.

**Important:** After you start performing the steps below, click **Cancel** to exit if you decide not to install the application. Do not simply move to another administrative console page without first clicking **Cancel** on an application installation page.

## Procedure

1. Click **Applications** → **Install New Application** in the console navigation tree.  
The first of two Preparing for application installation pages is displayed.
2. On the first Preparing for the application installation page, specify the path to the new application.
  - a. Browse to the *install\_root*/installableApps directory, and select SIBXJndiLookupEAR.ear.
  - b. Click **Next**.
3. On the second Preparing for application installation page:
  - a. Select whether to generate default bindings and mappings.  
Using the default bindings causes any incomplete bindings in the application to be filled in with default values. Existing bindings are not altered. You can customize default values used in generating default bindings.
  - b. Click **Next**.  
The Install New Application pages are displayed.
4. On Step 1: Select installation options panel, select **Deploy Web services**.
5. Click **Step 5: Summary** to go to the Summary panel.
6. On the Summary panel click **Finish**.

## What to do next

Examine the application installation progress messages. If the application installs successfully, save your changes to the Master Configuration. You can now see **SIBXJndiLookup** in the list of deployed applications on the Enterprise Applications page accessed by clicking **Applications** → **Enterprise Applications** in the console navigation tree.

To start the application from the Enterprise Applications page, select **SIBXJndiLookup** and click **Start**.



---

## Chapter 5. Installing the documentation

You can install the IBM WebSphere Process Server Help System on your system from the product installation launchpad.

### Before you begin

**Note:** i5/OS **On i5/OS platforms:** The IBM WebSphere Process Server Help System must be installed on a Windows client.

The installation wizard for the IBM WebSphere Process Server Help System (help system) requires a working Internet connection to download documentation. Without an Internet connection, the installation wizard stops and asks you to connect your computer and restart the installation process.

You can use the update function to update your local installation with the latest documentation available for products in the same version of the WebSphere Business Process Management product family (for example, WebSphere Process Server Version 6.2 and WebSphere ESB Version 6.2). If you have a help system from an earlier version of the product (for example, WebSphere Process Server Version 6.1.2), you can add documentation for the newer product version into that help system by changing the bookmarks.xml file to point to the documentation update site for the new product version.

### About this task

Product documentation is available in the help system, which you can install from the product installation launchpad. The help system installation wizard guides you through the installation of documentation into an existing help system, if you have one, and can also install a new help system.

You can start and use the help system in either stand-alone mode or server mode. In stand-alone mode, the help system acts as a personal help system. In server (or information center) mode, the help system acts as a public documentation server and allows other Web browsers on your network to connect to the help system on a specified port.

### Procedure

1. Start the installation wizard by clicking **IBM WebSphere Process Server Help System** on the WebSphere Process Server launchpad welcome page and then clicking **Launch the installation wizard for IBM WebSphere Process Server Help System** on the IBM WebSphere Process Server Help System Installation panel.
2. On the IBM WebSphere Process Server Help System Installation Wizard welcome panel, click **Next**.
3. At the installation wizard panel that asks if you want to install the documentation into an existing help system, select one of the following options and click **Next**.

Option	Description
Create a new installation	If you have not installed the IBM WebSphere Process Server Help System, follow the instructions in "Installing a new help system."
Search for an existing installation	If you have already installed the IBM WebSphere Process Server Help System, you can install the documentation into that help system as a set of document plug-ins. <ul style="list-style-type: none"> <li>• Accept the default directory for the installation wizard to search for existing documentation, and click <b>Next</b>.</li> <li>• If existing documentation is found, follow the instructions in "Installing the latest documentation into a help system" on page 151 to use the update function to install new documentation.</li> </ul>

## What to do next

After you have installed the IBM WebSphere Process Server Help System, you can open that help system to view product documentation.

---

## Installing a new help system

If you have not installed the IBM WebSphere Process Server Help System before, you can install it from the WebSphere Process Server launchpad.

### Before you begin

Follow the steps in Chapter 5, "Installing the documentation," on page 149 to start the IBM WebSphere Process Server Help System Installation Wizard.

### Procedure

1. Choose the root directory for the IBM WebSphere Process Server Help System in the Installation location panel.

Option	Description
Click <b>Next</b> to confirm the default location.	The default installation location for an installation by a root user is: <ul style="list-style-type: none"> <li>• <b>AIX</b> <b>On AIX platforms:</b> /user/IBM/WebSphere/ProcServerDocs</li> <li>• <b>HP-UX</b> <b>Solaris</b> <b>On HP-UX and Solaris platforms:</b> /opt/IBM/WebSphere/ProcServerDocs</li> <li>• <b>Linux</b> <b>On Linux platforms:</b> /opt/ibm/WebSphere/ProcServerDocs</li> <li>• <b>Windows</b> <b>On Windows platforms:</b>C:\Program Files\IBM\WebSphere\ProcServerDocs</li> </ul>

Option	Description
Click <b>Browse</b> to specify a different directory.	The installation wizard displays a file browser with which you can select an alternative directory in which to install the help system.

The IBM WebSphere Process Server Help System Installation Wizard installs the IBM User Interface Help System Built on Eclipse help viewer and displays a list of available documentation from the server.

2. Select the check box for the documentation that you want to install and click **Next**.
3. Click **Next** to confirm the list of items to be installed. The Installation Summary panel lists the help system as the product and the sets of English and translated documentation as features. Documentation in English is always installed by default, in addition to whatever other language sets you choose. The installation wizard installs the help system.
4. Click **Finish** to complete the installation.

### What to do next

You can view the documentation by starting the help system.

---

## Installing the latest documentation into a help system

If you have already installed the IBM WebSphere Process Server Help System, you can use the update function in the help system itself to install into and view product documentation within that help system.

### Before you begin

Installing documentation into the IBM WebSphere Process Server Help System requires a working Internet connection to download documentation. Also, the IBM WebSphere Process Server Help System installation wizard must have found a compatible help system on your system. See Installing the documentation in other Eclipse-based help viewers for information about installing documentation in help viewers that are not the WebSphere Process Server Help System.

Only previously installed copies of the IBM WebSphere Process Server or WebSphere Enterprise Service Bus Help System can be used. The WebSphere Process Server and WebSphere Enterprise Service Bus Help Systems are equivalent - for the same version - and can be used interchangeably. If you plan to use the update function to bring your documentation up-to-date with the latest available for your version of the product, earlier versions of the IBM User Interface Help System Built on Eclipse and Eclipse-based help viewers cannot be used. They do not have the update function that initiates installation of the product documentation and will not be found by the installation wizard in its search.

### About this task

You can use the update function to update your local installation with the latest documentation available for products in the same version of the WebSphere Business Process Management product family (for example, WebSphere Process Server Version 6.2 and WebSphere ESB Version 6.2).

**Note:**

Because the update function is limited to installing the latest documentation available for products in the same version of the WebSphere Business Process Management product family, it requires extra steps to do any of the following:

- Add 6.2 documentation to version 6.1.2 of IBM WebSphere Process Server Help System
- Add 6.1.2 documentation to version 6.2 of IBM WebSphere Process Server Help System
- Add non-WebSphere Business Process Management product's documentation to version 6.2 of IBM WebSphere Process Server Help System

If you have a help system from an earlier version of the product (for example, WebSphere Process Server Version 6.1.2), you can add documentation for the newer product version into that help system by changing the bookmarks.xml file to point to the documentation update site for the new product version. For more information on changing the bookmarks.xml file, see "Installing different versions of documentation into an help system."

### Procedure

1. Cancel the IBM WebSphere Process Server Help System installation wizard if you haven't already and follow the instructions here to install product documentation from within the help system itself.
2. Follow instructions in Starting the help system viewer to start the IBM WebSphere Process Server help system.
3. Click the **Update** icon in the help system toolbar and click **Find Updates** at the bottom of the Installed documentation list. The help system goes to the IBM Help System server and returns a list of documentation sets to install. These sets include product documentation in different languages and can also include documentation sets for different products.
4. Select the check box for the documentation that you want to install.
5. Click **Install Updates** to confirm the documentation to be installed. The IBM WebSphere Process Server Help System installs the selected documentation.

### What to do next

You can view the newly installed documentation by stopping and then restarting the help system.

## Installing different versions of documentation into an help system

If you have already installed an IBM WebSphere Process Server Help System from an earlier version of the product (for example, WebSphere Process Server Version 6.1.2), you can add documentation for the newer product version into that help system by changing the bookmarks.xml file to point to the documentation update site for the new product version.

### Before you begin

Installing documentation into the IBM WebSphere Process Server Help System requires a working Internet connection to download documentation. Also, the IBM WebSphere Process Server Help System installation wizard must have found a compatible help system on your system. See Installing the documentation in other Eclipse-based help viewers for information about installing documentation in help viewers that are not the WebSphere Process Server Help System.

Only previously installed copies of the IBM WebSphere Process Server or WebSphere Enterprise Service Bus Help System can be used. The WebSphere Process Server and WebSphere Enterprise Service Bus Help Systems are equivalent - for the same version - and can be used interchangeably. If you plan to use the update function to bring your documentation up-to-date with the latest available for your version of the product, earlier versions of the IBM User Interface Help System Built on Eclipse and Eclipse-based help viewers cannot be used. They do not have the update function that initiates installation of the product documentation and will not be found by the installation wizard in its search.

## About this task

To install documentation for any of the following combinations, complete the following steps:

- Add 6.2 documentation to version 6.1.2 of IBM WebSphere Process Server Help System
- Add 6.1.2 documentation to version 6.2 of IBM WebSphere Process Server Help System
- Add non-WebSphere Business Process Management product's documentation to version 6.2 of IBM WebSphere Process Server Help System

## Procedure

1. Cancel the IBM WebSphere Process Server Help System installation wizard if you haven't already and follow the instructions here to install product documentation from within the help system itself.
2. Optional: To update information for a new version of the product, complete the following steps:
  - a. Go to the plugins directory of your Eclipse-based help viewer.
  - b. Within that plugins directory, find the Eclipse "webapp" plugin directory, which is typically named org.eclipse.help.webapp\_<version>. For example, the 3.1.1 version of the Eclipse webapp plugin folder is named org.eclipse.help.webapp\_3.1.1.
  - c. In that plugin folder, open the file bookmarks.xml for editing.
  - d. Add or change the values of the site element attributes:

Table 30. Site element attributes

name (optional)	IBM Help System server
url	<ul style="list-style-type: none"> <li>• For version 6.2 of the documentation - <a href="http://publib.boulder.ibm.com/dmndhelp/downloads/v6r2mx">http://publib.boulder.ibm.com/dmndhelp/downloads/v6r2mx</a></li> <li>• For version 6.1.2 of the documentation - <a href="http://publib.boulder.ibm.com/dmndhelp/downloads/">http://publib.boulder.ibm.com/dmndhelp/downloads/</a></li> </ul>

```
<?xml version="1.0" encoding="UTF-8"?>
<bookmarks>
  <site name="IBM Help System server"
    url="http://publib.boulder.ibm.com/dmndhelp/downloads/v6r2mx" />
</bookmarks>
```

3. Follow instructions in Starting the help system viewer to start the IBM WebSphere Process Server help system.
4. Click the **Update** icon in the help system toolbar and click **Find Updates** at the bottom of the Installed documentation list. The help system goes to the IBM

Help System server and returns a list of documentation sets to install. These sets include product documentation in different languages and can also include documentation sets for different products.

5. Select the check box for the documentation that you want to install.
6. Click **Install Updates** to confirm the documentation to be installed. The IBM WebSphere Process Server Help System installs the selected documentation.

## What to do next

You can view the newly installed documentation by stopping and then restarting the help system.

---

## Installing the documentation in other Eclipse-based help viewers

If you are using an Eclipse-based help viewer and want to make WebSphere Process Server documentation available for viewing there, you can configure your viewer to view the documentation.

### Before you begin

Installing documentation into an Eclipse-based help viewer requires a working Internet connection to download documentation. Your Eclipse-based help viewer must also be version 3.1.0 or higher.

### About this task

The IBM WebSphere Process Server Help System is specially configured to download documentation from the update server for version 6.2 of WebSphere Business Process Management products. You can configure other Eclipse-based help systems to download documentation from that update server

### Procedure


1. Go to the plugins directory of your Eclipse-based help viewer.
2. Within that plugins directory, find the Eclipse "webapp" plugin directory, which is typically named org.eclipse.help.webapp\_<version>. For example, the 3.1.0 version of the Eclipse webapp plugin folder is named org.eclipse.help.webapp\_3.1.0.
3. In that plugin folder, open the file bookmarks.xml for editing.
4. Add or change the values of the site element attributes:

Option	Description
name (optional)	update server
url	http://publib.boulder.ibm.com/dmndhelp/downloads/v6r2mx

```
<?xml version="1.0" encoding="UTF-8"?>
<bookmarks>
  <site name="update server"
    url="http://publib.boulder.ibm.com/dmndhelp/downloads/v6r2mx" />
</bookmarks>
```

5. Start the help system in stand-alone mode. The update function is not available in server mode. If the help system is already running, you need to stop it before restarting.



- Click the Update button () in the toolbar at the upper right of the browsing window. The help viewer displays a list of currently installed documentation. For example:

**Installed documentation**

- + IEHS information center document version 3.1.1
- + IEHS help system document version 3.1.1

[Find Updates]

- Click **Find Updates** to access the update server. The update server is the remote server from which documentation features are downloaded. The help viewer displays a list of available updates. For example:

**Select updates you want to install**

**Updates for existing documentation**

No updates for existing documentation

**New documentation**

- + WebSphere Process Server, English documentation version 6.2
- + WebSphere Enterprise Service Bus, English documentation version 6.2
- + WebSphere Integration Developer documentation in English version 6.2

[Install Updates]

- Select the documentation you want to install. If you have not already installed WebSphere Process Server documentation, that documentation set will be listed in the New documentation section.
- Click **Install Updates**. The help viewer displays its progress as it downloads the documentation set from the server. The help viewer displays a list of the successfully installed documentation.
- Click **Finish** to complete the installation process and restart the help viewer.

## What to do next

You can view the newly installed documentation in your help system.

---

## Starting the help system

Use command files on your computer to start the help system.

### Before you begin

#### Procedure

- Go to the directory into which you installed the help system.
- To start the help system in stand-alone mode, complete the following steps:
  - Start the appropriate script in that directory:
    - On Linux and UNIX platforms:** help\_start.sh
    - On Windows platforms:** help\_start.bat

It might take a few minutes for the system to start.
- To start the help system in server mode, complete the following steps:
  - Start the appropriate script in that directory:
    - On Linux and UNIX platforms:** IC\_start.sh

- **On Windows platforms:** IC\_start.bat

The port setting in the script to start the server is editable by changing the value in a text editor. By default, the port setting is 8888. The command-line window is displayed.

## Results

The help system is started.

---

## Stopping the help system

Use command files on your computer to stop the help system.

### Procedure

1. Go to the directory into which you installed the help system.
2. To stop a help system viewer running in stand-alone mode, complete the following steps:
  - a. Start the appropriate script in that directory:
    - **On Linux and UNIX platforms:** help\_end.sh
    - **On Windows platforms:** help\_end.bat
3. To stop a help system viewer running in server mode, complete the following steps:
  - a. Start the appropriate script in that directory:
    - **On Linux and UNIX platforms:** IC\_end.sh
    - **On Windows platforms:** IC\_end.bat

## Results

The help system is stopped.

---

## Viewing the help system

Use a Web browser to view the contents of your help system.

### Before you begin

When the help system runs in server mode it calls a Web application on the user-defined port and makes the help content available to any Web browser that connects to that help system. The help pages and menus are displayed in the locale of the Web browser. To change the port on which the server starts, you can change the start up script in a text editor.

### About this task

When starting in information center in stand-alone mode the documentation is displayed automatically. However, to view, the documentation in server mode, you must complete the following steps:

### Procedure

1. Open a Web browser.
2. Type the URL `http://<servername>:<port>/help` to the help pages, where `<servername>` is the name of the host name or IP address of the system where IBM Eclipse Help System is installed. For example, if the information center is

installed on the server xyz.com and the default port is used, you can open the information center by entering the following URL `http://xyz.ibm.com:8888/help`

3. Press Enter. It might take a few minutes for the system to start.

---

## Uninstalling the documentation

You can use the uninstallation wizard for the IBM WebSphere Process Server Help System to completely uninstall the Help System and all of the documentation within it from your local system.

### Before you begin

The uninstallation wizard for the IBM WebSphere Process Server Help System requires a working Internet connection.

### Procedure

1. Go to the directory into which you installed the help system, open the `uninstall` subdirectory, and start the uninstaller script.
2. On the welcome panel for the uninstallation wizard, click **Next**.
3. On the summary panel, click **Next** to verify that the displayed help system is the one that you want to remove. The wizard displays a progress panel while it removes the help system.
4. On the Uninstallation complete panel, click **Finish** to verify the uninstallation and exit the wizard.



---

## Chapter 6. Verifying the product installation

Use the installation verification tools to verify that the installation of WebSphere Process Server and the creation of the stand-alone server or deployment manager profiles were successful. A *profile* consists of files that define the runtime environment for a deployment manager or a server. Verify the core product files with the `installver_wbi` checksum tool. Verify each profile with the installation verification test (IVT) tool.

### Before you begin

After installing WebSphere Process Server and creating a stand-alone server or deployment manager profile, you are ready to use the installation verification tools.

### About this task

Use the installation verification tools to gain assurance that the product is successfully installed. WebSphere Process Server includes two installation verification tools:

- the `installver_wbi` checksum tool, which verifies that the WebSphere Process Server files installed on your system were installed completely. The `installver_wbi` tool compares the checksum of each installed WebSphere Process Server file to the correct checksum value for each file and reports differences.
- the installation verification test (IVT) tool, which tests deployment manager profiles and stand-alone server profiles to make sure that the server processes can start. The IVT program scans product log files for errors and verifies core functionality of the product installation. Additionally, the IVT will perform a Health Monitor check and generate a report for stand-alone server profiles.

To use the verification tools, perform the following steps.

#### Procedure

1. Run the `installver_wbi` command to verify that all WebSphere Process Server files are correctly installed.  
For more information, see “Verifying checksums of installed files.”
2. Use the installation verification test (IVT) tool to verify the proper creation of profiles. On the First steps console, click **Installation verification** or use the `wbi_ivt` command.

### What to do next

After installing the product and verifying the installation, you can configure the installation by creating more profiles.

---

## Verifying checksums of installed files

After installing the product or after installing maintenance packages, you can use the installation verification utility (IVU) to compute checksums of the installed file set to verify the checksum against the checksum in the product bill of materials.

## Before you begin

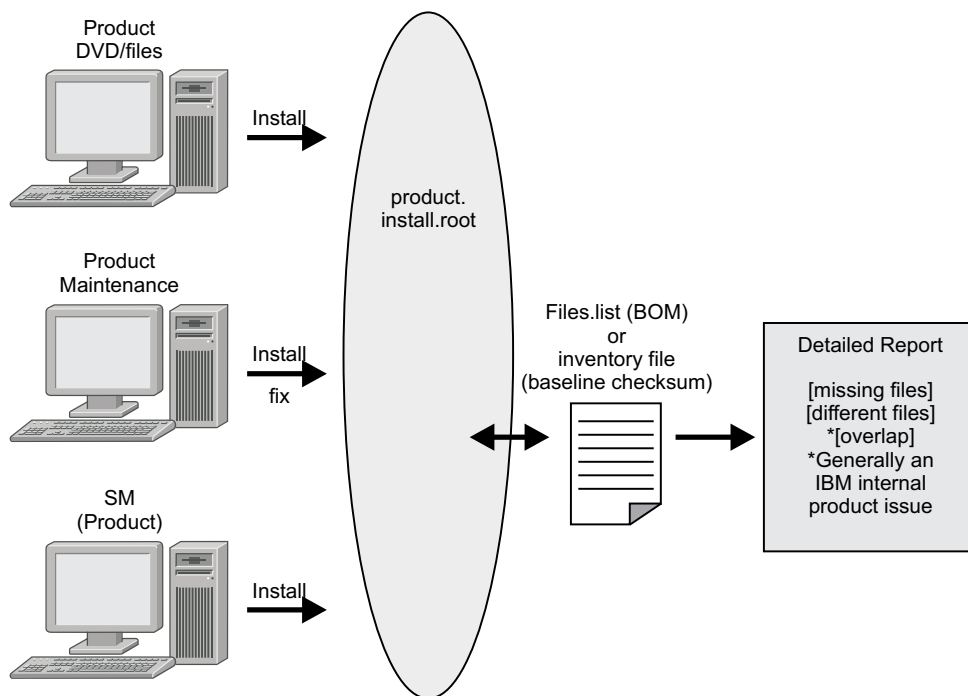
Installing the product also installs the IVU, which is the `installver_wbi.bat` command-line tool.

## About this task

You use the `installver_wbi.bat` command-line tool to compute a checksum on the installed files and compare the checksum to the product bill of materials.

The installation verification utility tool is installed during the installation of WebSphere Process Server.

You can also use the IVU to compute a new checksum for a system after you make significant configuration changes. The `installver_wbi.bat` tool computes a new baseline checksum for each file in the inventory of a configured system to use to identify file changes in the later comparisons. Such a comparison is useful for detecting file tampering on the configured system, for example, you can use the new checksums to compare installations on multiple systems. The following graphic illustrates the main use-cases where you can perform product verification at any point of the product life-cycle or use the inventory file, which is part of the baseline checksum feature, to provide full-file verification of a configured system.



Although the most common use of the tool is to compare the product bill of materials to the installed file set, other tasks are also possible.

To verify the checksums of installed files, perform the following steps.

- Verify the installed files against the bill of materials. See “Verifying against the bill of materials” on page 161 for more information.
- Create and use a new baseline checksum.

See “Computing a new baseline checksum for an inventory of configured files” on page 165 for more information.

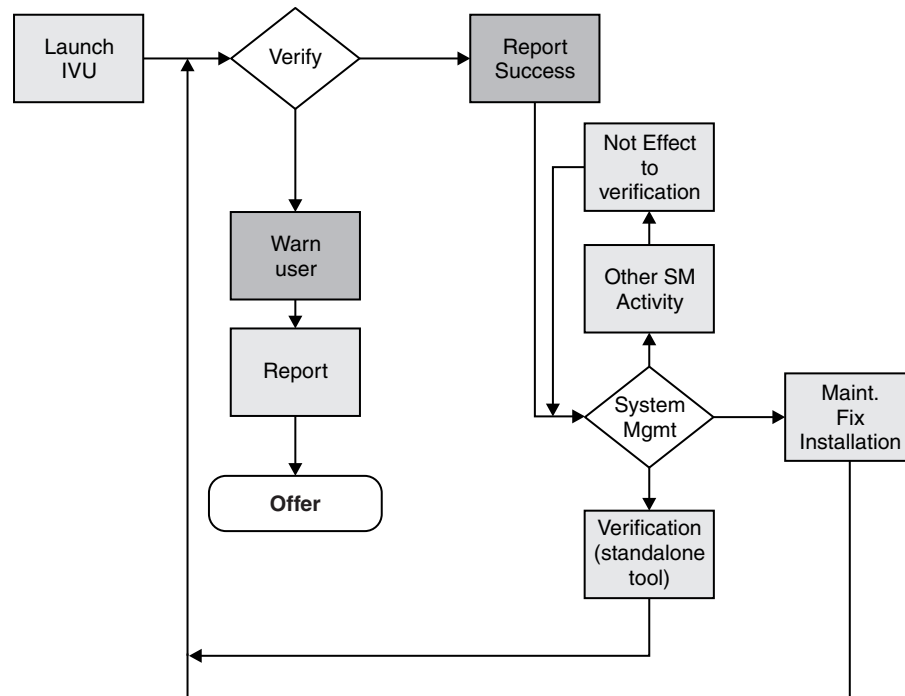
- Exclude files and components from the comparison.  
See “Excluding files from a checksum comparison” on page 168 for more information.
- Include only specific files and components in the comparison.  
See “Comparing specific file and component checksums” on page 172 for more information.
- Change the default message digest algorithm for computing checksums.  
See “Changing the default message digest algorithm for the installver\_wbi command” on page 175 for more information.
- Handle out-of-memory conditions.  
See “Handling out-of-memory situations” on page 176 for more information.
- Verify the installver\_wbi.bat command files.

## Results

When you are satisfied that your installed or updated file set matches the product bill of materials, you are finished verifying the product files.

If you detect a problem, see if the problem is a known problem by checking the WebSphere Process Server Support Web site.

The IVU performs the tasks using the logic described in the following graphic:



## Verifying against the bill of materials

After installation of the product, verify actual checksums of installed files against a bill of materials that ships with the product. If the checksums match, the installed product is installed correctly. If the checksums differ, review the differences to determine whether a problem exists.

## Before you begin

Complete the product installation before attempting to compare checksums of the installed files to the shipped bill of materials.

## About this task

Use the `installver_wbi` command to compare a set of bill-of-material files against a checksum of the installed files to verify that all installed files are correct. The product includes a bill-of-materials file for each component to provide this system of verifying installation files.

The `installver_wbi` tool dynamically generates a list of total components found in the installation.

The `installver_wbi` command file is located in the `bin` directory of the installation root directory:

- **i5/OS** On i5/OS platforms: `install_root/bin/installver_wbi`
- **Linux** **UNIX** On Linux and UNIX platforms: `install_root/bin/installver_wbi.sh`
- **Windows** On Windows platforms: `install_root\bin\installver_wbi.bat`

Change directories to the `bin` directory to start the `installver_wbi` tool from the command line.

To check the bill of materials against the installed file system, perform the following steps.

- To compare the checksum of product files to the correct checksum in the bill-of-material files, type the following command:
  - **i5/OS** On i5/OS platforms: `install_root/bin/installver_wbi`
  - **Linux** **UNIX** On Linux and UNIX platforms: `install_root/bin/installver_wbi.sh`
  - **Windows** On Windows platforms: `install_root\bin\installver_wbi.bat`
- To compare checksums and display trace results, type the following command:
  - **i5/OS** On i5/OS platforms: `./installver_wbi -trace`
  - **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -trace`
  - **Windows** On Windows platforms: `installver_wbi.bat -trace`
- To display information about how use the `installver_wbi` command, type the following command:
  - **i5/OS** On i5/OS platforms: `./installver_wbi -help`
  - **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -help`
  - **Windows** On Windows platforms: `installver_wbi.bat -help`
- To compare checksums and include only specified files and components in the comparison, see “Comparing specific file and component checksums” on page 172. You can compare only the files and components that you list in the command.



- To compare checksums and ignore the list of files to exclude, type the following command:

- **i5/OS** On i5/OS platforms: `./installver_wbi -ignoreuserexclude`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -ignoreuserexclude`
- **Windows** On Windows platforms: `installver_wbi.bat -ignoreuserexclude`

For information about specifying a list of files to exclude from the bill of materials checksum, see “Excluding files from a checksum comparison” on page 168.

- To compare checksums and ignore all IBM-excluded files, type the following command:

- **i5/OS** On i5/OS platforms: `./installver_wbi -ignoreibmexclude`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -ignoreibmexclude`
- **Windows** On Windows platforms: `installver_wbi.bat -ignoreibmexclude`

## Results

When you issue one of the checksum commands from the `install_root/bin` directory, the status of the command is displayed on the terminal console.

**Logging results:** The `installver_wbi` utility creates messages for each component. It also reports overall success based on the verification of all components in the bill of materials. The following messages indicate completion:

- I CWNVU0400I: [ivu] Total issues found : 625
- I CWNVU0340I: [ivu] Done.

The messages report the total number of issues found. If the issue count is zero, all of the components exist and no problems exist. The `installver_wbi` utility logs the results of the command to the `install_root/logs/installver.log` file if you use the `-log` parameter without specifying a file name for the log.

You can redirect the output using the `-log` parameter and an argument. The directory that you specify must already exist. For example: `./installver_wbi.sh -log /tmp/waslogs/my_installver.log`

## Example

The following command produces this example, which shows the results of comparing the installed product against the product bill of materials.

- **i5/OS** On i5/OS platforms: `./installver_wbi`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh`
- **Windows** On Windows platforms: `installver_wbi.bat`

### Example output from components with errors

This example shows errors that the comparison finds.

```
I CWNVU0160I: [ivu] Verifying.
I CWNVU0170I: [ivu] The installation root directory is E:\WPS61\
I CWNVU0300I: [ivu] The total number of user excluded files found is 38.
I CWNVU0300I: [ivu] The total number of IBM excluded files found is 82.
```

```

I CWNVU0185I: [ivu] Searching component directory for file listing: files.list
I CWNVU0460I: [ivu] The utility is running.
I CWNVU0260I: [ivu] The total number of components found is: 441
I CWNVU0270I: [ivu] Gathering installation root data.
W CWNVU0280W: [ivu] Component mismatch: expected mismatchcomponentname
but found mismatchingname
I CWNVU0360I: [ivu] The following bill of materials issue is found for component
nullvaluesample: Hash must not be null or an empty string.
I CWNVU0360I: [ivu] The following bill of materials issue is found for component
nullvaluesample: Name must not be null or an empty string.
I CWNVU0360I: [ivu] The following bill of materials issue is found for component
nullvaluesample: Hash must not be null or an empty string.
I CWNVU0360I: [ivu] The following bill of materials issue is found for component
nullvaluesample: Permission must not be null or an empty string.
I CWNVU0360I: [ivu] The following bill of materials issue is found for component
symlinksample: Hash must not be null or an empty string.
I CWNVU0290I: [ivu] Starting the verification for 6 components.

I CWNVU0470I: [ivu] Starting to analyze: _binarycomponentsample
I CWNVU0480I: [ivu] Done analyzing: _binarycomponentsample

I CWNVU0470I: [ivu] Starting to analyze: nullvaluesample
I CWNVU0430I: [ivu] The following file is missing: testpath
I CWNVU0390I: [ivu] Component issues found : 1
I CWNVU0480I: [ivu] Done analyzing: nullvaluesample

I CWNVU0470I: [ivu] Starting to analyze: overlapbinarycomponentsample
W CWNVU0422W: [ivu] The following file is overlapped: lib/binaryTest.jar
W CWNVU0425W: [ivu] The overlap is caused by: _binarycomponentsample
I CWNVU0390I: [ivu] Component issues found : 1
I CWNVU0480I: [ivu] Done analyzing: overlapbinarycomponentsample

I CWNVU0470I: [ivu] Starting to analyze: regularcomponentsample
I CWNVU0440I: [ivu] The following file is different: lib/different.jar
I CWNVU0410I: [ivu] fc19318dd13128ce14344d066510a982269c241b is the
checksum in the bill of materials.
I CWNVU0420I: [ivu] 517d5a7240861ec297fa07542a7bf7470bb604fe is the
checksum on the file system.
I CWNVU0440I: [ivu] The following file is different: lib/ibmtemplateexclude.jar
I CWNVU0410I: [ivu] d3ac7a4ef1a8ffb4134f2f6e7f3c0d249d74b674 is the
checksum in the bill of materials.
I CWNVU0420I: [ivu] d3ac7a4ef1a838b4134f2f6e7f3c0d249d74b674 is the
checksum on the file system.
I CWNVU0430I: [ivu] The following file is missing: lib/missing.jar
I CWNVU0440I: [ivu] The following file is different: lib/usertemplateexclude.jar
I CWNVU0410I: [ivu] 12dea96fec20593566ab75ff2c9949596833adc9 is the
checksum in the bill of materials.
I CWNVU0420I: [ivu] 12dea96fec20593566ab75692c9949596833adc9 is the
checksum on the file system.
I CWNVU0430I: [ivu] The following file is missing: missingfilebutwithbaddirectory/
missingBadDirectory.jar
I CWNVU0390I: [ivu] Component issues found : 5
I CWNVU0480I: [ivu] Done analyzing: regularcomponentsample

I CWNVU0470I: [ivu] Starting to analyze: symlinksample
I CWNVU0480I: [ivu] Done analyzing: symlinksample

I CWNVU0400I: [ivu] Total issues found : 7
I CWNVU0340I: [ivu] Done.

```

### Example output from a typical successful installation

This example shows typical results from checking a successful installation.

Carefully examine an issue before assuming that the issue is a problem.

```

I CWNVU0160I: [ivu] Verifying.
I CWNVU0170I: [ivu] The installation root directory is E:\WPS61\
I CWNVU0300I: [ivu] The total number of user excluded files found is 38.
I CWNVU0300I: [ivu] The total number of IBM excluded files found is 82.
I CWNVU0185I: [ivu] Searching component directory for file listing: files.list
I CWNVU0460I: [ivu] The utility is running.
I CWNVU0260I: [ivu] The total number of components found is: 441
I CWNVU0270I: [ivu] Gathering installation root data.
I CWNVU0290I: [ivu] Starting the verification for 439 components.

I CWNVU0470I: [ivu] Starting to analyze: ArtifactLoaderImpl
I CWNVU0480I: [ivu] Done analyzing: ArtifactLoaderImpl

I CWNVU0470I: [ivu] Starting to analyze: activity.impl
I CWNVU0480I: [ivu] Done analyzing: activity.impl

I CWNVU0470I: [ivu] Starting to analyze: activity.session.impl
I CWNVU0480I: [ivu] Done analyzing: activity.session.impl

I CWNVU0470I: [ivu] Starting to analyze: acwa
I CWNVU0480I: [ivu] Done analyzing: acwa

I CWNVU0470I: [ivu] Starting to analyze: adapter
I CWNVU0480I: [ivu] Done analyzing: adapter
...

I CWNVU0470I: [ivu] Starting to analyze: workspace
I CWNVU0480I: [ivu] Done analyzing: workspace

I CWNVU0470I: [ivu] Starting to analyze: workspace.query
I CWNVU0480I: [ivu] Done analyzing: workspace.query

I CWNVU0470I: [ivu] Starting to analyze: wps.rt.bundle
I CWNVU0480I: [ivu] Done analyzing: wps.rt.bundle

I CWNVU0470I: [ivu] Starting to analyze: wps.wccm.bundle
I CWNVU0480I: [ivu] Done analyzing: wps.wccm.bundle

I CWNVU0470I: [ivu] Starting to analyze: wpsnd
I CWNVU0480I: [ivu] Done analyzing: wpsnd

I CWNVU0470I: [ivu] Starting to analyze: wsadie.bundle
I CWNVU0480I: [ivu] Done analyzing: wsadie.bundle

I CWNVU0470I: [ivu] Starting to analyze: wsba.impl
I CWNVU0480I: [ivu] Done analyzing: wsba.impl

I CWNVU0400I: [ivu] Total issues found : 0
I CWNVU0340I: [ivu] Done.

```

## Computing a new baseline checksum for an inventory of configured files

After installation, you can verify the actual checksums of installed files against a bill of materials that ships with the product. After configuring your system, create a checksum so that you can compare the system periodically to the checksum. Use the result to analyze changes to your configured system.

### Before you begin

After configuring the product, save a new baseline checksum to establish a new checksum standard for your system.

## About this task

You can use the `installver_wbi` command to create and compare an inventory of configured files to the currently installed files.

The `installver_wbi` command can compute a new baseline checksum for the inventory of all files in the installation root directory. Running the command stores the new checksum by default in the `sys.inv` file within the current working directory. You can specify a different file path and file name. Create the file outside of the installation root directory or exclude the file from comparisons.

Later, compare the checksums in the `sys.inv` file (or the file that you specified when creating the inventory) to the checksums of the currently installed files to see what files have changed.

The baseline checksum report identifies missing files, additional files, and changed files.

The `installver_wbi` command file is located in the `bin` directory of the installation root directory:

- **i5/OS** On i5/OS platforms: `install_root/bin/installver_wbi`
- **Linux** **UNIX** On Linux and UNIX platforms: `install_root/bin/installver_wbi.sh`
- **Windows** On Windows platforms: `install_root\bin\installver_wbi.bat`

Change directories to the `bin` directory to start the `installver_wbi` tool from the command line.

To compute a new baseline checksum for an inventory of configured files, perform the following steps.

- Create an inventory list of the files that are currently installed in the installation root directory:
  - **i5/OS** On i5/OS platforms: `./installver_wbi -createinventory`
  - **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -createinventory`
  - **Windows** On Windows platforms: `installver_wbi.bat -createinventory`

**Windows** For example, the following messages might display on a Windows system when you issue the `installver_wbi.bat -createinventory` command to create the default `install_root\bin\sys.inv` file:

```
W CWNVU0320W: [ivu] The
C:\IBM\WebSphere\ProcServer\bin\sys.inv
inventory file is within the product installation root directory:
C:\IBM\WebSphere\ProcServer.
```

Create the file outside of the installation root directory to omit the file from the verification.

```
I CWNVU0300I: [ivu] The total number of user excluded files found are 2.
I CWNVU0300I: [ivu] The total number of IBM excluded files found are 78.
I CWNVU0310I: [ivu] Creating the following inventory file:
C:\IBM\WebSphere\ProcServer\bin\sys.inv
I CWNVU0460I: [ivu] The utility is running.
```

For example, the following messages might display on an i5/OS system when you issue the `installver_wbi -createinventory` command to create the default `install_root\bin\sys.inv` file:

**Note:** This command gets run within a Qshell environment on i5/OS platforms.

```
W CWNVU0320W: [ivu] The
/QIBM/ProdData/WebSphere/ProcServer/bin/sys.invinventory file is within the product installation
root directory: /QIBM/ProdData/WebSphere/ProcServer.
```

Create the file outside of the installation root directory to omit the file from the verification.

```
I CWNVU0300I: [ivu] The total number of user excluded files found are 2.
I CWNVU0300I: [ivu] The total number of IBM excluded files found are 78.
I CWNVU0310I: [ivu] Creating the following inventory file:
/QIBM/ProdData/WebSphere/ProcServer/bin/sys.inv
I CWNVU0460I: [ivu] The utility is running.
```

When it finishes running, a completion message is displayed:

```
I CWNVU0340I: [ivu] Done.
```

The sys.inv contains the new inventory, as shown in this Windows system example:

```
#C:\IBM\WebSphere\AppServer\
#2005.10.10_06.24.06PM_EDT
#user_ID
#-createinventory -log
241fe4e309abfd8f2c5911216dbabd61dd4751a6
|_jvm\bin\appletviewer.exe
|42032
|2004.10.28 05.37.02AM EDT
e00c6ea688ab67e004ec6cfac26ec48541a5b9ff
|_jvm\bin\dbgHELP.dll
|712192
|2004.10.28 05.36.50AM EDT
916e244deeb44b9d3218aafa3b56c8680aa31f2f
|_jvm\bin\extcheck.exe
|42040
|2004.10.28 05.37.02AM EDT
...
7fc3bb38e8b90fed05cd0440953000c2cc965b44
|web\spidocs\stylesheet.css
|1240
|2005.10.09 12.14.17AM EDT
22706a0d900c52f1c015c870ddeee25581c5d57b
|web\spidocs\toHTML\index.html
|867
|2005.10.09 12.14.17AM EDT
```

- Create the inventory file in a directory outside of the installation root directory to exclude the inventory file from the comparison.

```
- i5/OS On i5/OS platforms: ./installver_wbi -createinventory
/tmp/system.inv
```

```
- Linux UNIX On Linux and UNIX platforms: ./installver_wbi.sh
-createinventory /tmp/system.inv
```

```
- Windows On Windows platforms: installver_wbi.bat -createinventory
"C:\temp\system.inv"
```

- Compare the inventory list to files that are currently installed in the installation root directory:

```
- i5/OS On i5/OS platforms: ./installver_wbi -compare
```

```
- Linux UNIX On Linux and UNIX platforms: ./installver_wbi.sh
-compare
```

```
- Windows On Windows platforms: installver_wbi.bat -compare
```

If you created the inventory file somewhere other than the default location, use the following syntax:

- **i5/OS** **On i5/OS platforms:** `./installver_wbi -compare /tmp/system.inv`
- **Linux** **UNIX** **On Linux and UNIX platforms:** `./installver_wbi.sh -compare /tmp/system.inv`
- **Windows** **On Windows platforms:** `installver_wbi.bat -compare "C:\temp\system.inv"`
- Compare and display trace results:
  - **i5/OS** **On i5/OS platforms:** `./installver_wbi -compare -trace`
  - **Linux** **UNIX** **On Linux and UNIX platforms:** `./installver_wbi.sh -compare -trace`
  - **Windows** **On Windows platforms:** `installver_wbi.bat -compare -trace`
- Compare and exclude specified files from the inventory comparison:
  - **i5/OS** **On i5/OS platforms:** `./installver_wbi -compare -exclude fn1;fn2;fn3;...`
  - **Linux** **UNIX** **On Linux and UNIX platforms:** `./installver_wbi.sh -compare -exclude fn1;fn2;fn3;...`
  - **Windows** **On Windows platforms:** `installver_wbi.bat -compare -exclude fn1;fn2;fn3;...`
- Compare and include only specified files in the inventory comparison:
  - **i5/OS** **On i5/OS platforms:** `./installver_wbi -compare -include fn1;fn2;fn3;...`
  - **Linux** **UNIX** **On Linux and UNIX platforms:** `./installver_wbi.sh -compare -include fn1;fn2;fn3;...`
  - **Windows** **On Windows platforms:** `installver_wbi.bat -compare -include fn1;fn2;fn3;...`

## Results

When you issue an `installver_wbi` command from the `install_root/bin` directory, the status of the command is displayed on the terminal console. To create a log, use the `-log` parameter.

## Excluding files from a checksum comparison

Specify individual files to exclude from a comparison, specify individual components to exclude, or create a single configurable properties file to specify a list of files to exclude from the bill of materials verification.

### Before you begin

Install the product before comparing checksums and using exclusion properties.

### About this task

You can use exclusion properties of the `installver_wbi` command to exclude files from a checksum comparison.

By default, IBM excludes some files from the checksum comparison. You can also exclude files. The number of files excluded is reported within the first few messages. For example:

```

I CWNVU0160I: [ivu] Verifying.
I CWNVU0170I: [ivu] The installation root directory is ...
I CWNVU0300I: [ivu] The total number of user excluded files found are 0.
I CWNVU0300I: [ivu] The total number of IBM excluded files found are 82.
...

```

Several methods are provided to exclude files from the comparison.

The `installver_wbi` command file is located in the `bin` directory of the installation root directory:

- **i5/OS** On **i5/OS platforms**: `install_root/bin/installver_wbi`
- **Linux** **UNIX** On **Linux and UNIX platforms**: `install_root/bin/installver_wbi.sh`
- **Windows** On **Windows platforms**: `install_root\bin\installver_wbi.bat`

Change directories to the `bin` directory to start the `installver_wbi` tool from the command line.

To exclude files from a checksum comparison, perform the following steps.

- To exclude all of the files within one or more components from the comparison, type the following command:

```

- i5/OS On i5/OS platforms: ./installver_wbi -excludecomponent comp1;comp2;comp3;...

```

```

- Linux UNIX On Linux and UNIX platforms: ./installver_wbi.sh -excludecomponent comp1;comp2;comp3;...

```

```

- Windows On Windows platforms: installver_wbi.bat -excludecomponent comp1;comp2;comp3;...

```

**Linux** **UNIX** For example, you might exclude the `prereq.wccm` component to avoid known but acceptable issues in the component:

```

./installver_wbi.sh -log -excludecomponent prereq.wccm

```

The resulting messages show the exclusion:

```

I CWNVU0160I: [ivu] Verifying.
I CWNVU0170I: [ivu] The installation root directory is E:\WPS61\
I CWNVU0300I: [ivu] The total number of user excluded files found is 38.
I CWNVU0300I: [ivu] The total number of IBM excluded files found is 82.
I CWNVU0185I: [ivu] Searching component directory for file listing: files.list
I CWNVU0460I: [ivu] The utility is running.
I CWNVU0260I: [ivu] The total number of components found is: 441
I CWNVU0270I: [ivu] Gathering installation root data.
I CWNVU0290I: [ivu] Starting the verification for 439 components.
...
I CWNVU0400I: [ivu] Total issues found : 0
I CWNVU0340I: [ivu] Done.

```

- To exclude certain files from the comparison, type the following command :
  - **i5/OS** On **i5/OS platforms**: `install_root/bin/installver_wbi -exclude fn1;fn2;fn3`
  - **Linux** **UNIX** On **Linux and UNIX platforms**: `install_root/bin/installver_wbi.sh -exclude fn1;fn2;fn3`
  - **Windows** On **Windows platforms**: `install_root\bin\installver_wbi.bat -exclude fn1;fn2;fn3`

For example, suppose that you want to include only the `prereq.wccm` component for comparison, but you want to exclude specific files that were missing when you previously ran that comparison:

```

...
I CWNVU0470I: [ivu] Starting to analyze: prereq.wccm
I CWNVU0430I: [ivu] The following file is missing:
web/configDocs/activitysessionejbext/ActivitySessionEJBJarExtension.html
I CWNVU0430I: [ivu] The following file is missing:
web/configDocs/activitysessionejbext/ActivitySessionEnterpriseBeanExtension.html
I CWNVU0430I: [ivu] The following file is missing:
web/configDocs/activitysessionejbext/ContainerActivitySession.html
...

```

**Windows** Here is an example of excluding those missing files that are highlighted files in the previous example:

```

installver_wbi.bat -log -includecomponent prereq.wccm -exclude web\configDocs\activitysessionejbext\
ActivitySessionEJBJarExtension.html;web\configDocs\activitysessionejbext\
ActivitySessionEnterpriseBeanExtension.html

```

**Tip:** **Windows** **On Windows platforms:** Use Windows-style slashes or UNIX-style slashes to delimit directories.

The result shows that the excluded files were not compared:

```

I CWNVU0160I: [ivu] Verifying.
I CWNVU0170I: [ivu] The installation root directory is ...
I CWNVU0300I: [ivu] The total number of user excluded files found are 0.
I CWNVU0300I: [ivu] The total number of IBM excluded files found are 82.
I CWNVU0185I: [ivu] Searching component directory for file listing: files.list
I CWNVU0260I: [ivu] The total number of components found is: 285
I CWNVU0270I: [ivu] Gathering installation root data.
I CWNVU0460I: [ivu] The utility is running.
I CWNVU0290I: [ivu] Starting the verification for 1 components.

I CWNVU0470I: [ivu] Starting to analyze: prereq.wccm
I CWNVU0430I: [ivu] The following file is missing:
web/configDocs/activitysessionejbext/ContainerActivitySession.html
...
I CWNVU0390I: [ivu] Component issues found : 623
I CWNVU0480I: [ivu] Done analyzing: prereq.wccm

I CWNVU0400I: [ivu] Total issues found : 623
I CWNVU0340I: [ivu] Done.

```

If the two files were in the comparison, they would be in the list and the count would be 625, as in the previous example.

**Tip:** The highlighted line in the example is reserved for excluded files listed in the user template file, as described in the next step. The highlighted line does not count files that you list in the `installver_wbi` command line with the `-exclude` parameter.

- To compare checksums and exclude certain files from the comparison by creating and using a user template file, perform the following steps. A configurable properties file is available to specify a list of files to exclude from the bill of materials verification.
  1. Create an empty template file by typing the following command.
    - **i5/OS** **On i5/OS platforms:** `install_root/bin/installver_wbi template_name -createtemplate`
    - **Linux** **UNIX** **On Linux and UNIX platforms:** `install_root/bin/installver_wbi.sh template_name -createtemplate`
    - **Windows** **On Windows platforms:** `install_root\bin\installver_wbi.bat template_name -createtemplate`



**Windows** For example, create the default user template file on a Windows system:

```
installver_wbi.bat -createtemplate
I CWNVU0200I: [ivu] Creating template:
C:\IBM\WebSphere\ProcServer\profiles\
Dmgr01\properties\ivu_user.template
I CWNVU0340I: [ivu] Done.
```

**i5/OS** For example, create the default user template file on an i5/OS system:

```
installver_wbi -createtemplate
I CWNVU0200I: [ivu] Creating template:
/QIBM/ProdData/WebSphere/ProcServer/profiles/
Dmgr01/properties/ivu_user.template
I CWNVU0340I: [ivu] Done.
```

The `ivu_user.template` file is created in the properties directory of the default profile, which in this case, is a deployment manager profile.

The `-template_name` parameter is optional. However, a template file must reside in the properties directory of the default profile, such as the `install_root/profiles/Dmgr01/properties` directory.

## 2. List files to exclude in the template file.

The properties file has the following format:

```
<template>
  <componentfiles componentname="name_of_component">
    <file>
      <relativepath action="exclude">file_name</relativepath>
    </file>
  </componentfiles>
</template>
```

For example, list the component and files from the previous example:

```
<template>
  <componentfiles componentname="prereq.wccm">
    <file>
      <relativepath action="exclude">
web/configDocs/activitysessionejbext/ \
ActivitySessionEnterpriseBeanExtension.html
      </relativepath>
    </file>
    <file>
      <relativepath action="exclude">
web/configDocs/activitysessionejbext/ \
ActivitySessionEJBJarExtension.html
      </relativepath>
    </file>
  </componentfiles>
</template>
```

**Tip:** Do not use quotation marks or double quotation marks to delimit a file name.

## 3. Use the template file to exclude files from the comparison:

For example:

```
installver_wbi.bat -log
```

If the `ivu_user.template` file exists in the properties directory of the default profile, the `installver_wbi` command uses it.

The result shows that some user files are excluded:

```

I CWNVU0160I: [ivu] Verifying.
I CWNVU0170I: [ivu] The installation root directory is ...
I CWNVU0300I: [ivu] The total number of user excluded files found are 2.
I CWNVU0300I: [ivu] The total number of IBM excluded files found are 82.
I CWNVU0185I: [ivu] Searching component directory for file listing: files.list
I CWNVU0460I: [ivu] The utility is running.
I CWNVU0260I: [ivu] The total number of components found is: 285
I CWNVU0270I: [ivu] Gathering installation root data.
I CWNVU0290I: [ivu] Starting the verification for 1 components.

```

```

I CWNVU0470I: [ivu] Starting to analyze: prereq.wccm
I CWNVU0430I: [ivu] The following file is missing:
web/configDocs/activitysessionejbext/ContainerActivitySession.html

```

```

...
I CWNVU0430I: [ivu] The following file is missing:
web/configDocs/wssecurity/generator-binding.html
I CWNVU0390I: [ivu] Component issues found : 623
I CWNVU0480I: [ivu] Done analyzing: prereq.wccm

```

```

I CWNVU0400I: [ivu] Total issues found : 623
I CWNVU0340I: [ivu] Done.

```

## Results

When you run one of the checksum commands from the *install\_root/bin* directory, the status of the command is displayed on the terminal console or in a log file.

## Comparing specific file and component checksums

Specify individual files or components to include in the bill of materials verification.

### Before you begin

Complete the product installation before attempting to compare checksums of individual files and components.

### About this task

You can use inclusion properties to specify individual files and components.

By default, IBM includes all files in the checksum comparison except for the IBM excluded files. The displayed output will be similar to the following:

```

I CWNVU0160I: [ivu] Verifying.
I CWNVU0170I: [ivu] The installation root directory is E:\WPS61\
I CWNVU0300I: [ivu] The total number of user excluded files found are 0.
I CWNVU0300I: [ivu] The total number of IBM excluded files found are 82.
I CWNVU0185I: [ivu] Searching component directory for file listing: files.list
I CWNVU0460I: [ivu] The utility is running.
I CWNVU0260I: [ivu] The total number of components found is: 441
I CWNVU0270I: [ivu] Gathering installation root data.
I CWNVU0460I: [ivu] The utility is running.
I CWNVU0290I: [ivu] Starting the verification for 441 components.

```

```

I CWNVU0470I: [ivu] Starting to analyze: activity
I CWNVU0480I: [ivu] Done analyzing: activity

```

...

Several methods are provided to include only certain files in the comparison.

The `installver_wbi` command file is located in the `bin` directory of the installation root directory:

- **i5/OS** On i5/OS platforms: `install_root/bin/installver_wbi`
- **Linux** **UNIX** On Linux and UNIX platforms: `install_root/bin/installver_wbi.sh`
- **Windows** On Windows platforms: `install_root\bin\installver_wbi.bat`

Change directories to the `bin` directory to start the `installver_wbi` tool from the command line.

To compare specific file and component checksums, perform the following steps.

- To include only specified components in a checksum comparison, type the following command.
  - **i5/OS** On i5/OS platforms: `./installver_wbi -includecomponent comp1;comp2;comp3;...`
  - **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -includecomponent comp1;comp2;comp3;...`
  - **Windows** On Windows platforms: `installver_wbi.bat -includecomponent comp1;comp2;comp3;...`

For example, you might include the `activity` component:

- **i5/OS** On i5/OS platforms: `./installver_wbi -log -includecomponent activity`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -log -includecomponent activity`
- **Windows** On Windows platforms: `installver_wbi.bat -log -includecomponent activity`

The resulting messages show the inclusion. The displayed output will be similar to the following:

```
I CWNVU0160I: [ivu] Verifying.
I CWNVU0170I: [ivu] The installation root directory is ...
I CWNVU0300I: [ivu] The total number of user excluded files found are 0.
I CWNVU0300I: [ivu] The total number of IBM excluded files found are 82.
I CWNVU0185I: [ivu] Searching component directory for file listing: files.list
I CWNVU0460I: [ivu] The utility is running.
I CWNVU0260I: [ivu] The total number of components found is: 285
I CWNVU0270I: [ivu] Gathering installation root data.
I CWNVU0290I: [ivu] Starting the verification for 1 components.

I CWNVU0470I: [ivu] Starting to analyze: activity
I CWNVU0480I: [ivu] Done analyzing: activity

I CWNVU0400I: [ivu] Total issues found : 0
I CWNVU0340I: [ivu] Done.
```

- To include only specified files in the checksum comparison, type the following command.
  - **i5/OS** On i5/OS platforms: `install_root/bin/installver_wbi -include fn1;fn2;fn3`
  - **Linux** **UNIX** On Linux and UNIX platforms: `install_root/bin/installver_wbi.sh -include fn1;fn2;fn3`
  - **Windows** On Windows platforms: `install_root\bin\installver_wbi.bat -include fn1;fn2;fn3`

For example, you might include only the properties/version/proxy.server.component file, which was changed to generate the checksum difference in this example.

```
- Windows
   installver_wbi.bat -log -include properties\version\proxy.server.component
```

```
- i5/OS
   installver_wbi -log -include properties/version/proxy.server.component
```

The result shows that the included file was in the comparison, which scanned 285 components looking for all components that refer to the file. The displayed output will be similar to the following:

```
I CWNVU0160I: [ivu] Verifying.
...
I CWNVU0300I: [ivu] The total number of user excluded files found are 0.
I CWNVU0300I: [ivu] The total number of IBM excluded files found is 82.
I CWNVU0185I: [ivu] Searching component directory for file listing: files.list
I CWNVU0460I: [ivu] The utility is running.
I CWNVU0260I: [ivu] The total number of components found is: 285
I CWNVU0270I: [ivu] Gathering installation root data.
I CWNVU0290I: [ivu] Starting the verification for 285 components.

I CWNVU0470I: [ivu] Starting to analyze: activity
I CWNVU0480I: [ivu] Done analyzing: activity
...
I CWNVU0470I: [ivu] Starting to analyze: proxy.server
I CWNVU0440I: [ivu] The following file is different: properties/version/proxy.server.component
I CWNVU0410I: [ivu] f385fc95977092e0482d52f9d1d5bebbc39fbb10 is the checksum in the bill of materials.
I CWNVU0420I: [ivu] b43bda7f1e7202d1f9495fc74ac14b8d85830aab is the checksum on the file system.
I CWNVU0390I: [ivu] Component issues found : 1
I CWNVU0480I: [ivu] Done analyzing: proxy.server
...
I CWNVU0400I: [ivu] Total issues found : 1
I CWNVU0340I: [ivu] Done.
```

If you know that a file is in only one component, you can speed up the comparison by restricting the comparison of the file to the relevant component. For example:

```
- Windows
installver_wbi.bat -log -includecomponent proxy.server -include properties\version\proxy.server.component
- i5/OS
installver_wbi -log -includecomponent proxy.server -include properties/version/proxy.server.component
```

The result shows the comparison was restricted to one component. The displayed output will be similar to the following:

```
I CWNVU0160I: [ivu] Verifying.
...
I CWNVU0300I: [ivu] The total number of user excluded files found are 0.
I CWNVU0300I: [ivu] The total number of IBM excluded files found is 82.
I CWNVU0185I: [ivu] Searching component directory for file listing: files.list
I CWNVU0460I: [ivu] The utility is running.
I CWNVU0260I: [ivu] The total number of components found is: 285
I CWNVU0270I: [ivu] Gathering installation root data.
I CWNVU0460I: [ivu] The utility is running.
I CWNVU0290I: [ivu] Starting the verification for 1 components.

I CWNVU0470I: [ivu] Starting to analyze: proxy.server
I CWNVU0440I: [ivu] The following file is different: properties/version/proxy.server.component
I CWNVU0410I: [ivu] f385fc95977092e0482d52f9d1d5bebbc39fbb10 is the checksum in the bill
of materials.
I CWNVU0420I: [ivu] b43bda7f1e7202d1f9495fc74ac14b8d85830aab is the checksum on the file
system.
I CWNVU0390I: [ivu] Component issues found : 1
```

```
I CWNVU0480I: [ivu] Done analyzing: proxy.server
```

```
I CWNVU0400I: [ivu] Total issues found : 1
```

```
I CWNVU0340I: [ivu] Done.
```

## Results

When you issue one of the checksum commands from the *install\_root/bin* directory, the status of the command is displayed on the terminal console or in a log file.

## Changing the default message digest algorithm for the `installver_wbi` command

You can change the default message digest algorithm for a checksum comparison of installed files. You must edit the `installver_wbi` command script to change the algorithm.

### Before you begin

Install the product before attempting to change the default message digest algorithm from SHA to MD5.

Also, verify the product files with the `installver_wbi` command before you change the command file.

### About this task

The default message digest algorithm is one of the secure hash algorithms (SHA) that are part of the Secure Hash Standard (SHS) from the National Institute of Standards and Technology (NIST). SHA-1 is the standard hash function of the U.S. government. For more information, see the Federal Information Processing Standards (FIPS) Web page at <http://csrc.nist.gov/publications/fips/index.html>, and view the publication FIPS 180-2.

For more information about WebSphere Process Server compliance with FIPS, see Federal Information Processing Standards.

Also available is the older MD5 message digest algorithm. MD5 is a deprecated type of message algorithm that is not as secure as SHA and is provided only for backward compatibility.

Change the default message digest algorithm from SHA to MD5 only if absolutely necessary. Edit the `installver_wbi.bat` file or the `installver_wbi.sh` file to make the change. Changing the algorithm invalidates the SHA-based checksums in the product bill of materials. For this reason, verify the product files before changing the message digest algorithm.

To change the default message digest algorithm, perform the following steps.

### Procedure

1. Edit the `installver_wbi` command script:

- **i5/OS** On **i5/OS platforms**: Edit the `install_root/bin/installver_wbi` file.
- **Linux** **UNIX** On **Linux and UNIX platforms**: Edit the `install_root/bin/installver_wbi.sh` file.

- **Windows** **On Windows platforms:** Edit the `install_root\bin\installver_wbi.bat` file.
2. Add the following environmental property to the script file:  
`-Dchecksum.type=MD5`

The default value is:

`-Dchecksum.type=SHA`

3. Save your changes.

## Results

After you change the algorithm, run the `installver_wbi` command to verify that it works correctly.

## Handling out-of-memory situations

Memory requirements for using the `installver_wbi` command are related to the size of the installed file set for the product. For the basic verification scenario, comparing an installed file set with the provided bill of materials might require a maximum heap size of 128 MB to 256 MB.

### About this task

If you need more memory for either a product verification or a baseline checksum verification, you must increase the maximum heap size setting for your Java Virtual Machine (JVM) by including a setting in the `installver` command script. (The `installver_wbi` command calls the `installver` command script.)

**Note:** **i5/OS** On i5/OS systems, the default Java maximum heap size is `*NOMAX`, so there is no need to increase it.

To handle out-of-memory situations, perform the following steps.

### Procedure

1. Edit the `installver` command script:
  - **Linux** **UNIX** **On Linux and UNIX platforms:** Edit the `install_root/bin/installver.sh` file.
  - **Windows** **On Windows platforms:** Edit the `install_root\bin\installver.bat` file.
2. Add or increase the maximum heap size setting:
  - **Linux** **UNIX** **On Linux and UNIX platforms:** Change the following line:  
`"$JAVA_HOME"/bin/java \`  
  
to:  
`"$JAVA_HOME"/bin/java -Xmx256M \`
  - **Windows** **On Windows platforms:** Change the following line:  
`"%JAVA_HOME%\bin\java" "-Dproduct.home=%WAS_HOME%"`  
  
to:  
`"%JAVA_HOME%\bin\java" -Xmx256M "-Dproduct.home=%WAS_HOME%"`
3. Save your changes.

## Results

After you change the setting, run the `installver_wbi` command to verify that it works correctly.

## installver\_wbi command

Use the `installver_wbi` command to compute a checksum on installed files and compare the checksum to the shipped bill of materials for the product.

### Purpose

The `installver_wbi` command performs two main functions. It computes a checksum on the installed files and compares the checksum to the shipped bill of materials for the product. The `installver_wbi` command can also compute a new baseline checksum for each file in the inventory of a configured system to use to identify file changes in later comparisons.

The default log file is the `install_root/logs/installver.log` file. You can redirect the output using the `-log` parameter and an argument. Use the `-log` parameter without the file argument to generate the default log file.

**Computing the checksum:** The `installver_wbi` command computes a checksum for each installed file in the product. The command compares each computed checksum to the correct checksum for the file. The correct checksums are shipped in the bill-of-material files. One bill-of-materials file exists for each component.

The tool parses the bill-of-materials file for each component to find the correct checksum value for each file in the component. Each product file has an entry in some bill-of-materials file. The entry for a product file lists the product file path and the correct checksum value.

**Shipped bill-of-material files:** Each bill-of-materials file is named `files.list`. Each component has one `files.list` file. Each `files.list` file is in one of the `install_root/properties/version/nif/backup/component_name` directories. A `component_name` directory exists for each component.

For example, the `files.list` file for the activity component is in the `install_root/properties/version/nif/backup/component_name` directory. The file resembles the following example:

```
<?xml version="1.0" encoding="UTF-8"?>
<componentfiles componentname="activity">
  <file>
    <relativepath>properties/version/activity.component</relativepath>
    <checksum>1a20dc54694e81fccd16c80f7c1bb6b46bba8768</checksum>
    <permissions>644</permissions>
    <installoperation>remove</installoperation>
  </file>
  <file>
    <relativepath>lib/activity.jar</relativepath>
    <checksum>2f056cc01be7ff42bb343e962d26328d5332c88c</checksum>
    <permissions>644</permissions>
    <installoperation>remove</installoperation>
  </file>
</componentfiles>
```

**Comparing the computed checksum to the correct checksum:** As the tool processes each product file in each bill-of-materials file, the tool also computes the

actual checksum value of the corresponding installed product file. The tool then compares the checksum of the product file to the correct checksum value in the bill-of-materials file. The tool then reports any differences.

#### Location of the command file:

The `installver_wbi` command file is located in the `bin` directory of the installation root directory:

- **i5/OS** On i5/OS platforms: `install_root/bin/installver_wbi`
- **Linux** **UNIX** On Linux and UNIX platforms: `install_root/bin/installver_wbi.sh`
- **Windows** On Windows platforms: `install_root\bin\installver_wbi.bat`

Change directories to the `bin` directory to start the `installver_wbi` tool from the command line. The tool runs on any supported operating system except for z/OS. For example, use the following command to start the tool on a Linux system or a UNIX system:

```
./installver_wbi.sh
```

**Note:** **i5/OS** On i5/OS you need to invoke the QShell using the `QSH` or `STRQSH` command from the native i5/OS Command window before you can execute these scripts.

#### Syntax for displaying information about how use the command

- **i5/OS** On i5/OS platforms: `./installver_wbi -help`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -help`
- **Windows** On Windows platforms: `installver_wbi.bat -help`

#### Syntax for listing all components

- **i5/OS** On i5/OS platforms: `./installver_wbi -listcomponents`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -listcomponents`
- **Windows** On Windows platforms: `installver_wbi.bat -listcomponents`

#### Syntax for comparing product files to the bill-of-material files

Use the following command syntax to automatically check the bill of materials against the installed file system.

- **i5/OS** On i5/OS platforms: `install_root/bin/installver_wbi`
- **Linux** **UNIX** On Linux and UNIX platforms: `install_root/bin/installver_wbi.sh`
- **Windows** On Windows platforms: `install_root\bin\installver_wbi.bat`

See “Verifying against the bill of materials” on page 161 for examples of using the command to compare the installed files to the product bill-of-materials files.



## Example comparisons and command usage

Compare checksums and include specified files only in the comparison:

- **i5/OS** On i5/OS platforms: `./installver_wbi -include fn1;fn2;fn3`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -include fn1;fn2;fn3`
- **Windows** On Windows platforms: `installver_wbi.bat -include fn1;fn2;fn3`

See Comparing specific file and component checksums for examples of using the command to compare only files or components that you specify.

Compare checksums and include specified components only in the comparison:

- **i5/OS** On i5/OS platforms: `./installver_wbi -includecomponent comp1;comp2;comp3;...`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -includecomponent comp1;comp2;comp3;...`
- **Windows** On Windows platforms: `installver_wbi.bat -includecomponent comp1;comp2;comp3;...`

Compare checksums and exclude certain components from the comparison:

- **i5/OS** On i5/OS platforms: `./installver_wbi -excludecomponent comp1;comp2;comp3;...`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -excludecomponent comp1;comp2;comp3;...`
- **Windows** On Windows platforms: `installver_wbi.bat -excludecomponent comp1;comp2;comp3;...`

See “Excluding files from a checksum comparison” on page 168 for examples of using the command to exclude files from the comparison.

Compare checksums and ignore user-excluded files:

- **i5/OS** On i5/OS platforms: `./installver_wbi -ignoreuserexclude`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -ignoreuserexclude`
- **Windows** On Windows platforms: `installver_wbi.bat -ignoreuserexclude`

Compare checksums and ignore IBM-excluded files:

- **i5/OS** On i5/OS platforms: `./installver_wbi -ignoreibmexclude`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -ignoreibmexclude`
- **Windows** On Windows platforms: `installver_wbi.bat -ignoreibmexclude`

List all components only:

- **i5/OS** On i5/OS platforms: `./installver_wbi -listcomponents`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -listcomponents`
- **Windows** On Windows platforms: `installver_wbi.bat -listcomponents`

### Create template (for listing excluded files) only:

- **i5/OS** On i5/OS platforms: `./installver_wbi -createtemplate`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -createtemplate`
- **Windows** On Windows platforms: `installver_wbi.bat -createtemplate`

## Parameters for comparing checksums against the bill of materials

The following parameters are associated with the command when comparing product file checksums to the correct checksums in the bill of material files.

### **-componentdir** *directory\_1;directory\_2;directory\_n*

Optional parameter that identifies the name of the directory where WebSphere Application Server products store the individual bill-of-material lists for each component.

The default value is the `install_root/properties/version/nif/backup` directory.

### **-createtemplate** [*file\_name* ]

Creates a template properties file for excluding files from the checksum comparison. Edit the template properties file to add a line for each file that you want to exclude from verification.

Without a file specification argument, the `installver_wbi` tool creates the `install_root/properties/ivu_user.template` file.

If you specify a file name, the `installver_wbi` tool creates the file in the working directory, which is the `install_root/profiles/profile_name/bin` directory by default.

- **i5/OS** On i5/OS platforms: Type the following at the command line:
  1. `cd install_root/bin`
  2. `./installver_wbi -createtemplate`
- **Linux** **UNIX** On Linux and UNIX platforms: Type the following at the command line:
  1. `cd install_root/bin`
  2. `./installver_wbi.sh -createtemplate`
- **Windows** On Windows platforms: Type the following at the command line:
  1. `cd install_root\bin`
  2. `installver_wbi.bat -createtemplate`

The `installver_wbi` tool creates the template properties file in the properties directory of the default profile:

- **i5/OS** On i5/OS platforms: `default_profile_root/properties/ivu.user.template`
- **Linux** **UNIX** On Linux and UNIX platforms: `default_profile_root/properties/ivu.user.template`
- **Windows** On Windows platforms: `default_profile_root\properties\ivu.user.template`

### **-exclude** *file1;file2;file3; ...*

Excludes files from verification.

Use a semi-colon (;) or a colon (:) to delimit file names.

**-excludecomponent** *component1;component2;component3; ...*

Excludes components from verification.

Use a semi-colon (;) or a colon (:) to delimit component names.

**-filelist** *file\_name*

Optional parameter that identifies the name of the file that IBM uses to identify the correct checksums of product files in a particular product component.

The default value is files.list.

**-help**

Displays usage information.

**-ignoreuserexclude**

Ignores the default *install\_root/properties/ivu\_user.template* file, if the file exists, and compares the files listed in the template.

If you use the *-createtemplate* parameter with a file specification to create a template file in another location, the *-ignoreusertemplate* parameter has no effect.

**-ignoreibmexclude**

Compares checksums for all of the files in the installation root directory. IBM specifies certain files to exclude from the verification by default. You can cause the *installver\_wbi* tool to verify those files as well by using the *-ignoreibmexclude* parameter.

**-include** *file1;file2;file3; ...*

Includes files in the verification and excludes all other files.

Use a semi-colon (;) or a colon (:) to delimit file names.

**-includecomponent** *component1;component2;component3; ...*

Includes components in the verification and excludes all other components.

Use a semi-colon (;) or a colon (:) to delimit component names.

**-installroot** *directory\_name*

Overrides the default installation root directory.

**-listcomponents**

Displays a list of components in the product. Each component must have a files.list file.

**-log** [*file\_path\_and\_file\_name\_of\_log\_file*]

The default log file is the *install\_root/logs/installver.log* file. You can redirect the output using the *-log* parameter and an argument.

**-profilehome** *directory\_name*

Overrides the default profiles directory in the installation root directory.

**-trace**

Provides trace output of what the tool checks and what the tool discovers.

## Syntax for creating and using a new baseline checksum for an inventory of configured files

Use the following syntax to create and compare an inventory of configured files to the currently installed files.

**Create an inventory list of the files that are currently installed in the installation root directory:**

- **i5/OS** On i5/OS platforms: `./installver_wbi -createinventory [path/file_name]`, such as `./installver_wbi -createinventory /tmp/system.inv`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -createinventory [path/file_name]`, such as `./installver_wbi.sh -createinventory /tmp/system.inv`
- **Windows** On Windows platforms: `installver_wbi.bat -createinventory [path\file_name]`, such as `installver_wbi.bat -createinventory C:\temp\system.inv`

**Compare the inventory list to files that are currently installed in the installation root directory:**

- **i5/OS** On i5/OS platforms: `./installver_wbi -compare /path/file_name`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -compare /path/file_name`
- **Windows** On Windows platforms: `installver_wbi.bat -compare path\file_name`

**Compare and display trace results:**

- **i5/OS** On i5/OS platforms: `./installver_wbi -compare /path/file_name -trace`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -compare /path/file_name -trace`
- **Windows** On Windows platforms: `installver_wbi.bat -compare /path/file_name -trace`

**Display usage information:**

- **i5/OS** On i5/OS platforms: `./installver_wbi -help`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -help`
- **Windows** On Windows platforms: `installver_wbi.bat -help`

**Compare and exclude specified files from the inventory comparison:**

- **i5/OS** On i5/OS platforms: `./installver_wbi -compare /path/file_name -exclude fn1;fn2;fn3;...`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -compare /path/file_name -exclude fn1;fn2;fn3;...`
- **Windows** On Windows platforms: `installver_wbi.bat -compare \path\file_name -exclude fn1;fn2;fn3;...`

**Compare and include only specified files in the inventory comparison:**

- **i5/OS** On i5/OS platforms: `./installver_wbi -compare /path/file_name -include fn1;fn2;fn3;...`
- **Linux** **UNIX** On Linux and UNIX platforms: `./installver_wbi.sh -compare /path/file_name -include fn1;fn2;fn3;...`
- **Windows** On Windows platforms: `installver_wbi.bat -compare /path/file_name -include fn1;fn2;fn3;...`

## Parameters for creating and using checksums for a file inventory

The following parameters are associated with this command.

**-compare** *file\_path\_and\_file\_name\_of\_existing\_inventory\_file*

Compares the existing inventory list to the existing files to determine changes.

First use the `-createinventory` parameter to create an inventory list. Then use the `-compare` parameter to compare the inventory list to the actual files that exist in the system at the time of the comparison.

The result of the comparison shows changed classes, changed files, missing files, and added files. Such a comparison is very useful for verifying the absence of virus files, for example.

**-createinventory** *directory\_name*

Creates the new checksum by default in the `sys.inv` file within the current working directory, such as the `profile_root/bin` directory. You can specify a file path and file name. Create the file outside of the installation root directory or exclude the file from comparisons.

You can point the `installver_wbi` tool at any directory. The default directory is the installation root directory.

You can exclude files or components from the inventory.

The `installver_wbi` tool computes a checksum for each file. Each file entry in the inventory has the following general pattern:

```
checksum|relativepath/file_name|file_size|last_modified_time
```

After creating an inventory list, use the `-compare` parameter to compare the list to the actual files that exist in the system at the time of the comparison.

**-exclude** *file1;file2;file3;...*

Excludes files from comparison.

Use a semi-colon (;) or a colon (:) to delimit file names.

**-help**

Displays usage information.

**-include** *file1;file2;file3; ...*

Includes files in the comparison and excludes all other files.

Use a semi-colon (;) or a colon (:) to delimit file names.

**-installroot** *directory\_name*

Overrides the default installation root directory.

**-log** [*file\_path\_and\_file\_name\_of\_log\_file*]

The default log file is the `install_root/logs/installver.log` file. You can redirect the output using the `-log` parameter and an argument.

**-trace**

Provides trace output of what the tool checks and what the tool discovers.

## Example

The following examples show issues that might occur when you run the `installver_wbi` command to compare checksums.

**Ignore entries for checksum mismatches that you introduce on purpose, such as might occur when you extend a component**

The checksums differ for each file that you change:

```
I CWNVU0470I: [ivu] Starting to analyze: regularcomponentsample
I CWNVU0440I: [ivu] The following file is different: lib/different.jar
I CWNVU0410I: [ivu] fc19318dd13128ce14344d066510a982269c241b is the checksum in
the bill of materials.
I CWNVU0420I: [ivu] 517d5a7240861ec297fa07542a7bf7470bb604fe is the checksum on
the file system.
I CWNVU0390I: [ivu] Component issues found : 1
I CWNVU0480I: [ivu] Done analyzing: regularcomponentsample
```

### **Ignore issues that are obvious informational (I) messages**

Some messages indicate deviations from the normally expected result, but are not indicators of a serious issue:

```
I CWNVU0360I: [ivu] The following bill of materials issue is found for component
nullvaluesample:
Hash must not be null or an empty string.
```

### **Overlapped files are either a potential product issue or potential tampering with the IBM provided bill of materials**

```
I CWNVU0470I: [ivu] Starting to analyze: overlapbinarycomponentsample
W CWNVU0422W: [ivu] The following file is overlapped: lib/binaryTest.jar
W CWNVU0425W: [ivu] The overlap is caused by: _binarycomponentsample
I CWNVU0390I: [ivu] Component issues found : 1
I CWNVU0480I: [ivu] Done analyzing: overlapbinarycomponentsample
```

### **Contact IBM support for the following issue**

If you see any messages with the following format, contact IBM support:

```
W CWNVU0280W: [ivu] Component mismatch: expected ... but found ...
```

For current information available from IBM Support on known problems and their resolution, see this [IBM Support page](#).

IBM Support has documents that can save you time gathering information needed to resolve this problem. Before opening a PMR, see this [IBM Support page](#).

If you do not see a known installation problem that resembles yours, or if the information provided does not solve your problem, contact IBM support for further assistance.

## **Next**




After verifying your installation, you can create profiles or deploy an application on an existing profile.

---

## Chapter 7. Coexisting with other WebSphere product installations

An installation of WebSphere Process Server, version 6.2 can coexist on the same system with installations of any version of WebSphere Enterprise Service Bus, WebSphere Process Server, and with certain versions of selected WebSphere products.

An installation of WebSphere Process Server, version 6.2 can run on the same system at the same time as installations of one or more of the following supported products and versions:

- IBM WebSphere Process Server, versions 6.2, 6.1.x, and 6.0.x
- IBM WebSphere Enterprise Service Bus, versions 6.2, 6.1.x, and 6.0.x
- IBM WebSphere Application Server, versions 6.1, 6.0.x, and 5.x
- IBM WebSphere Application Server Network Deployment, versions 6.1, 6.0.x, and 5.x
- IBM WebSphere Business Integration Server Foundation, version 5.x
-    IBM WebSphere Application Server Enterprise, version 5.0.x

When configuring coexistence, you must address any port conflicts that occur to avoid communication errors. Each version of the server must have a distinct database.

Do not confuse coexistence with *migration*, *updating*, or *interoperation*:

- *Migration* is copying the configuration from a previous release of WebSphere Process Server into a new release. If you are installing WebSphere Process Server, version 6.2 on a system that already has a prior version of WebSphere Process Server or WebSphere ESB installed and you intend to migrate to the newer version of WebSphere Process Server or WebSphere ESB, see *Migrating to WebSphere Process Server* for more information.
- *Updating* is replacing out-of-date files or data of an existing installation with current information. Refresh packs, interim fixes, and fix packs are examples of updates. For more information on updating, see Chapter 10, “Installing fix packs and refresh packs with the Update Installer,” on page 499.
- *Interoperation* is exchanging data between two different systems, such as coexisting product installations. This version of WebSphere Process Server is generally interoperable with many previous versions. To support interoperability, you need apply the latest fix levels. See *Planning for interoperability between WebSphere Process Server and other WebSphere Application Server products* for more information.

---

## Installing WebSphere Process Server or the WebSphere Process Server Client to coexist with existing installations of various WebSphere products

Use this procedure to install WebSphere Process Server or the WebSphere Process Server Client on a system with an existing installation of WebSphere Process Server, the WebSphere Process Server Client, WebSphere Enterprise Service Bus, or a supported version of WebSphere Application Server or WebSphere Application Server Network Deployment. This procedure uses the installation wizard graphical user interface (GUI).

### Before you begin

Review the list of prerequisites for installing the product at “Prerequisites for installing WebSphere Process Server” on page 31.

### About this task

This procedure assumes you have one or more of the following products already installed:

- WebSphere Process Server, the WebSphere Process Server Client, or WebSphere Enterprise Service Bus, version 6.2.
- WebSphere Application Server or WebSphere Application Server Network Deployment, version 6.1.

You do not have to have existing profiles. It also assumes you want to install using an interactive interface. Use the following procedure to install the product.

### Procedure

1. Go to the topic “Installing WebSphere Process Server interactively” on page 79 and follow the steps to start the installation wizard, accept the license agreement, and check prerequisites.

This procedure identifies existing installations of the following products on your system:

- WebSphere Process Server, the WebSphere Process Server Client, or WebSphere Enterprise Service Bus, version 6.2.
  - WebSphere Application Server or WebSphere Application Server Network Deployment, version 6.1.
2. When you reach the panels that identify that there are existing installations on your system, elect to install a new copy of WebSphere Process Server to coexist with the existing versions.
  3. Progress through the installation wizard panels to install the product. If the Installation results panel indicates **Success**, the product was installed successfully, and if you created a profile during installation, it was created successfully.
  4. Use the Profile Management Tool or the `manageprofiles` command to create profiles as needed.

During profile creation, the `manageprofiles` command can use port values that you specify instead of the default port values. You can use a port file, specify a starting port, or accept the default port values. See the topic “`manageprofiles` command” on page 251 for details.
  5. If the installation was successful, after you have created a stand-alone server or deployment manager profile, start it from its First steps console to verify that



your installation is operating properly. See “Options on the First steps console” on page 136 for more details. You can also use the installation verification tools to verify your installation. See Chapter 6, “Verifying the product installation,” on page 159 for more information.

6. If you have a node that you cannot start because of port conflicts, change port assignments to nonconflicting ports in configuration files. Use one of the following methods:
  - Run the updatePorts tool; see Updating ports in an existing profile.
  - Edit the *profile\_root/config/cells/cell\_name/nodes/node\_name/serverindex.xml* file. See Setting port numbers kept in the serverindex.xml file using scripting
  - Perform scripting. See Scripting the application serving environment (wsadmin) for more information.

## Results

You have two installations of WebSphere Process Server coexisting on the same system.

---

## Creating new WebSphere Process Server profiles to coexist with configuration instances of WebSphere Business Integration Server Foundation and selected pre-6.0 versions of WebSphere Application Server products

Use this procedure to create a WebSphere Process Server, version 6.2 profile to coexist with a configuration instance of WebSphere Business Integration Server Foundation, version 5.x, WebSphere Application Server, version 5.x, WebSphere Application Server Network Deployment, version 5.x, or WebSphere Application Server Enterprise, version 5.0.x, on a single system. This procedure uses the Profile Management Tool graphical user interface (GUI).

### Before you begin

Review the general prerequisites for creating or augmenting profiles in “Prerequisites for creating or augmenting profiles” on page 192, as well as those specific to “Creating profiles using the Profile Management Tool” on page 198 or “Augmenting profiles using the Profile Management Tool” on page 231. In addition to these prerequisites, you must also have an existing installation of either:

- WebSphere Business Integration Server Foundation, version 5.x with an existing configuration instance.
- WebSphere Application Server, version 5.x, WebSphere Application Server Network Deployment, version 5.x, or WebSphere Application Server Enterprise, version 5.0.x, with an existing configuration instance. Coexistence with WebSphere Application Server Enterprise, version 5.0.x is supported on Linux, UNIX, and Windows platforms only.

### About this task

To create a new profile, use the following procedure.

#### Procedure

1. Create the new WebSphere Process Server profile.

To do so, follow the procedure in “Creating profiles using the Profile Management Tool” on page 198 or “Augmenting profiles using the Profile Management Tool” on page 231.

When progressing through the Profile Management Tool, on the Port values assignment panel, verify that the ports specified for the new profile are unique and different than the ports assigned to the existing configuration instance.

2. If you created a stand-alone server profile or deployment manager profile, verify that it is operating correctly with the coexisting instance. To verify that the profile is operating properly, start it from its First steps console while the coexisting instance is running. If it starts successfully, the profile is operating properly.

## Results

A new WebSphere Process Server profile exists.

---

## Creating new WebSphere Process Server profiles to coexist with profiles of other WebSphere products

Use this procedure to create a WebSphere Process Server profile to coexist with a profile of WebSphere Enterprise Service Bus, version 6.0.x, 6.1, and 6.2, WebSphere Application Server, version 6.0 and 6.1, or WebSphere Application Server Network Deployment, version 6.0 or 6.1 on a single workstation. This procedure uses the Profile Management Tool graphical user interface (GUI).

### Before you begin

Review the general prerequisites for creating or augmenting profiles in “Prerequisites for creating or augmenting profiles” on page 192, as well as those specific to “Creating profiles using the Profile Management Tool” on page 198 or “Augmenting profiles using the Profile Management Tool” on page 231. In addition to these prerequisites, you must also have an existing installation of WebSphere Enterprise Service Bus, version 6.2, 6.1, or 6.0.x, WebSphere Application Server, version 6.0 and 6.1, or WebSphere Application Server Network Deployment, version 6.0 or 6.1, with an existing profile.

### About this task

To create a new profile, use the following procedure.

#### Procedure

1. Create the new WebSphere Process Server profile.

To do so, follow the procedure in “Creating profiles using the Profile Management Tool” on page 198 or “Augmenting profiles using the Profile Management Tool” on page 231.

When progressing through the Profile Management Tool, on the Port values assignment panel, verify that the ports specified for the new profile are unique and different than the ports assigned to the existing profile.

2. If you created a stand-alone server profile or deployment manager profile, verify that it is operating properly with the coexisting profile. To verify that the profile is operating properly, start it from its First steps console while the coexisting profile is running. If it starts successfully, the profile is operating properly.

## Results

A new WebSphere Process Server profile exists.



---

## Chapter 8. Configuring the software

After you have installed WebSphere Process Server, you must complete additional configuration tasks to fully prepare your runtime environment.

---

### Configuring profiles

There are three types of profiles: a stand-alone server profile, a deployment manager profile, and a custom profile (managed node). Each profile defines a separate runtime environment, with separate files (commands, configuration files, and log files). Topics in this section provide detailed information on tasks you might have to perform to work with profiles after you install WebSphere Process Server.

#### Profiles

A profile defines a unique runtime environment, with separate command files, configuration files, and log files. Profiles define three different types of environments: stand-alone server, deployment manager, and managed node.

Using profiles you can have more than one runtime environment on a system, without having to install multiple copies of the WebSphere Process Server binary files.

The first profile can be automatically created when you install WebSphere Process Server. You can later use the Profile Management Tool or the `manageprofiles` command to create further profiles on the same system, without installing a second copy of the binary files.

**Note:** On distributed platforms, each profile has a unique name. On z/OS all the profiles are named “default”.

#### The profile directory

Every profile in the system has its own directory containing all its files. You specify the location of the profile directory when you create the profile: by default it is in the profiles directory in the directory where WebSphere Process Server was installed, for example, the `Dmgr01` profile is in `C:\Program Files\IBM\WebSphere\ProcServer\profiles\Dmgr01`.

#### The First steps console

**Linux** **UNIX** **Windows** **i5/OS** Every profile in the system has a First steps console, which is a user interface for familiarizing yourself with the stand-alone server, deployment manager, or managed node.

#### The default profile

The first profile that you create within one installation of WebSphere Process Server is the *default profile*. The default profile is the default target for commands issued from the `\bin` directory in the directory where WebSphere Process Server was installed. If only one profile exists on a system, every command operates on that profile. If you create another profile, you can make it the default.

**Note:** The default profile is not necessarily a profile whose name is “default”.

## Augmenting profiles

If you already have a deployment manager, a custom profile, or a stand-alone server created for WebSphere Application Server Network Deployment or WebSphere ESB, you can *augment* its profile to support WebSphere Process Server in addition to existing function. To augment a profile, first install WebSphere Process Server. Then use the Profile Management Tool or the `manageprofiles` command.

**Restriction:** You cannot augment a profile if it defines a managed node that is already federated to a deployment manager.

## Prerequisites for creating or augmenting profiles

Before creating or augmenting a profile, you must ensure that a series of prerequisites have been met.

- You must have an existing installation of WebSphere Process Server. If you do not, see Chapter 4, “Installing the software,” on page 67 for installation procedures.
- If you are not the user ID who installed the product, you must have write permission to selected directories within the WebSphere Process Server installation. See “Granting write permission of files and directories to non-root users for profile creation” on page 194 for instructions on how to obtain these permissions. You must create your profiles in a directory other than `install_root/profiles`.

**Note:** In the case of i5/OS the user creating a profile must have \*SECOFR user class or \*ALLOBJ authority on the system. Also profiles on i5/OS are created under `user_data_root/profiles/..` and not `install_root/profiles` as on distributed platforms.

- You must know the type of profile you want to create or augment. For more information about profiles, see “Profiles” on page 191.
- You must follow the correct procedure to create or augment the profile:
  - If you want to create a new profile rather than augment an existing profile, see one of the following topics:
    - To create a profile using an interactive interface: “Creating profiles using the Profile Management Tool” on page 198.
    - To create a profile using the `manageprofiles` command: “Creating profiles using the `manageprofiles` command” on page 203.
  - If you want to augment an existing WebSphere Application Server, WebSphere Application Server Network Deployment, or WebSphere Enterprise Service Bus profile into a WebSphere Process Server profile, see one of the following topics:
    - To augment a profile using an interactive interface: “Augmenting profiles using the Profile Management Tool” on page 231.
    - To augment a profile using the `manageprofiles` command: “Augmenting profiles using the `manageprofiles` command” on page 235.

**Important:** A profile that you plan to augment using the Profile Management Tool or the `manageprofiles` command cannot define a managed node that is already federated.

- You must manually add three schemas to the common database when creating stand-alone server profiles using Microsoft SQL Server 2005 with Messaging

Engines (MEs). These schemas are XXXSS00, XXXSA00, and XXXCM00. Where XXX is the first three characters of the name of the common database.

For network deployment refer to the following technote: [http://www-01.ibm.com/support/docview.wss?rs=2307&context=SSQH9M&context=SS7J6S&q1=v62readme&q2=1330280&uid=swg21330280&loc=en\\_US&cs=utf-8&lang=en](http://www-01.ibm.com/support/docview.wss?rs=2307&context=SSQH9M&context=SS7J6S&q1=v62readme&q2=1330280&uid=swg21330280&loc=en_US&cs=utf-8&lang=en).

- You cannot use the Profile Management Tool to create or augment profiles on 64-bit platforms (except i5/OS) or on the Linux on System z platform. To create or augment profiles on these platforms, you must use the `manageprofiles` command. See “Creating profiles using the `manageprofiles` command” on page 203 for more information.
- You must shut down any servers associated with a profile you plan to augment.
- You must review “Naming considerations for profiles, nodes, hosts, and cells” on page 554 for information about reserved terms and issues that you must consider when naming your profile, node, host, and cell (if applicable).
- You must have enough disk and temporary space to create or augment the new profile. For information on space requirements, see WebSphere Process Server detailed system requirements at <http://www.ibm.com/support/docview.wss?uid=swg27006205> and select the link to your version of WebSphere Process Server.

The following prerequisites relate to product databases:

- During the profile creation or augmentation process, you will be configuring the database used by the Common Event Infrastructure component and the Common database used by other selected components. Whether you plan to create new databases and tables or postpone actual database configuration by producing scripts that must be run manually by you or your database administrator (DBA), you must know the following database details:
  - For database configuration:
    - Common Database name
    - Common Event Infrastructure Database name
    - User ID and password for database authentication (not required for Derby Embedded)
    - Directory location of the JDBC driver class path files (not required for Derby Embedded, Derby Network Server, or Microsoft SQL Server Embedded)
    - Database server host name (not required for Derby Embedded or DB2 Universal Runtime Client)
    - Server port (not required for Derby Embedded, DB2 for i5/OS (Native), DB2 for i5/OS (Toolbox), DB2 UDB for iSeries (Toolbox), DB2 UDB for iSeries (Native), or DB2 Universal Runtime Client)
    - Event service instance name (required for Informix Dynamic Server, Oracle, and Microsoft SQL Server command-line only)
    - Directory of database server installation (required for Informix Dynamic Server, and Oracle only)
    - Sys Administrator user ID and password (required for Oracle and Microsoft SQL Server only)
    - For Oracle 11g you must have a user ID that has SYSDBA privileges before creating any profile.
    - Database server name (required for Microsoft SQL Server only)
    - Database node name, if DB2 server remote (required for DB2 Universal only)
    - JDBC driver type (required for DB2 Universal Database, Oracle 9i, Oracle 10g or Oracle 11g only)
    - Database alias name (required for DB2 for z/OS V8 and V9 only)

- Connection location (required for DB2 for z/OS V8 and V9 only)
  - Storage group name (required for DB2 for z/OS V8 and V9 only)
  - Database subsystem name (required for DB2 for z/OS V8 and V9 only)
  - 4K, 8K, and 16K buffer pool names (can be set for DB2 for z/OS V8 and V9 on command-line only)
  - Disk size for the event service database (can be set for DB2 for z/OS V8 and V9 on command-line only)
  - Database collection name (required for DB2 for i5/OS (Native), DB2 for i5/OS (Toolbox))
  - Events service instance name (required for Informix Dynamic Server only)
  - CommonDB user ID and password (required for Oracle only and not applicable to Deployment Environment Dmgr profile)
- If you plan to use or create the Common database repository on a remote server, you must create it before beginning to create or augment the profile. You can create a repository on the local server or use an existing one on a remote server. See “Creating the Common database manually before product installation” on page 56 for the location of default scripts you can use to create this database.
  - If you plan to use DB2 on a remote z/OS workstation for the Common Event Infrastructure and Common database repositories, your DBA must create, on the z/OS server, three databases called event, eventcat, and WPRCSDB, as well as the correct storage groups for each (EVTST0 is the default). The DBA can use the site’s standard database definition tools and procedures.

Before running CreateDB.sh you must allocate the following buffer pools with these DB2 commands:

```
-ALTER BUFFERPOOL (BP1) VPSIZE(20000)
-ALTER BUFFERPOOL (BP2) VPSIZE(20000)
-ALTER BUFFERPOOL (BP3) VPSIZE(20000)
```

You must also make sure that permission to use them has been granted as follows:

```
GRANT USE OF BUFFERPOOL BP1 TO PUBLIC;
GRANT USE OF BUFFERPOOL BP2 TO PUBLIC;
GRANT USE OF BUFFERPOOL BP3 TO PUBLIC;
```

- To create the event and eventcat databases and associated storage groups, the DBA can reference Configuring the event database and its subtopics.
- To create the WPRCSDB database and associated storage groups, the DBA can edit and run the default scripts provided in the following directories:
  - Linux UNIX *install\_root*/dbscripts/CommonDB/DB2zOSV8/ or *install\_root*/dbscripts/CommonDB/DB2zOSV9/
  - Windows *install\_root*\dbscripts\CommonDB\DB2zOSV8\ or *install\_root*\dbscripts\CommonDB\DB2zOSV9\

After you have reviewed these prerequisites, return to the topic from which you accessed this one.

### Granting write permission of files and directories to non-root users for profile creation

The product installer (who can be a root/Administrator or non-root user) can grant write permission to the appropriate WebSphere Process Server files and directories to other non-root users. The non-root users can then create profiles. Alternatively, the product installer can create a group for users who are authorized to create profiles or give individual users the authority to create profiles. The following example task shows how to create a group that is authorized to create profiles.



**Restriction:** i5/OS The tasks described in this topic are not supported on i5/OS.

Throughout this text, the terms "installer" and "product installer" refer to the user ID that installed WebSphere Process Server.

**Restriction:** WebSphere Process Server does not support changing ownership of existing profiles from the product installer to other non-root users. Thus, profile augmentation by non-root users of profiles owned by another user is not supported.

Non-root users create their own profiles so that they can manage their own environments. Typically, they manage environments for development purposes.

Non-root users must store their profiles in their private directory structure, not in the *install\_root/profiles* directory of the product.

**Restriction:** An ease-of-use limitation exists for non-root users who create profiles. Mechanisms within the Profile Management Tool that suggest unique names and port values are disabled for non-root users. The non-root user must change the default field values in the Profile Management Tool for the profile name, node name, cell name, and port assignments. The product installer can assign non-root users a range of values for each of the fields, and assign responsibility to the non-root users for adhering to their assigned value ranges and for maintaining the integrity of their own definitions.

## Steps the product installer must perform to grant appropriate permissions

The installer can perform the following steps to create the profilers group and give the group appropriate permissions to create a profile.

1. Log on to the WebSphere Process Server system as the product installer. (The product installer can be a root/Administrator or non-root user.)
2. Using operating system commands, do the following:
  - Create a group named profilers, which will contain all users who can create profiles.
  - Create a user named user1, who can create profiles.
  - Add users product\_installer and user1 to the profilers group.
3. Linux UNIX Log off and log back on as the installer to pick up the new group.
4. Create the following directories as the installer:
  - Linux UNIX Create the *install\_root/logs/manageprofiles* directory:  

```
mkdir install_root/logs/manageprofiles
```
  - Windows Create the *install\_root\logs\manageprofiles* directory by following instructions in the Windows documentation. For this example procedure, the directory is:  

```
install_root\logs\manageprofiles
```
  - Linux UNIX Create the *install\_root/properties/fsdb* directory:  

```
mkdir install_root/properties/fsdb
```
  - Windows Create the *install\_root\properties\fsdb* directory by following instructions in the Windows documentation. For this example procedure, the directory is:

```
install_root\properties\fsdb
```

- As the installer, follow directions for your operating system to create the profileRegistry.xml file. For this example, the file paths are:

Linux

UNIX

```
install_root/properties/profileRegistry.xml
```

Windows

```
install_root\properties\profileRegistry.xml
```

Follow instructions for your operating system to add the following information to the profileRegistry.xml file. The file must be encoded as UTF-8.

```
<?xml version="1.0" encoding="UTF-8"?>
<profiles/>
```

- As the product installer, use operating system tools to change directory and file permissions.

Linux

UNIX

The following example assumes that the variable \$WASHOME is the WebSphere Process Server root installation directory /opt/IBM/WebSphere/ProcServer.

```
export WASHOME=/opt/IBM/WebSphere/ProcServer
echo $WASHOME
echo "Performing chgrp/chmod per WAS directions..."
chgrp profilers $WASHOME/logs/manageprofiles
chmod g+wr $WASHOME/logs/manageprofiles
chgrp profilers $WASHOME/properties
chmod g+wr $WASHOME/properties
chgrp profilers $WASHOME/properties/fsdb
chmod g+wr $WASHOME/properties/fsdb
chgrp profilers $WASHOME/properties/profileRegistry.xml
chmod g+wr $WASHOME/properties/profileRegistry.xml
chgrp -R profilers $WASHOME/profileTemplates
```

HP-UX

Issue the following additional command where *profile\_template\_name* is default, dmgr, or managed, respectively:

```
chmod -R g+wr $WASHOME/profileTemplates/profile_template_name/documents
```

The ownership of files is preserved when the files are copied to the profile directory during profile creation. You granted write permission to the profile directory so that files copied to the profile directory can be modified as part of the profile creation process. Files that are already in the profileTemplatedirectory structure prior to the start of profile creation are not modified during profile creation.

Linux

Issue the following additional commands:

```
chgrp profilers $WASHOME/properties/Profiles.menu
chmod g+wr $WASHOME/properties/Profiles.menu
```

Windows

The following example assumes that the variable \$WASHOME is the WebSphere Process Server root installation directory C:\Program Files\IBM\WebSphere\ProcServer. Follow instructions in the Windows documentation to give the profilers group read and write permission to the following directories and their files:

```
@WASHOME\logs\manageprofiles
@WASHOME\properties
@WASHOME\properties\fsdb
@WASHOME\properties\profileRegistry.xml
```

You might have to change the permissions on additional files if the non-root user encounters permission errors. For example, if the product installer authorizes a non-root user to delete a profile, then product installer might have to delete the following file:

Linux

UNIX

`install_root/properties/profileRegistry.xml_LOCK`

Windows

`install_root\properties\profileRegistry.xml_LOCK`

Give write access to the non-root user for the file to authorize the user to delete the file. If the non-root user still cannot delete the profile, then the product installer can delete the profile.

## Result

The installer created the `profilers` group and gave the group proper permissions to certain directories and files to create profiles. These directories and files are the only ones in the installation root of WebSphere Process Server to which a non-root user needs to write to create profiles.

## What to do next

The non-root user that belongs to the `profilers` group can create profiles in a directory that the non-root user owns and to which the non-root user has write permission. However, the non-root user cannot create profiles in the installation root directory of the product.

A non-root user ID can manage multiple profiles. The same non-root user ID can manage an entire profile, whether it is the deployment manager profile, a profile that contains the servers and the node agent, or a custom profile. A different user ID can be used for each profile in a cell, whether global security or administrative security is enabled or disabled. The user IDs can be a mix of root and non-root user IDs. For example, the root user might manage the deployment manager profile, while a non-root user might manage a profile that contains servers and the node agent, or vice versa. However, typically, a root user or a non-root user can manage all profiles in a cell.

The non-root user can use the same tasks to manage a profile that the root user uses.

## Creating profiles

Learn how to create new WebSphere Enterprise Service Bus or WebSphere Process Server profiles. You can create profiles from a command line by using the `manageprofiles` command, or interactively by using the Profile Management Tool graphical user interface (GUI).

### Before you begin

Choose the type of profile you want to create. For more information about profiles, see “Profiles” on page 191. See the list of prerequisites for creating or augmenting profiles in the topic “Prerequisites for creating or augmenting profiles” on page 192.

### About this task

You can create any combination of deployment manager, stand-alone server, or custom profiles. Each time you use the Profile Management Tool or `manageprofiles` command one profile is created.

**Restriction:** You cannot use the Profile Management Tool to create or augment profiles on 64-bit platforms (except for i5/OS) or on the Linux on System z

platform. To create profiles on these platforms, you must use the `manageprofiles` command. See “Creating profiles using the `manageprofiles` command” on page 203 for more information.

### Procedure

Decide whether to create the profile from a command line by using the `manageprofiles` command, or interactively by using the Profile Management Tool. Use the command line for speed and the ability to reuse the command line (or the properties file) if you want to create similar profiles. Use the Profile Management Tool if you want a wizard help you through the procedure.

- To create the profile by using the `manageprofiles` command, see the topic “Creating profiles using the `manageprofiles` command” on page 203.
- To create the profile by using the Profile Management Tool, see the topic “Creating profiles using the Profile Management Tool,” which has you:
  - Start the Profile Management Tool.
  - Select whether to create a WebSphere Process Server or WebSphere Enterprise Service Bus profile.
  - Select the type of profile to create (stand-alone server, deployment manager, or custom).
  - Choose the type of profile creation you want to perform:
    - **Typical** (the default), which creates a profile with default configuration settings.
    - **Advanced**, which lets you specify your own configuration values for a profile.
    - **Deployment environment** (for deployment manager or custom profiles only), which lets you create a deployment manager and choose a deployment environment pattern for it, or choose a cluster or clusters to apply to a managed node. You specify your own configuration values for the profile.
  - Based on the type of profile creation you select, links within the topic “Creating profiles using the Profile Management Tool” direct you to the proper interactive procedure to complete the profile creation you want.

### Creating profiles using the Profile Management Tool

Use the Profile Management Tool graphical user interface (GUI) to create a stand-alone server profile, a deployment manager profile, or a custom profile.

### Before you begin

Review the list of prerequisites for creating or augmenting a profile at “Prerequisites for creating or augmenting profiles” on page 192.

Complete the following steps to create a profile.

### Procedure

1. Start the WebSphere Process Server Profile Management Tool.

Use one of the following commands:

- **Linux** **UNIX** **On Linux and UNIX platforms:** `install_root/bin/ProfileManagement/pmt.sh`
- **Windows** **On Windows platforms:** `install_root\bin\ProfileManagement\pmt.bat`

- **i5/OS** On i5/OS platforms: `pmt_client_installation\PMT\pmt.bat`, which is by default `C:\ProgramFiles\IBM\WebSphere\PMTCClient`

See the topic “Starting the Profile Management Tool” on page 201 for details on the different methods of starting this tool.

The next step depends on whether you have an existing profile for WebSphere Application Server, WebSphere Application Server Network Deployment, WebSphere Application Server Network Deployment with Web Services Feature Pack, WebSphere Process Server, or WebSphere Enterprise Service Bus on your system.

Is an existing profile on the system?	Next step
No	The Welcome panel is displayed. Proceed to step 3.
Yes	The Create or augment profile panel is displayed. Proceed to step 2.

- In the Create or augment profile panel, click **Create**.  
The Profile Management Tool opens in a separate window and the Welcome panel is displayed.
- In the Welcome panel, click **Next**.  
The Environment Selection panel is displayed.
- In the Environment Selection panel, select **WebSphere Process Server or WebSphere Enterprise Service Bus** and click **Next**.

**Important:** Do not select the entries **Cell**, **Deployment manager**, **Application server**, or **Custom profile** from this panel. These entries represent WebSphere Application Server profile types. If you select **WebSphere Process Server or WebSphere Enterprise Service Bus** in this panel, you ensure that the profile you create will be for that product type. You will specify which type of profile (stand-alone server, deployment manager, or custom) to create in a later step.

The next step depends on whether your installation of WebSphere Process Server is installed over WebSphere Application Server or WebSphere Application Server Network Deployment (although you can create a WebSphere Enterprise Service Bus profile with the WebSphere Process Server Profile Management Tool, the assumption of this procedure is that WebSphere Process Server is the installed product):

WebSphere Application Server product underlying WebSphere Process Server	Next step
WebSphere Application Server	You can create only a stand-alone server profile, so the Profile creation options panel is displayed. Proceed to step 6.
WebSphere Application Server Network Deployment	You must first choose which type of profile you want to create from the Profile type selection panel. Proceed to step 5.

- In the Profile Type Selection panel, select the type of profile you want to create and click **Next**.  
The Profile Creation Options panel is displayed.
- In the Profile Creation Options panel, choose to perform a **Typical**, an **Advanced**, or (for deployment manager or custom profiles) a **Deployment environment** profile creation, and click **Next**. The **Typical** option creates a profile with default configuration settings. The **Advanced** option lets you

specify your own configuration values for a profile. The **Deployment environment** option also lets you specify your own configuration values for a profile, plus lets you create a deployment manager and choose a deployment environment pattern for it or choose a cluster or clusters to apply to a managed node.

7. Before continuing to the next panel in the Profile Management Tool, proceed to one of the following topics to configure and complete creation of your profile.

Type of profile creation you selected	Procedure to complete profile creation based on your profile type (stand-alone server, deployment manager, or custom)
<p><b>Typical</b></p>	<ul style="list-style-type: none"> <li>• “Configuring stand-alone server profiles using default values” on page 281</li> <li>• “Configuring deployment manager profiles using default values” on page 284</li> <li>• “Configuring custom profiles (managed nodes) using default values” on page 286</li> </ul>
<p><b>Advanced</b></p>	<ul style="list-style-type: none"> <li>• “Configuring stand-alone server profiles using customized values” on page 289</li> <li>• “Configuring deployment manager profiles using customized values” on page 312</li> <li>• “Configuring custom profiles (managed nodes) using customized values” on page 329</li> </ul>
<p><b>Deployment environment</b>  <b>Important:</b> If you do not have an existing deployment manager and deployment environment pattern, be sure to follow the instructions under “Configuring deployment manager profiles for a deployment environment” on page 336 when creating profiles on your first workstation. Follow those under “Configuring custom profiles (managed nodes) for a deployment environment” on page 353 when creating profiles on subsequent workstations.  <b>Restriction:</b></p> <p>Database administrator (DBA) privileges are required for the database configuration panels that are part of creating a deployment manager profile for a deployment environment. If you plan to use the deployment environment feature of the product installer or Profile Management Tool, and want to use a database other than Derby Network Server as your database product, the user ID you provide for the “User name to authenticate with the database” field on the database configuration panels must have DBA privileges.</p>	<ul style="list-style-type: none"> <li>• “Configuring deployment manager profiles for a deployment environment” on page 336</li> <li>• “Configuring custom profiles (managed nodes) for a deployment environment” on page 353</li> </ul>

## Results

You are ready to configure your profile, which defines a new operating environment of the type you specified (stand-alone server, deployment manager, or custom).

### Starting the Profile Management Tool:

Before you start the Profile Management Tool, be aware of the restrictions and ensure that certain prerequisites are met. You can start the Profile Management Tool in several ways, depending on the platform on which it is running.

#### Restrictions:

- You cannot use the Profile Management Tool to create or augment profiles on 64-bit platforms (with the exception of i5/OS) or the Linux on System z platform.
- **i5/OS** When WebSphere Process Server is installed on an i5/OS system, the Profile Management Tool will run only in stand-alone mode. The tool cannot be started from the Application Server Toolkit (AST) tool.
- **i5/OS** The **Browse** buttons on the Profile Management Tool panels are disabled.
- **Vista** **Restriction for a non-root user with multiple instances:** If you install multiple instances of WebSphere Process Server as the root user and give a non-root user access to only a subset of those instances, the Profile Management Tool does not function correctly for the non-root user. In addition, a `com.ibm.wsspi.profile.WSProfileException` or Access is denied message occurs in the `install_root\bin\ProfileManagement\pmt.bat` file. By default, non-root users do not have access to the program file directories, which is the default installation location for the product. To resolve this issue, the non-root user can install the product or be given permission to access the other product instances.

**Linux** **UNIX** **Windows** The language of the Profile Management Tool is determined by the default language on the system. If the default language is not one of the supported languages, then English is used. You can override the system's default language by starting the Profile Management Tool from the command line and using the `java user.language` setting to replace the default language. Run the following command:

- **Linux** **UNIX** `install_root/java/bin/java -Duser.language=locale install_root/bin/ProfileManagement/startup.jar`
- **Windows** `install_root\java\bin\java -Duser.language=locale install_root\bin\ProfileManagement\startup.jar`

For example, to start the Profile Management Tool in the German language on a Linux system, type the following command:

```
install_root/java/bin/java -Duser.language=de install_root/ \
bin/ProfileManagement/startup.jar
```

### Starting the tool on all platforms

Start the tool on any platform in one of the following ways:

- From the First steps console. See “Starting the First steps console” on page 133 for how to start the First steps console.

- At the end of an installation, select the check box to start the Profile Management Tool.

### Starting the tool on i5/OS platforms

**i5/OS** The Profile Management Tool Client for i5/OS is a Java application you must install on a Windows workstation. The tool runs on the Windows workstation as a client for i5/OS and remotely connects to the i5/OS server hosting the WebSphere Process Server installation. To install and start the tool, do the following:

1. Install the Profile Management Tool Client for i5/OS on the Windows workstation in one of two ways:
  - From the product launchpad, by clicking **WebSphere Profile Management Tool Client for i5/OS installation**.
  - By clicking `\PMTClient\PMTInstaller.exe` in the product root directory.

The installation creates an entry in the Windows Start menu.
2. Start the tool from the Windows Start menu by clicking **Start > Programs or All Programs > IBM WebSphere > Profile Management Tool Client for i5/OS**. A panel is displayed on which you can sign on to the System i server.
3. On the sign-on panel, enter the remote i5/OS system name, your i5/OS user profile, and a password, and click **OK**.
4. On the next panel, select which installation (if there is more than one installation of WebSphere Process Server) and which port number you want to use. Then click **Launch Profile Management Tool**.

**Note:** The default port number is 1099. You can change this to a different port. If that port number is busy, an error message is displayed. Select a different port number to continue.

If the Profile Management Tool Client is connecting to a server with a newer version of WebSphere Process Server, you receive a message asking if you want to update the Profile Management Tool Client to match the version on the server. If you click **Yes**, the Profile Management Tool Client is updated automatically and the Profile Management Tool opens.

If the Profile Management Tool Client is connecting to a server with an older version of WebSphere Process Server, you receive a message telling you to install the same version of the Profile Management Tool Client as is on the server. You cannot access the Profile Management Tool until you install a version of the Profile Management Tool Client that matches the version on the server.

### Starting the tool on Linux and UNIX platforms

**Linux** **UNIX** You can start the tool on Linux and UNIX platforms by running the command `install_root/bin/ProfileManagement/pmt.sh`.

### Starting the tool on Windows platforms

**Windows** You can use the following methods to start the tool on Windows platforms:

- Use the Windows Start menu. For example, select **Start > Programs or All Programs > IBM WebSphere > Process Server 6.2 > Profile Management Tool**.
- Run the command `install_root\bin\ProfileManagement\pmt.bat`.



## Creating profiles using the manageprofiles command

Learn about creating a profile from the command line using the manageprofiles command and a property file.

### Before you begin

To find out more about the manageprofiles command, see “manageprofiles command” on page 251.

Before you run the manageprofiles command ensure that you have completed the following tasks:

- You have reviewed the full list of prerequisites for creating or augmenting a profile at “Prerequisites for creating or augmenting profiles” on page 192.
- You have reviewed example profile creation commands in “Creating profiles with manageprofiles command with Derby or DB2 databases – examples” on page 205 or “Example: Creating profiles with manageprofiles command and Oracle database” on page 217.
- You have verified that you are not already running the manageprofiles command on the same profile. If an error message is displayed, determine if there is another profile creation or augmentation action in progress. If so, wait until it completes.

**Security role required for this task:** See “Granting write permission of files and directories to non-root users for profile creation” on page 194.

**Note:** i5/OS **On i5/OS platforms:** You must have operating system permissions to read, write, and run commands in the `user_data_root/profiles` directory.

To use the manageprofiles command to create a profile, perform the following steps.

### Procedure

1. Determine the kind of profile you want to create, which in turn determines the template to use for your new profile (using the `-templatePath` option). The following templates are available:
  - `default.wbiserver`: for a WebSphere Process Server stand-alone server profile, which defines a stand-alone server.
  - `dmgr.wbiserver`: for a WebSphere Process Server deployment manager profile, which defines a deployment manager. A *deployment manager* provides one administrative interface to a logical group of servers on one or more workstations.
  - `managed.wbiserver`: for a WebSphere Process Server custom profile, which, when federated to a deployment manager, defines a managed node. If you have decided that your solution requires a deployment environment, your runtime environment requires one or more managed nodes. A *custom profile* contains an empty node that you must federate into a deployment manager cell to make operational. Federating the custom profile changes it into a managed node. Do not federate a node unless the deployment manager you are federating to is at a release level the same or higher than that of the custom profile you are creating. Also, WebSphere Process Server profiles cannot use a WebSphere Enterprise Service Bus deployment manager, but WebSphere Enterprise Service Bus profiles can use a WebSphere Process Server deployment manager.

- `default.esbserver`: for a WebSphere Enterprise Service Bus stand-alone server profile, which defines a stand-alone server.
- `dmgr.esbserver`: for a WebSphere Enterprise Service Bus deployment manager profile, which defines a deployment manager.
- `managed.esbserver`: for a WebSphere Enterprise Service Bus custom profile, which, when federated to a deployment manager, defines a managed node. Do not federate a node unless the deployment manager you are federating to is at a release level the same or higher than that of the custom profile you are creating. WebSphere Enterprise Service Bus profiles can use a WebSphere Enterprise Service Bus or WebSphere Process Server deployment manager.

Templates for each profile are located in the `install_root/profileTemplates` directory.

2. Determine which parameters are required for your type of profile by reviewing the example profile creation commands in “Creating profiles with `manageprofiles` command with Derby or DB2 databases – examples” on page 205 or “Example: Creating profiles with `manageprofiles` command and Oracle database” on page 217.
3. Determine the values that you want to supply for the profile by reviewing the default values in the “`manageprofiles` parameters” on page 253 topic to see if they are what you need for your profile.
4. Run the file from the command line. Here are some simple examples. For more complex examples, see “Creating profiles with `manageprofiles` command with Derby or DB2 databases – examples” on page 205 or “Example: Creating profiles with `manageprofiles` command and Oracle database” on page 217.

- `i5/OS` `manageprofiles -create -templatePath install_root/profileTemplates/default.wbiserver`
- `Linux` `UNIX` `manageprofiles.sh -create -templatePath install_root/profileTemplates/default.wbiserver`
- `Windows` `manageprofiles.bat -create -templatePath install_root\profileTemplates\default.wbiserver`

If you have created a response file, use the `-response` parameter: `-response myResponseFile`

The following example shows a response file for a create operation:

```
create
profileName=testResponseFileCreate
profilePath=profile_root
templatePath=install_root/profileTemplates/default.wbiserver
nodeName=myNodeName
cellName=myCellName
hostName=myHostName
omitAction=myOptionalAction1, myOptionalAction2
```

The command displays status as it runs. Wait for it to finish. Normal syntax checking on the response file applies as the file is parsed like any other response file. Individual values in the response file are treated as command-line parameters.

## What to do next

You can see that your profile creation completed successfully if you receive a `INSTCONFSUCCESS: Profile creation succeeded.` message, and you can check the following log file:

- `Linux` `UNIX` `install_root/logs/manageprofiles/profile_name_create.log`

- **Windows** `install_root\logs\manageprofiles\profile_name_create.log`
- **i5/OS** `user_data_root/profileRegistry/logs/manageprofiles/profile_name_create.log`

Run the Installation Verification Test (IVT) tool to verify that the profile was created successfully. To do this, run the following command:

- **i5/OS** **On i5/OS platforms:** `profile_root/bin/wbi_ivt`
- **Linux** **UNIX** **On Linux and UNIX platforms:** `profile_root/bin/wbi_ivt.sh`
- **Windows** **On Windows platforms:** `profile_root\bin\wbi_ivt.bat`

### Creating profiles with manageprofiles command with Derby or DB2 databases – examples:

Example profile creation commands to help you create stand-alone server, deployment manager, and custom profiles using the manageprofiles command on your installation.

#### Stand-alone server profile

The following command example creates a WebSphere Process Server stand-alone server profile called `my_WPSSA_profile` on a Windows server. The parameters in Table 31 and Table 32 on page 206 specify the following:

- The DB2 Universal database product will be used for both the Common and Common Event Infrastructure databases, which are both assumed to already exist on the localhost. Both databases are set to be configured later (the `-dbDelayConfig "false"` and `-dbDelayConfig "true"` command parameter values specify that configuration scripts be created but not run). For complete listings of database-related manageprofiles parameters, see the topics “manageprofiles parameters for Common database configuration (per database product)” on page 269 and “manageprofiles parameters for Common Event Infrastructure database configuration (per database product)” on page 275.
- The Windows service will be set for manual startup.
- A sample Business Process Choreographer implementation will *not* be created.
- The Business Rules Manager will be configured.
- Business Space powered by WebSphere will *not* be configured.
- The profile creation process will set the port values automatically (except for database-related ports). The process will validate the new profile against other profiles to ensure there are no port conflicts.

**Tip:** To override the port values that the manageprofiles command will specify, use the `-portsFile` parameter. See “manageprofiles parameters” on page 253 for a listing of all valid manageprofiles parameters.

- Administrative security will be enabled.

Table 31 shows manageprofiles command parameters with example values used to create a stand-alone server profile.

Table 31. Specified manageprofiles command parameters

Parameter	Value
-create	N/A

Table 31. Specified manageprofiles command parameters (continued)

Parameter	Value
-templatePath	"install_root\profileTemplates\default.wbiserver" (must be fully qualified)
-profileName	"my_WPSSA_profile"
-enableAdminSecurity	"true"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-dbServerPort	"50000"
-ceiDbName	"event"
-dbDelayConfig	"false"
-dbHostName	"localhost"
-ceiDbAlreadyConfigured	"false"
-configureBPC	"false"
-dbType	"DB2_Universal"
-dbName	"WPRCSDB"
-dbCreateNew	"false"
-dbDelayConfig	"true"
-dbUserId	"db_id"
-dbPassword	"db_pwd"
-dbDriverType	"4"
-dbHostName	"localhost"
-dbServerPort	"50000"
-dbCommonForME	"false"
-fileStoreForME	"false" (cannot be true when -dbCommonForME is also true)
-configureBSpace	"false"
-configureBRM	"true"

Table 32 shows manageprofiles command parameters with default values that do not normally have to be changed.

Table 32. Defaulted manageprofiles command parameters





Parameter	Default values
-profilePath	"install_root\profiles\my_WPSSA_profile"
-hostName	"host_name"
-nodeName	"host_nameNodenode_number"
-cellName	"host_nameNodenode_numbercell_numberCell"
 -winserviceCheck	"true"
 -winserviceAccountType	"localsystem"
 -winserviceStartupType	"manual"
 -winserviceUserName	"Administrator"

Table 32. Defaulted manageprofiles command parameters (continued)

Parameter	Default values
-dbOutputscriptDir	"install_root\profiles\my_WPSSA_profile\dbscripts\CEI_event"
-dbJDBCClasspath	"install_root\universalDriver_wbi\lib"
-dbJDBCClasspath	"install_root\universalDriver_wbi\lib"
-dbOutputScriptDir	"install_root\profiles\my_WPSSA_profile\dbscripts\CommonDB\DB2\WPRCSDB"

### WebSphere Enterprise Service Bus example

Here is a similar example that creates a WebSphere Enterprise Service Bus stand-alone server profile called *my\_WESBSA\_profile*. There is a difference:

- The Derby Embedded database product will be used for both the Common and Common Event Infrastructure databases, which are set to be created and configured on the localhost during the profile creation process.

Table 33 shows manageprofiles command parameters with example values.

Table 33. Specified manageprofiles command parameters

Parameter	Value
-create	N/A
-templatePath	"install_root\profileTemplates\default.esbserver" (must be fully qualified)
-profileName	"my_WESBSA_profile"
-enableAdminSecurity	"true"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-ceiDbName	"event"
-dbDelayConfig	"true"
-ceiDbAlreadyConfigured	"false"
-dbType	"DERBY_EMBEDDED"
-dbName	"WPRCSDB"
-dbCreateNew	"true"
-dbDelayConfig	"false"
-dbCommonForME	"false"
-fileStoreForME	"false" (cannot be true when -dbCommonForME is also true)
-configureBspace	"false"

Table 34 shows manageprofiles command parameters with default values that do not normally have to be changed.

Table 34. Defaulted manageprofiles command parameters

Parameter	Default values
-profilePath	"install_root\profiles\my_WESBSA_profile"
-hostName	"host_name"

Table 34. Defaulted manageprofiles command parameters (continued)

Parameter	Default values
-nodeName	"host_nameNodenode_number"
-cellName	"host_nameNodenode_numbercell_numberCell"
<b>Windows</b> -winserviceStartupType	"manual"
<b>Windows</b> -winserviceCheck	"true"
<b>Windows</b> -winserviceAccountType	"localsystem"
<b>Windows</b> -winserviceUserName	"Administrator"
-dbOutputScriptDir	"install_root\profiles\my_WESBSA_profile\ dbscripts\CommonDB\Derby\WPRCSDB"

### Deployment manager profile (without deployment environment setup)

The following command example creates a deployment manager profile called *my\_WPSDMGR\_profile* on a Windows server.

The parameters in Table 35 and Table 36 on page 209 specify the following:

- The DB2 Universal database product will be used for the Common database, which is assumed to exist on a remote host. The database is set to be configured later (the **-dbDelayConfig "true"** command parameter value specifies that configuration scripts be created but not run). For a complete listing of database-related manageprofiles parameters, see the topic "manageprofiles parameters for Common database configuration (per database product)" on page 269.
- The Windows service will be set for manual startup.
- The profile creation process will set the port values automatically (except for database-related ports). The process will validate the new profile against other profiles to ensure there are no port conflicts.

**Tip:** To override the port values that the manageprofiles command will specify, use the **-portsFile** parameter. See "manageprofiles parameters" on page 253 for a listing of all valid manageprofiles parameters.

- Administrative security will be enabled.

Table 35 shows manageprofiles command parameters with example values used to create a deployment manager profile.

Table 35. Specified manageprofiles command parameters





Parameter	Value
-create	N/A
-templatePath	"install_root\profileTemplates\ dmgr.wbiserver" (must be fully qualified)
-profileName	"my_WPSDMGR_profile"
-enableAdminSecurity	"true"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-ndtopology	"false"

Table 35. Specified manageprofiles command parameters (continued)

Parameter	Value
-dbType	"DB2_Universal"
-dbName	"WPRCSDB"
-dbCreateNew	"false"
-dbDelayConfig	"true"
-dbUserId	"db_id"
-dbPassword	"db_pwd"
-dbDriverType	"4"
-dbHostName	"remote_host_name"
-dbServerPort	"50000"

Table 36 shows manageprofiles command parameters with default values that do not normally have to be changed.

Table 36. Defaulted manageprofiles command parameters

Parameter	Default values
-profilePath	"install_root\profiles\my_WPSDMGR_profile"
-hostName	"host_name"
-nodeName	"host_nameCellManagernode_number"
-cellName	"host_nameCellcell_number"
 -winserviceCheck	"true"
 -winserviceAccountType	"localsystem"
 -winserviceStartupType	"manual"
 -winserviceUserName	"Administrator"
-dbJDBCClasspath	"install_root\universalDriver_wbi\lib"
-dbOutputScriptDir	"install_root\profiles\my_WPSDMGR_profile\ dbscripts\CommonDB\DB2\WPRCSDB"

## WebSphere Enterprise Service Bus example

Here is a similar example that creates a WebSphere Enterprise Service Bus deployment manager profile called *my\_WESBDMGR\_profile*. The difference is the Derby Network Server database product will be used for the Common database, which is set to be created and configured on the localhost during the profile creation process.

Table 37 shows manageprofiles command parameters with example values used to create a deployment manager profile.

Table 37. Specified manageprofiles command parameters





Parameter	Value
-create	N/A
-templatePath	"install_root\profileTemplates\ dmgr.esbserver" (must be fully qualified)

Table 37. Specified manageprofiles command parameters (continued)

Parameter	Value
-profileName	"my_WESBDMGR_profile"
-enableAdminSecurity	"true"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-ndtopology	"false"
-dbType	"DERBY_NETWORKSERVER"
-dbName	"WPRCSDB"
-dbCreateNew	"true"
-dbDelayConfig	"false"
-dbUserId	"db_id"
-dbPassword	"db_pwd"
-dbHostName	"localhost"
-dbServerPort	"1528"

Table 38 shows manageprofiles command parameters with default values that do not normally have to be changed.

Table 38. Defaulted manageprofiles command parameters

Parameter	Default values
-profilePath	"install_root\profiles\ my_WESBDMGR_profile"
-hostName	"host_name"
-nodeName	"host_nameCellManagernode_number"
-cellName	"host_nameCellcell_number"
 -winserviceCheck	"true"
 -winserviceAccountType	"localsystem"
 -winserviceStartupType	"manual"
 -winserviceUserName	"Administrator"
-dbOutputScriptDir	"install_root\profiles\ my_WESBDMGR_profile\dbscripts\ CommonDB\Derby\WPRCSDB"

### Custom profile (without deployment environment setup)

The following command example creates a custom profile called *my\_WPSCUSTOM\_profile* on a Windows server.

This example is set to operate with the deployment manager profile created above.

The parameters in Table 39 on page 211 and Table 40 on page 211 specify the following:



- The DB2 Universal database product will be used for the Common database, which is assumed to already exist. The custom profile creation simply needs to point to the database used by the deployment manager to which the custom profile will be federated.
- Administrative security will be enabled on the deployment manager to which the custom profile will be federated.

See “manageprofiles parameters” on page 253 for a listing of all valid manageprofiles parameters.

Table 39 shows manageprofiles command parameters with example values used to create a custom profile.

Table 39. Specified manageprofiles command parameters

Parameter	Value
-create	N/A
-templatePath	"install_root\profileTemplates\managed.wbiserver" (must be fully qualified)
-profileName	"my_WPSCUSTOM_profile"
-dmgrHost	"remote_host"
-dmgrPort	"8882" (To find the -dmgrPort value, go to the dmgr_profile_root\logs directory for the deployment manager associated with this custom profile. In this directory, open the AboutThisProfile.txt file and find the value for the entry "Deployment manager SOAP connector port:".)
-dmgrAdminPassword	"admin_pwd"
-dmgrAdminUserName	"admin_id"
-ndtopology	"false"
-dbType	"DB2_Universal"
-dbJDBCClasspath	"install_root\universalDriver_wbi\lib"

Table 40 shows manageprofiles command parameters with default values that do not normally have to be changed.

Table 40. Defaulted manageprofiles command parameters

Parameter	Default values
-profilePath	"install_root\profiles\my_WPSCUSTOM_profile"
-hostName	"host_name"
-nodeName	"host_nameNodenode_number"

### WebSphere Enterprise Service Bus example

Here is a similar example that creates a WebSphere Enterprise Service Bus custom profile called *my\_WESBCUSTOM\_profile*. The difference is the Derby Network Server database product will be used for the Common database on the deployment

manager to which the custom profile will be federated. This example is set to operate with the WebSphere Enterprise Service Bus deployment manager profile created above.

Table 41 shows manageprofiles command parameters with example values used to create a custom profile.

Table 41. Specified manageprofiles command parameters

Parameter	Value
-create	N/A
-templatePath	"install_root\profileTemplates\managed.esbserver" (must be fully qualified)
-profileName	"my_WESBCUSTOM_profile"
-dmgrHost	"remote_host"
-dmgrPort	"8885" (To find the -dmgrPort value, go to the dmgr_profile_root\logs directory for the deployment manager associated with this custom profile. In this directory, open the AboutThisProfile.txt file and find the value for the entry "Deployment manager SOAP connector port:".)
-dmgrAdminPassword	"admin_pwd"
-dmgrAdminUserName	"admin_id"
-ndtopology	"false"
-dbType	"DERBY_NETWORKSERVER"
-dbJDBCClasspath	"install_root\derby\lib"

Table 42 shows manageprofiles command parameters with default values that do not normally have to be changed.

Table 42. Defaulted manageprofiles command parameters

Parameter	Default values
-profilePath	"install_root\profiles\my_WESBCUSTOM_profile"
-hostName	"host_name"
-nodeName	"host_nameNodenode_number"

### Deployment manager profile (with deployment environment setup)

The following command example creates a deployment manager profile called *my\_WPSDMGR\_DE\_profile* on a Windows server.

The parameters in Table 43 on page 213 and Table 44 on page 213 specify the following:

- The profile creation process will automatically configure a deployment environment (specified by the parameters **-ndtopology "true"** and **-topologyPattern "Reference"**).
- The Derby Network Server database product will be used for the Common database, which is set to be created and configured on the localhost during the profile creation process. For a complete listing of database-related

manageprofiles parameters, see the topic “manageprofiles parameters for Common database configuration (per database product)” on page 269.

- The Windows service will be set for manual startup.
- The profile creation process will set the port values automatically (except for database-related ports). The process will validate the new profile against other profiles to ensure there are no port conflicts.

**Tip:** To override the port values that the manageprofiles command will specify, use the **-portsFile** parameter. See “manageprofiles parameters” on page 253 for a listing of all valid manageprofiles parameters.

- Administrative security will be enabled.

Table 43 shows manageprofiles command parameters with example values used to create a deployment manager profile.

Table 43. Specified manageprofiles command parameters

Parameter	Value
-create	N/A
-templatePath	"install_root\profileTemplates\dmgr.wbiserver" (must be fully qualified)
-profileName	"my_WPSDMGR_DE_profile"
-enableAdminSecurity	"true"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-ndtopology	"true"
-topologyPattern	"Reference"
-dbType	"DERBY_NETWORKSERVER"
-dbName	"WPRCSDB"
-dbCreateNew	"true"
-dbDelayConfig	"false"
-dbUserId	"db_id"
-dbPassword	"db_pwd"
-dbHostName	"localhost"
-dbServerPort	"1529"

Table 44 shows manageprofiles command parameters with default values that do not normally have to be changed.

Table 44. Defaulted manageprofiles command parameters


Parameter	Default values
-profilePath	"install_root\profiles\my_WPSDMGR_DE_profile"
-hostName	"host_name"
-nodeName	"host_nameCellManagernode_number"
-cellName	"host_nameCellcell_number"
 -winserviceCheck	"true"

Table 44. Defaulted manageprofiles command parameters (continued)

Parameter	Default values
<b>Windows</b> -winserviceAccountType	"localsystem"
<b>Windows</b> -winserviceStartupType	"manual"
<b>Windows</b> -winserviceUserName	"Administrator"
-dbOutputScriptDir	"install_root\profiles\ my_WPSDMGR_DE_profile\dbscripts\ CommonDB\Derby\WPRCSDB"

### WebSphere Enterprise Service Bus example

Here is a similar example that creates a WebSphere Enterprise Service Bus deployment manager profile called *my\_WESBDMGR\_DE\_profile*.

Table 45 shows manageprofiles command parameters with example values used to create a deployment manager profile.

Table 45. Specified manageprofiles command parameters

Parameter	Value
-create	N/A
-templatePath	"install_root\profileTemplates\ dmgr.esbserver" (must be fully qualified)
-profileName	"my_WESBDMGR_DE_profile"
-enableAdminSecurity	"true"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-ndtopology	"true"
-topologyPattern	"Reference"
-dbType	"DERBY_NETWORKSERVER"
-dbName	"WPRCSDB"
-dbCreateNew	"true"
-dbDelayConfig	"false"
-dbUserId	"db_id"
-dbPassword	"db_pwd"
-dbHostName	"localhost"
-dbServerPort	"1530"

Table 46 shows manageprofiles command parameters with default values that do not normally have to be changed.

Table 46. Defaulted manageprofiles command parameters

Parameter	Default values
-profilePath	"install_root\profiles\ my_WESBDMGR_DE_profile"
-hostName	"host_name"

Table 46. Defaulted manageprofiles command parameters (continued)

Parameter	Default values
-nodeName	"host_nameCellManagernode_number"
-cellName	"host_nameCellcell_number"
<b>Windows</b> -winserviceCheck	"true"
<b>Windows</b> -winserviceAccountType	"localsystem"
<b>Windows</b> -winserviceStartupType	"manual"
<b>Windows</b> -winserviceUserName	"Administrator"
-dbOutputScriptDir	"install_root\profiles\ my_WESBDMGR_DE_profile\dbscripts\ CommonDB\Derby\WPRCSDB"

### Custom profile (with deployment environment setup)

The following command example creates a custom profile called *my\_WPSCUSTOM\_DE\_profile* on a Windows server. This example is set to operate with the deployment manager profile *for a deployment environment* created above.

The parameters in Table 47 and Table 48 on page 216 specify the following:

- The profile creation process will automatically assign the profile to a deployment environment (specified by the parameters **-ndtopology "true"** and **-topologyRole ADT Messaging Support**).
- The Derby Network Server database product will be used for the Common database, which is assumed to already exist. The custom profile creation simply needs to point to the database used by the deployment manager to which the custom profile will be federated. For a complete listing of database-related manageprofiles parameters, see the topic “manageprofiles parameters for Common database configuration (per database product)” on page 269.
- Administrative security will be enabled on the deployment manager to which the custom profile will be federated.

See “manageprofiles parameters” on page 253 for a listing of all valid manageprofiles parameters.

Table 47 shows manageprofiles command parameters with example values used to create a custom profile.

Table 47. Specified manageprofiles command parameters

Parameter	Value
-create	N/A
-templatePath	"install_root\profileTemplates\ managed.wbiserver" (must be fully qualified)
-profileName	"my_WPSCUSTOM_DE_profile"
-dmgrHost	"remote_host"

Table 47. Specified manageprofiles command parameters (continued)

Parameter	Value
-dmgrPort	"8890" (To find the -dmgrPort value, go to the <i>dmgr_profile_root</i> \logs directory for the deployment manager associated with this custom profile. In this directory, open the AboutThisProfile.txt file and find the value for the entry "Deployment manager SOAP connector port:".)
-dmgrAdminPassword	"admin_pwd"
-dmgrAdminUserName	"admin_id"
-ndtopology	"true"
-topologyRole	"ADT Support Messaging"
-dbType	"DERBY_NETWORKSERVER"
-dbJDBCClasspath	"install_root\derby\lib"

Table 48 shows manageprofiles command parameters with default values that do not normally have to be changed.

Table 48. Defaulted manageprofiles command parameters

Parameter	Default values
-profilePath	"install_root\profiles\ my_WPSCUSTOM_DE_profile"
-hostName	"host_name"
-nodeName	"host_nameNodenode_number"

### WebSphere Enterprise Service Bus example

Here is a similar example that creates a WebSphere Enterprise Service Bus custom profile called *my\_WESBCUSTOM\_DE\_profile*. This example is set to operate with the WebSphere Enterprise Service Bus deployment manager profile *for a deployment environment* created above.

Table 49 shows manageprofiles command parameters with example values used to create a custom profile.

Table 49. Specified manageprofiles command parameters

Parameter	Value
-create	N/A
-templatePath	"install_root\profileTemplates\ managed.esbserver" (must be fully qualified)
-profileName	"my_WESBCUSTOM__DE_profile"
-dmgrHost	"remote_host"
-dmgrPort	"8897" (To find the -dmgrPort value, go to the <i>dmgr_profile_root</i> \logs directory for the deployment manager associated with this custom profile. In this directory, open the AboutThisProfile.txt file and find the value for the entry "Deployment manager SOAP connector port:".)

Table 49. Specified manageprofiles command parameters (continued)

Parameter	Value
-dmgrAdminPassword	"admin_pwd"
-dmgrAdminUserName	"admin_id"
-ndtopology	"true"
-topologyRole	"ADT Support Messaging"
-dbType	"DERBY_NETWORKSERVER"
-dbJDBCClasspath	"install_root\derby\lib"

Table 50 shows manageprofiles command parameters with default values that do not normally have to be changed.

Table 50. Defaulted manageprofiles command parameters

Parameter	Default values
-profilePath	"install_root\profiles\ my_WESBCUSTOM_DE_profile"
-hostName	"host_name"
-nodeName	"host_nameNodenode_number"

### Example: Creating profiles with manageprofiles command and Oracle database:

Example profile creation commands to help you create stand-alone server and deployment manager profiles using the manageprofiles command on your installation with an Oracle database.

#### Stand-alone server profile

The following command example creates a WebSphere Process Server stand-alone server profile called *my\_WPSSA\_profile* on a Windows server.

The parameters in Table 51 on page 218, Table 52 on page 219, and Table 53 on page 219 specify the following features:

- The Oracle 10g or Oracle 11g database product will be used for both the Common and Common Event Infrastructure databases, which are both assumed to already exist on the localhost. Both databases are set to be configured later (the **-dbDelayConfig "true"** command parameter value specifies that configuration scripts be created but not run). For complete listings of database-related manageprofiles parameters, see the topics “manageprofiles parameters for Common database configuration (per database product)” on page 269 and “manageprofiles parameters for Common Event Infrastructure database configuration (per database product)” on page 275.
- The Windows service will be set for manual startup.
- A sample Business Process Choreographer configuration will be created.
- The Business Rules Manager will *not* be configured.
- Business Space powered by WebSphere will be configured.
- The profile creation process will set the port values automatically (except for database-related ports). The process will validate the new profile against other profiles to ensure there are no port conflicts.

**Tip:** To override the port values that the manageprofiles command will specify, use the **-portsFile** parameter. See “manageprofiles parameters” on page 253 for a listing of all valid manageprofiles parameters.

- Administrative security will be enabled.

There are two configuration options available:

- Optional: If you want all of the schema user IDs and tables to be created as part of the profile creation, you must provide a user ID that has SYSDBA privileges in the Oracle database. This ID is used to create the schemas and tables, but is not persisted anywhere in the configuration.
- Optional: If you do not want to provide the SYSDBA user ID, you can export the scripts and execute them manually.

For both of these options, you can select a specific schema user ID for each of the components.

Table 51 shows manageprofiles command parameters with example values used to create a stand-alone server profile.

*Table 51. Specified manageprofiles command parameters*

Parameter	Value
-create	N/A
-templatePath	"install_root\profileTemplates\default.wbiserver" (must be fully qualified)
-profileName	"my_WPSSA_profile"
-enableAdminSecurity	"true"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-configureBPC	"true"
-dbType	"ORACLE10G" or "ORACLE11G"
-dbName	"WPRCSDB"
-ceiDbName	"EVENT"
-dbDelayConfig	"true"
-fileStoreForME	"false" (cannot be true when -dbCommonForME is also true)
-dbCommonForME	"true"
-dbPassword	"db_pwd"
-dbDriverType	"oracle_thin"
-dbJDBCClasspath	"oracle_library_directory"
-dbServerPort	"1521"
-configureBspace	"true"
-configureBRM	"false"

Table 52 on page 219 shows manageprofiles command parameters with default values that do not normally have to be changed.



Table 52. Defaulted manageprofiles command parameters





Parameter	Default values
-profilePath	"install_root\profiles\my_WPSSA_profile"
-hostName	"host_name"
-nodeName	"host_nameNodenode_number"
-cellName	"host_nameNodenode_numbercell_numberCell"
 -winserviceCheck	"true"
 -winserviceAccountType	"localsystem"
 -winserviceStartupType	"manual"
 -winserviceUserName	"Administrator"
-dbOutputscriptDir	"install_root\profiles\my_WPSSA_profile\ dbscripts\"
-dbHostName	"local_host_name"

Table 53 shows additional manageprofiles command parameters that are not displayed via the Profile Management Tool that can be specified to select your own user name and password combinations for Oracle.

Table 53. Additional manageprofiles command parameters for Oracle

Parameter	Value	Remarks
-dbSysUserId	"sys_user_id"	This ID must have SYSDBA privileges. Do not use the Oracle internal user 'sys'.  This parameter is needed if you want to configure the database and its objects during profile creation [when dbDelayConfig = "FALSE"]
-dbSysPassword	"sys_pwd"	This parameter is needed if you want to configure the database and its objects during profile creation [when dbDelayConfig = "FALSE"]
-dbCommonUserId	"common_db_userID" (used to create Common DB objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation. For the Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbCommonUserId is ORCCOMM
-dbCommonPassword	"common_db_pwd"	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCommonPassword will be set to dbPassword. For example: dbCommonPassword = dbPassword
-dbBspaceUserId	"bspace_db_userID" (used to configure Business Space)	This parameter is needed if you require your own Business Space schema. If not, the default value (IBMBUSSP) will be set.

Table 53. Additional manageprofiles command parameters for Oracle (continued)

Parameter	Value	Remarks
-dbBSPassword	" <i>bospace_db_pwd</i> " (used to configure Business Space)	This parameter is needed if you need your own Business Space password otherwise default value will be set in the following order: dbBSPassword = "YouNameIt" else dbBSPassword = dbPassword [if exists] else dbBSPassword = IBMBUSSP
-dbCeiUserId	" <i>cei_userID</i> " (used to create CEI objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbCeiUserId is ORCCEID
-dbCeiPassword	" <i>cei_db_pwd</i> "	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCeiPassword will be set to dbPassword. For example, dbCeiPassword = dbPassword
	All the parameters below are only valid if -dbCommonForME = "true"	
-dbBPCMeUserId	" <i>bpc_me_userID</i> " (used to create BPC ME objects) (only valid if -configureBPC = "true")	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbBPCMeUserId is ORCBM00
-dbBPCMePassword	" <i>bpc_me_pwd</i> " (only valid if -configureBPC = "true")	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCeiPassword will be set to dbPassword. For example, dbBPCMePassword = dbPassword
-dbCeiMeUserId	" <i>cei_me_userID</i> " (used to create CEI ME objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbCeiMeId is ORCCM00
-dbCeiMePassword	" <i>cei_me_pwd</i> "	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCeiPassword will be set to dbPassword. For example: dbCeiMePassword = dbPassword
-dbAppMeUserId	" <i>app_me_userID</i> " (used to create SCAAPP ME objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbAppMeId is ORCSA00

Table 53. Additional manageprofiles command parameters for Oracle (continued)

Parameter	Value	Remarks
-dbAppMePassword	"app_me_pwd"	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCeiPassword will be set to dbPassword. For example: dbAppMePassword = dbPassword
-dbSysMeUserId	"sys_me_userID" (used to create SCASYS ME objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbSysMeUserId is ORCSS00
-dbSysMePassword	"sys_me_pwd"	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCeiPassword will be set to dbPassword. For example: dbAppMePassword = dbPassword

### WebSphere Enterprise Service Bus example

Here is a similar example that creates a WebSphere Enterprise Service Bus stand-alone server profile called *my\_WESBSA\_profile*. The difference is the database is set to be configured now (the -dbDelayConfig "false" command parameter value specifies that configuration scripts be run).

Table 54 shows manageprofiles command parameters with example values.

Table 54. Specified manageprofiles command parameters

Parameter	Value
-create	N/A
-templatePath	"install_root\profileTemplates\default.esbserver" (must be fully qualified)
-profileName	"my_WESBSA_profile"
-enableAdminSecurity	"true"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-dbType	"ORACLE10G" or "ORACLE11G"
-dbUserId	"cei_id"
-dbUserPw	"cei_pwd"
-dbName	"WPRCSDB"
-ceiDbName	"EVENT"
-dbDelayConfig	"false"
-fileStoreForME	"false" (cannot be true when -dbCommonForME is also true)
-dbCommonForME	"true"
-dbLocation	"oracle_install_directory"

Table 54. Specified manageprofiles command parameters (continued)

Parameter	Value
-dbPassword	"db_pwd"
-dbDriverType	"oracle_thin"
-dbJDBCClasspath	"oracle_library_directory"
-dbServerPort	"1521"
-dbSysUserId	"sys_user_id"
-dbSysPassword	"sys_pwd"
-configureBspace	"true"

Table 55 shows manageprofiles command parameters with default values that do not normally have to be changed.

Table 55. Defaulted manageprofiles command parameters





Parameter	Default values
-profilePath	"install_root\profiles\my_WESBSA_profile"
-hostName	"host_name"
-nodeName	"host_nameNodenode_number"
-cellName	"host_nameNodenode_numbercell_numberCell"
 -winserviceStartupType	"manual"
 -winserviceCheck	"true"
 -winserviceAccountType	"localsystem"
 -winserviceUserName	"Administrator"
-dbOutputScriptDir	"install_root\profiles\my_WESBSA_profile\dbscripts\"
-dbHostName	"local_host_name"

Table 56 shows additional manageprofiles command parameters that are not displayed via the Profile Management Tool that can be specified to select your own user name and password combinations for Oracle.

Table 56. Additional manageprofiles command parameters for Oracle

Parameter	Default values	Remarks
-dbCommonUserId	"common_db_userID" (used to create Common DB objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation. For the Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbCommonUserId is ORCCOMM

Table 56. Additional manageprofiles command parameters for Oracle (continued)

Parameter	Default values	Remarks
-dbCommonPassword	"common_db_pwd"	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCommonPassword will be set to dbPassword. For example: dbCommonPassword = dbPassword
-dbBspaceUserId	"bspace_db_userID" (used to configure Business Space)	This parameter is needed if you require your own Business Space schema. If not, the default value (IBMBUSSP) will be set.
-dbBspacePassword	"bspace_db_pwd" (used to configure Business Space)	This parameter is needed if you need your own Business Space password otherwise default value will be set in the following order: dbBspacePassword = "YouNameIt" else dbBspacePassword = dbPassword [if exists] else dbBspacePassword = IBMBUSSP
-dbCeiUserId	"cei_userID" (used to create CEI objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbCeiUserId is ORCCEID
-dbCeiPassword	"cei_db_pwd"	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCeiPassword will be set to dbPassword. For example, dbCeiPassword = dbPassword
	All the parameters below are only valid if -dbCommonForME = "true"	
-dbCeiMeUserId	"cei_me_userID" (used to create CEI ME objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbCeiMeId is ORCCM00
-dbCeiMePassword	"cei_me_pwd"	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCeiPassword will be set to dbPassword. For example: dbCeiMePassword = dbPassword

Table 56. Additional manageprofiles command parameters for Oracle (continued)

Parameter	Default values	Remarks
-dbAppMeUserId	"app_me_userID" (used to create SCAAPP ME objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbAppMeId is ORCSA00
-dbAppMePassword	"app_me_pwd"	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCeiPassword will be set to dbPassword. For example: dbAppMePassword = dbPassword
-dbSysMeUserId	"sys_me_userID" (used to create SCASYS ME objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbSysMeUserId is ORCSS00
-dbSysMePassword	"sys_me_pwd"	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCeiPassword will be set to dbPassword. For example: dbAppMePassword = dbPassword

### Deployment manager profile (without deployment environment setup)

The following command example creates a deployment manager profile called *my\_WPSDMGR\_profile* on a Windows server.

The parameters in Table 57 on page 225 and Table 58 on page 225 specify the following:

- The Oracle 10g or Oracle 11g database product will be used for the Common database, which is assumed to exist on a remote host. The database is set to be configured later (the **-dbDelayConfig "true"** command parameter value specifies that configuration scripts be created but not run). For a complete listing of database-related manageprofiles parameters, see the topic "manageprofiles parameters for Common database configuration (per database product)" on page 269.
- The Windows service will be set for manual startup.
- The profile creation process will set the port values automatically (except for database-related ports). The process will validate the new profile against other profiles to ensure there are no port conflicts.

**Tip:** To override the port values that the manageprofiles command will specify, use the **-portsFile** parameter. See “manageprofiles parameters” on page 253 for a listing of all valid manageprofiles parameters.

- Administrative security will be enabled.

Table 57 shows manageprofiles command parameters with example values used to create a deployment manager profile.

Table 57. Specified manageprofiles command parameters

Parameter	Value
-create	N/A
-templatePath	"install_root\profileTemplates\dmgr.wbiserver" (must be fully qualified)
-profileName	"my_WPSDMGR_profile"
-enableAdminSecurity	"true"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-ndtopology	"false"
-dbType	"ORACLE10G" or "ORACLE11G"
-dbName	"WPRCSDB"
-dbDelayConfig	"true"
-dbPassword	"db_pwd"
-dbDriverType	"oracle_thin"
-dbHostName	"remote_host_name"
-dbJDBCClasspath	"oracle_library_directory"
-dbServerPort	"1521"

Table 58 shows manageprofiles command parameters with default values that do not normally have to be changed.

Table 58. Defaulted manageprofiles command parameters





Parameter	Default values
-profilePath	"install_root\profiles\my_WPSDMGR_profile"
-hostName	"host_name"
-nodeName	"host_nameCellManagernode_number"
-cellName	"host_nameCellcell_number"
 -winserviceCheck	"true"
 -winserviceAccountType	"localsystem"
 -winserviceStartupType	"manual"
 -winserviceUserName	"Administrator"
-dbOutputScriptDir	"install_root\profiles\my_WPSDMGR_profile\dbscripts\"

Table 59 on page 226 shows additional manageprofiles command parameters that are not displayed via the Profile Management Tool that can be specified to select

your own user name and password combinations for Oracle.

Table 59. Additional manageprofiles command parameters for Oracle

Parameter	Default values
-dbSysUserId	"sys_userID" (used to create SCASYS ME objects)
-dbSysPassword	"sys_pwd"
-dbCommonUserId	"common_db_userID" (used to create Common DB objects)
-dbCommonPassword	"common_db_pwd"

### WebSphere Enterprise Service Bus example

Here is a similar example that creates a WebSphere Enterprise Service Bus deployment manager profile called *my\_WESBDMGR\_profile*. The difference is the database is set to be configured now (the **-dbDelayConfig "false"** command parameter value specifies that configuration scripts be run).

Table 60 shows manageprofiles command parameters with example values used to create a deployment manager profile.

Table 60. Specified manageprofiles command parameters

Parameter	Value
-create	N/A
-templatePath	"install_root\profileTemplates\dmgr.esbserver" (must be fully qualified)
-profileName	"my_WESBDMGR_profile"
-enableAdminSecurity	"true"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-ndtopology	"false"
-dbType	"ORACLE10G" or "ORACLE11G"
-dbName	"WPRCSDB"
-dbDelayConfig	"false"
-dbLocation	"oracle_install_directory"
-dbPassword	"db_pwd"
-dbDriverType	"oracle_thin"
-dbHostName	"localhost"
-dbJDBCClasspath	"oracle_library_directory"
-dbServerPort	"1521"
-dbSysUserId	"sys_user_id"
-dbSysPassword	"sys_pwd"

Table 61 on page 227 shows manageprofiles command parameters with default values that do not normally have to be changed.



Table 61. Defaulted manageprofiles command parameters

Parameter	Default values
-profilePath	"install_root\profiles\ my_WESBDMGR_profile"
-hostName	"host_name"
-nodeName	"host_nameCellManagernode_number"
-cellName	"host_nameCellcell_number"
<b>Windows</b> -winserviceCheck	"true"
<b>Windows</b> -winserviceAccountType	"localsystem"
<b>Windows</b> -winserviceStartupType	"manual"
<b>Windows</b> -winserviceUserName	"Administrator"
-dbOutputScriptDir	"install_root\profiles\ my_WESBDMGR_profile\dbscripts\"

Table 62 shows additional manageprofiles command parameters that are not displayed via the Profile Management Tool that can be specified to select your own user name and password combinations for Oracle.

Table 62. Additional manageprofiles command parameters for Oracle

Parameter	Default values
-dbCommonUserId	"common_db_userID" (used to create Common DB objects)
-dbCommonPassword	"common_db_pwd"

### Deployment manager profile (with deployment environment setup)

The following command example creates a deployment manager profile called *my\_WPSDMGR\_DE\_profile* on a Windows server.

The parameters in Table 63 on page 228 and Table 64 on page 228 specify the following:

- The profile creation process will automatically configure a deployment environment (specified by the parameters **-ndtopology "true"** and **-topologyPattern "Reference"**).
- The Oracle 10g or Oracle 11g database product will be used for the Common database, which is assumed to exist on a remote host. The database is set to be configured as part of the deployment environment setup (the **-dbDelayConfig "true"** command parameter is not valid in a deployment environment setup). For a complete listing of database-related manageprofiles parameters, see the topic "manageprofiles parameters for Common database configuration (per database product)" on page 269.
- The Windows service will be set for manual startup.
- The profile creation process will set the port values automatically (except for database-related ports). The process will validate the new profile against other profiles to ensure there are no port conflicts.

**Tip:** To override the port values that the manageprofiles command will specify, use the **-portsFile** parameter. See “manageprofiles parameters” on page 253 for a listing of all valid manageprofiles parameters.

- Administrative security will be enabled.

There are two configuration options available:

- Optional: If you want all of the schema user IDs and tables to be created as part of the profile creation, you must provide a user ID that has SYSDBA privileges in the Oracle database. This ID is used to create the schemas and tables, but is not persisted anywhere in the configuration.
- Optional: If you do not want to provide the SYSDBA user ID, you can export the scripts and execute them manually.

For both of these options, you can select a specific schema user ID for each of the components.

Table 63 shows manageprofiles command parameters with example values used to create a deployment manager profile.

*Table 63. Specified manageprofiles command parameters*

Parameter	Value
-create	N/A
-templatePath	"install_root\profileTemplates\ dmgr.wbiserver" (must be fully qualified)
-profileName	"my_WPSDMGR_DE_profile"
-enableAdminSecurity	"true"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-ndtopology	"true"
-topologyPattern	"Reference"
-dbType	"ORACLE10G" or "ORACLE11G"
-dbName	"WPRCSDB"
-dbUserId	"sys_user_id" (Must be a SYSDBA user ID for deployment environments)
-dbPassword	"sys_pwd"
-dbDriverType	"oracle_thin"
-dbHostName	"remote_host_name"
-dbJDBCClasspath	"oracle_library_directory"
-dbServerPort	"1521"

Table 64 shows manageprofiles command parameters with default values that do not normally have to be changed.

*Table 64. Defaulted manageprofiles command parameters*

Parameter	Default values
-profilePath	"install_root\profiles\ my_WPSDMGR_DE_profile"
-hostName	"host_name"
-nodeName	"host_nameCellManagernode_number"

Table 64. Defaulted manageprofiles command parameters (continued)

Parameter	Default values
-cellName	"host_nameCellcell_number"
<b>Windows</b> -winserviceCheck	"true"
<b>Windows</b> -winserviceAccountType	"localsystem"
<b>Windows</b> -winserviceStartupType	"manual"
<b>Windows</b> -winserviceUserName	"Administrator"
-dbDelayConfig	"false" (true is not valid for deployment environments)
-dbOutputScriptDir	"install_root\profiles\ my_WPSDMGR_DE_profile\dbscripts\"

### WebSphere Enterprise Service Bus example

Here is a similar example that creates a WebSphere Enterprise Service Bus deployment manager profile called *my\_WESBDMGR\_DE\_profile*.





Table 65 shows manageprofiles command parameters with example values used to create a deployment manager profile.

Table 65. Specified manageprofiles command parameters

Parameter	Value
-create	N/A
-templatePath	"install_root\profileTemplates\ dmgr.esbserver" (must be fully qualified)
-profileName	"my_WESBDMGR_DE_profile"
-enableAdminSecurity	"true"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-ndtopology	"true"
-topologyPattern	"Reference"
-dbType	"ORACLE10G" or "ORACLE11G"
-dbName	"WPRCSDB"
-dbUserId	"sys_user_id" (Must be a SYSDBA user ID for deployment environments)
-dbPassword	"sys_pwd"
-dbDriverType	"oracle_thin"
-dbHostName	"remote_host_name"
-dbJDBCClasspath	"oracle_library_directory"
-dbServerPort	"1521"

Table 66 on page 230 shows manageprofiles command parameters with default values that do not normally have to be changed.

Table 66. Defaulted manageprofiles command parameters

Parameter	Default values
-profilePath	"install_root\profiles\ my_WESBDMGR_DE_profile"
-hostName	"host_name"
-nodeName	"host_nameCellManagernode_number"
-cellName	"host_nameCellcell_number"
 -winserviceCheck	"true"
 -winserviceAccountType	"localsystem"
 -winserviceStartupType	"manual"
 -winserviceUserName	"Administrator"
-dbDelayConfig	"false" (true is not valid for deployment environments)
-dbOutputScriptDir	"install_root\profiles\ my_WESBDMGR_DE_profile\dbscripts\"

## Augmenting profiles

You can augment existing WebSphere Application Server, WebSphere Application Server Network Deployment, or WebSphere Application Server Network Deployment with Web Services Feature Pack profiles into WebSphere Enterprise Service Bus or WebSphere Process Server profiles, or WebSphere Enterprise Service Bus profiles into WebSphere Process Server profiles. Use the instructions in this topic to augment profiles from a command line by using the manageprofiles command, or interactively by using the Profile Management Tool graphical user interface (GUI).

### Before you begin

Ensure that the profile has the following characteristics:

- It exists on a system with a WebSphere Process Server installation.
- It is not federated to a deployment manager. You cannot use the Profile Management Tool or the manageprofiles command to augment federated profiles.
- It does not have running servers.

### About this task

If you have existing WebSphere Application Server or WebSphere Application Server Network Deployment profiles on your system, you might want the operating environments defined by those profiles to have WebSphere ESB or WebSphere Process Server functionality. Likewise, if you have existing WebSphere Enterprise Service Bus profiles, you might want them to have WebSphere Process Server functionality.

#### Restrictions:

- You cannot augment deployment manager profiles if you choose the **Deployment environment** profile augmentation option.

- You cannot use the Profile Management Tool to create or augment profiles on 64-bit platforms (except for i5/OS) or on the Linux on System z platform. To augment profiles on these platforms, you must use the `manageprofiles` command. See “Augmenting profiles using the `manageprofiles` command” on page 235 for more information.

Review the following high-level tasks to better understand profile augmentation:

### Procedure

1. See the list of prerequisites for creating or augmenting profiles in the topic “Prerequisites for creating or augmenting profiles” on page 192.
2. Decide whether to augment the profile from a command line by using the `manageprofiles` command or interactively by using the Profile Management Tool.
  - To augment profiles by using the `manageprofiles` command, see the topic “Augmenting profiles using the `manageprofiles` command” on page 235.
  - To augment profiles by using the Profile Management Tool, see the topic “Augmenting profiles using the Profile Management Tool.”

## Augmenting profiles using the Profile Management Tool

Use the Profile Management Tool to augment a WebSphere Application Server, WebSphere Application Server Network Deployment, or WebSphere Enterprise Service Bus profile into a WebSphere Process Server profile.

### Before you begin

Ensure that the following prerequisites are satisfied:

- The profile type you will augment to (stand-alone server, deployment manager, or custom) is the same as the type of the profile you will augment from.
- You have reviewed the list of prerequisites for creating or augmenting a profile at “Prerequisites for creating or augmenting profiles” on page 192.
- You have shut down any servers associated with the profile you plan to augment.
- If you plan to augment a stand-alone server or custom profile, you have determined if it has already been federated to a deployment manager:
  - If the profile you want to augment has already been federated to a deployment manager, you cannot augment it to a WebSphere Process Server or a WebSphere Enterprise Service Bus profile using the Profile Management Tool.
  - If the profile you want to augment has not already been federated to a deployment manager, when you do federate it using the `addNode` command later, the following conditions must be true of the deployment manager with which it is federated in order for the augmentation to complete successfully:
    - It must be running.
    - It must have a JMX administrative port enabled. The default protocol is SOAP.
    - It must have already been augmented into a WebSphere Process Server deployment manager profile, depending on the product you have installed.

Complete the following steps to augment a profile.

### Procedure

1. Start the WebSphere Process Server Profile Management Tool.

Run one of the following files:

- **Linux** **UNIX** **On Linux and UNIX platforms:** `install_root/bin/ProfileManagement/pmt.sh`.
- **Windows** **On Windows platforms:** `install_root\bin\ProfileManagement\pmt.bat`.
- **i5/OS** **On i5/OS platforms:** `pmt_client_installation\PMTPMT\pmt.bat`, which is by default `C:\ProgramFiles\IBM\WebSphere\PMTPMT`

See the topic “Starting the Profile Management Tool” on page 201 for details on the different methods of starting this tool.

2. The next step depends on whether there is an existing WebSphere Application Server, WebSphere Application Server Network Deployment, or WebSphere Enterprise Service Bus profile on your system.

Existing profile on system?	Next step
No	The Welcome panel is displayed. In this case, do not follow this procedure. Use the procedure described in “Creating profiles using the Profile Management Tool” on page 198.
Yes	The Create or augment profile panel is displayed. Proceed to step 3.

3. In the Create or augment profile panel, click **Augment**.  
The Profile Management Tool opens in a separate window and the Welcome panel is displayed.
4. In the Welcome panel, click **Next**.  
The Profile selection panel is displayed.
5. In the Profile selection panel, highlight the profile to augment in the drop-down list, and click **Next**.  
All profiles are displayed as selections. If you augment a WebSphere Application Server or WebSphere Application Server Network Deployment profile, it must be from the version of WebSphere Application Server on which WebSphere Process Server is installed.  
The Augment selection panel is displayed.
6. In the Augment selection panel, choose whether to augment the profile into a WebSphere Enterprise Service Bus or WebSphere Process Server profile by highlighting the appropriate product and then select **Next**.  
The Profile Management Tool displays a warning message if any of the following conditions occur:
  - The profile you selected to augment has a running server. You cannot augment the profile until you stop the server or click **Back** and choose another profile that does not have running servers.
  - The profile you selected to augment is federated. You cannot augment a federated profile. You must click **Back** and choose another profile that is not federated.
  - The profile you selected to augment is already augmented with the product you selected. You must click **Back** and choose another profile to augment.
  - The profile you selected to augment cannot be augmented with the product you selected. For instance, you cannot augment a WebSphere Process Server

profile into a WebSphere Enterprise Service Bus profile. You must augment the profile with a compatible product or select **Back** and choose another profile to augment.

The Profile augmentation options panel is displayed.

7. In the Profile augmentation options panel, choose to perform a **Typical**, an **Advanced**, or (for custom profiles) a **Deployment environment** profile augmentation, and click **Next**. The **Typical** option augments a profile with default configuration settings. The **Advanced** option lets you specify your own configuration values for a profile. The **Deployment environment** option lets you specify your own configuration values for a custom profile and choose the cluster or clusters to apply to the managed node.
8. Before continuing to the next panel in the Profile Management Tool, proceed to one of the following topics to configure and complete augmentation of your profile.

Type of profile augmentation you selected	Procedure to complete profile augmentation based on your profile type (stand-alone server, deployment manager, or custom)
Typical	<ul style="list-style-type: none"> <li>• “Configuring stand-alone server profiles using default values” on page 281</li> <li>• “Configuring deployment manager profiles using default values” on page 284</li> <li>• “Configuring custom profiles (managed nodes) using default values” on page 286</li> </ul>
Advanced	<ul style="list-style-type: none"> <li>• “Configuring stand-alone server profiles using customized values” on page 289</li> <li>• “Configuring deployment manager profiles using customized values” on page 312</li> <li>• “Configuring custom profiles (managed nodes) using customized values” on page 329</li> </ul>
Deployment environment	<ul style="list-style-type: none"> <li>• “Configuring custom profiles (managed nodes) for a deployment environment” on page 353</li> </ul>

## Results

You are ready to configure your profile, which will define an extended operating environment of the type you specified (stand-alone server, deployment manager, or custom).

### Starting the Profile Management Tool:

Before you start the Profile Management Tool, be aware of the restrictions and ensure that certain prerequisites are met. You can start the Profile Management Tool in several ways, depending on the platform on which it is running.

### Restrictions:

- You cannot use the Profile Management Tool to create or augment profiles on 64-bit platforms (with the exception of i5/OS) or the Linux on System z platform.

- **i5/OS** When WebSphere Process Server is installed on an i5/OS system, the Profile Management Tool will run only in stand-alone mode. The tool cannot be started from the Application Server Toolkit (AST) tool.
- **i5/OS** The **Browse** buttons on the Profile Management Tool panels are disabled.
- **Vista** **Restriction for a non-root user with multiple instances:** If you install multiple instances of WebSphere Process Server as the root user and give a non-root user access to only a subset of those instances, the Profile Management Tool does not function correctly for the non-root user. In addition, a `com.ibm.wsspi.profile.WSProfileException` or Access is denied message occurs in the `install_root\bin\ProfileManagement\pmt.bat` file. By default, non-root users do not have access to the program file directories, which is the default installation location for the product. To resolve this issue, the non-root user can install the product or be given permission to access the other product instances.

**Linux** **UNIX** **Windows** The language of the Profile Management Tool is determined by the default language on the system. If the default language is not one of the supported languages, then English is used. You can override the system's default language by starting the Profile Management Tool from the command line and using the `java user.language` setting to replace the default language. Run the following command:

- **Linux** **UNIX** `install_root/java/bin/java -Duser.language=locale install_root/bin/ProfileManagement/startup.jar`
- **Windows** `install_root\java\bin\java -Duser.language=locale install_root\bin\ProfileManagement\startup.jar`

For example, to start the Profile Management Tool in the German language on a Linux system, type the following command:

```
install_root/java/bin/java -Duser.language=de install_root/ \
bin/ProfileManagement/startup.jar
```

### Starting the tool on all platforms

Start the tool on any platform in one of the following ways:

- From the First steps console. See “Starting the First steps console” on page 133 for how to start the First steps console.
- At the end of an installation, select the check box to start the Profile Management Tool.

### Starting the tool on i5/OS platforms

**i5/OS** The Profile Management Tool Client for i5/OS is a Java application you must install on a Windows workstation. The tool runs on the Windows workstation as a client for i5/OS and remotely connects to the i5/OS server hosting the WebSphere Process Server installation. To install and start the tool, do the following:

1. Install the Profile Management Tool Client for i5/OS on the Windows workstation in one of two ways:
  - From the product launchpad, by clicking **WebSphere Profile Management Tool Client for i5/OS installation**.
  - By clicking `\PMTClient\PMTInstaller.exe` in the product root directory.

The installation creates an entry in the Windows Start menu.



2. Start the tool from the Windows Start menu by clicking **Start > Programs or All Programs > IBM WebSphere > Profile Management Tool Client for i5/OS**. A panel is displayed on which you can sign on to the System i server.
3. On the sign-on panel, enter the remote i5/OS system name, your i5/OS user profile, and a password, and click **OK**.
4. On the next panel, select which installation (if there is more than one installation of WebSphere Process Server) and which port number you want to use. Then click **Launch Profile Management Tool**.

**Note:** The default port number is 1099. You can change this to a different port. If that port number is busy, an error message is displayed. Select a different port number to continue.

If the Profile Management Tool Client is connecting to a server with a newer version of WebSphere Process Server, you receive a message asking if you want to update the Profile Management Tool Client to match the version on the server. If you click **Yes**, the Profile Management Tool Client is updated automatically and the Profile Management Tool opens.

If the Profile Management Tool Client is connecting to a server with an older version of WebSphere Process Server, you receive a message telling you to install the same version of the Profile Management Tool Client as is on the server. You cannot access the Profile Management Tool until you install a version of the Profile Management Tool Client that matches the version on the server.

### Starting the tool on Linux and UNIX platforms

**Linux** **UNIX** You can start the tool on Linux and UNIX platforms by running the command `install_root/bin/ProfileManagement/pmt.sh`.

### Starting the tool on Windows platforms

**Windows** You can use the following methods to start the tool on Windows platforms:

- Use the Windows Start menu. For example, select **Start > Programs or All Programs > IBM WebSphere > Process Server 6.2 > Profile Management Tool**.
- Run the command `install_root\bin\ProfileManagement\pmt.bat`.

### Augmenting profiles using the manageprofiles command

Augmentation is the ability to change an existing profile with an augmentation template. You can augment existing WebSphere Application Server or WebSphere Application Server Network Deployment profiles into WebSphere Enterprise Service Bus or WebSphere Process Server profiles, or WebSphere Enterprise Service Bus profiles into WebSphere Process Server profiles. You can augment a profile from the command line using the `manageprofiles` command.

### Before you begin

Before using this procedure, ensure that you have done the following tasks:

- You have reviewed the list of prerequisites for creating or augmenting a profile at “Prerequisites for creating or augmenting profiles” on page 192.
- You have shut down any servers associated with the profile that you plan to augment.

- If you plan to augment a stand-alone server or custom profile, you have determined if it has already been federated to a deployment manager:
  - If the profile you want to augment has already been federated to a deployment manager, you cannot augment it using the `manageprofiles` command.
  - If the profile you want to augment has not already been federated to a deployment manager, when you do federate it via the `addNode` command later, the following must be true of the deployment manager with which it is federated in order for the augmentation to complete successfully:
    - It must be running.
    - It must be at a release level the same or higher than that of the profile you are augmenting. WebSphere Process Server profiles cannot use a WebSphere Enterprise Service Bus deployment manager, but WebSphere Enterprise Service Bus profiles can use a WebSphere Process Server deployment manager. WebSphere Enterprise Service Bus profiles can use a WebSphere Enterprise Service Bus or WebSphere Process Server deployment manager.
    - It must have a JMX administrative port enabled. The default protocol is SOAP.
    - It must have already been augmented into a WebSphere Process Server profile, depending on the product you have installed.
- You have reviewed example profile augmentation commands in “Augmenting profiles with `manageprofiles` command with Derby or DB2 databases – examples” on page 238 or “Augmenting profiles with `manageprofiles` command with Oracle database – examples” on page 244.
- You have verified that you are not already running the `manageprofiles` command on the same profile. If an error message is displayed, determine if there is another profile creation or augmentation action in progress. If so, wait until it completes.

**Security role required for this task:** See “Granting write permission of files and directories to non-root users for profile creation” on page 194.

To use the `manageprofiles` command to augment a profile, perform the following steps.

### Procedure

1. Determine the template that the existing profile was created with (deployment manager, stand-alone, or managed). You can determine the template that was used for creating the profile by viewing the profile registry in `install_root/properties/profileRegistry.xml`. Do not modify this file, use it only to view the templates.
2. Find the appropriate template to augment to. You can augment an existing WebSphere Application Server or WebSphere Application Server Network Deployment profile into a WebSphere Process Server or WebSphere ESB profile. You can augment an existing WebSphere ESB profile into a WebSphere Process Server profile. The following profile templates are available:
  - `default.wbiserver`: for a WebSphere Process Server stand-alone server profile, which defines a stand-alone server.
  - `dmgr.wbiserver`: for a WebSphere Process Server deployment manager profile, which defines a deployment manager. A *deployment manager* provides one administrative interface to a logical group of servers on one or more workstations.

- `managed.wbiserver`: for a WebSphere Process Server custom profile, which, when federated to a deployment manager, defines a managed node. If you have decided that your solution requires a deployment environment, your runtime environment requires one or more managed nodes. A *custom profile* contains an empty node that you must federate into a deployment manager cell to make operational. Federating the custom profile changes it into a managed node.
- `default.esbserver`: for a WebSphere Enterprise Service Bus stand-alone server profile, which defines a stand-alone server.
- `dmgr.esbserver`: for a WebSphere Enterprise Service Bus deployment manager profile, which defines a deployment manager.
- `managed.esbserver`: for a WebSphere Enterprise Service Bus custom profile, which, when federated to a deployment manager, defines a managed node.

Use the `augment` parameter to make changes to an existing profile with an augmentation template. The `augment` parameter causes the `manageprofiles` command to update or augment the profile identified in the **-profileName** parameter using the template in the **-templatePath** parameter. The augmentation templates that you can use are determined by which IBM products and versions are installed in your environment. Make sure that you specify the fully qualified file path for **-templatePath**, because a relative file path for the **-templatePath** parameter results in the specified profile not being fully augmented.

**Note:** Do not manually modify the files that are located in the `install_dir/profileTemplates` directory.

3. Run the file from the command line. Do not supply a **-profilePath** parameter. Here are some simple examples. For more complex examples, see “Augmenting profiles with `manageprofiles` command with Derby or DB2 databases – examples” on page 238 or “Augmenting profiles with `manageprofiles` command with Oracle database – examples” on page 244.

- `i5/OS` `manageprofiles -augment -templatePath install_root/profileTemplates/default.wbiserver -profileName MyProfileName`
- `Linux` `UNIX` `manageprofiles.sh -augment -templatePath install_root/profileTemplates/default.wbiserver -profileName MyProfileName`
- `Windows` `manageprofiles.bat -augment -templatePath install_root\profileTemplates\default.wbiserver -profileName MyProfileName`

If you have created a response file, use the **-response** parameter: `-response myResponseFile`

The following example shows a response file for an `augment` operation:

```
augment
profileName=testResponseFileAugment
templatePath=install_root/profileTemplates/default.wbiserver

nodeName=myNodeName
cellName=myCellName
hostName=myHostName
omitAction=myOptionalAction1, myOptionalAction2
```

The command displays status as it runs. Wait for it to finish. Normal syntax checking on the response file applies as the file is parsed like any other response file. Individual values in the response file are treated as command-line parameters.

## What to do next

You can see that your profile augmentation completed successfully if you receive a `INSTCONFSUCCESS: Profile augmentation succeeded.` message, and you can check the following log file:

- **Linux** **UNIX** `install_root/logs/manageprofiles/profile_name_augment.log`
- **Windows** `install_root\logs\manageprofiles\profile_name_augment.log`
- **i5/OS** `user_data_root/profileRegistry/logs/manageprofiles/profile_name_augment.log`

Run the Installation Verification Test (IVT) tool to verify that the profile was augmented successfully. To do this, run the following command:

- **i5/OS** **On i5/OS platforms:** `profile_root/bin/wbi_ivt`
- **Linux** **UNIX** **On Linux and UNIX platforms:** `profile_root/bin/wbi_ivt.sh`
- **Windows** **On Windows platforms:** `profile_root\bin\wbi_ivt.bat`

### Augmenting profiles with `manageprofiles` command with Derby or DB2 databases – examples:

Example profile augmentation commands to help you augment stand-alone server, deployment manager, and custom profiles using the `manageprofiles` command on your installation.

#### Stand-alone server profile

The following command example augments a WebSphere Application Server stand-alone server profile called `AppServ04` with WebSphere Process Server functionality on a Windows server. The parameters in Table 67 and Table 68 on page 239 specify the following:

- The Derby Embedded database product will be used for both the Common and Common Event Infrastructure databases, which are set to be created and configured on the localhost during the profile augmentation process. For complete listings of database-related `manageprofiles` parameters, see the topics “`manageprofiles` parameters for Common database configuration (per database product)” on page 269 and “`manageprofiles` parameters for Common Event Infrastructure database configuration (per database product)” on page 275.
- A sample Business Process Choreographer implementation will *not* be created.
- Business Rules Manager will *not* be configured.
- Business Space powered by WebSphere will *not* be configured.
- Administrative security was enabled during the profile creation process and will be specified again during profile augmentation.

Table 67 shows `manageprofiles` command parameters with example values used to create a stand-alone server profile.

Table 67. Specified `manageprofiles` command parameters

Parameter	Value
<code>-augment</code>	N/A
<code>-templatePath</code>	<code>"install_root\profileTemplates\default.wbiserver"</code> (must be fully qualified)

Table 67. Specified manageprofiles command parameters (continued)

Parameter	Value
-profileName	"AppServ04"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-dbType	"DERBY_EMBEDDED"
-dbUserId	"cei_id"
-dbPassword	"cei_pwd"
-dbServerPort	"50000"
-ceiDbName	"event"
-dbDelayConfig	"true"
-ceiDbAlreadyConfigured	"false"
-configureBPC	"false"
-dbType	"DERBY_EMBEDDED"
-dbName	"WPRCSDB"
-dbCreateNew	"true"
-dbDelayConfig	"false"
-dbCommonForME	"false"
-fileStoreForME	"false" (cannot be true when -dbCommonForME is also true)
-configureBspace	"false"
-configureBRM	"false"

Table 68 shows manageprofiles command parameters with default values that do not normally have to be changed.

Table 68. Defaulted manageprofiles command parameters

Parameter	Default values
-dbOutputScriptDir	"install_root\profiles\AppServ04\dbscripts\CommonDB\Derby\WPRCSDB"
-dbOutputscriptDir	"install_root\profiles\AppServ04\dbscripts\CEI_event"

### WebSphere Enterprise Service Bus example

Here is a similar example that augments a WebSphere Application Server stand-alone server profile called *AppServ03* with WebSphere Enterprise Service Bus functionality.

Table 69 shows manageprofiles command parameters with example values used to create a stand-alone server profile.

Table 69. Specified manageprofiles command parameters

Parameter	Value
-augment	N/A

Table 69. Specified manageprofiles command parameters (continued)

Parameter	Value
-templatePath	"install_root\profileTemplates\default.esbserver" (must be fully qualified)
-profileName	"AppServ03"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-dbType	"DERBY_EMBEDDED"
-dbUserId	"cei_id"
-dbPassword	"cei_pwd"
-ceiDbName	"event"
-dbDelayConfig	"true"
-ceiDbAlreadyConfigured	"false"
-dbType	"DERBY_EMBEDDED"
-dbName	"WPRCSDB"
-dbCreateNew	"true"
-dbDelayConfig	"false"
-dbCommonForME	"false"
-fileStoreForME	"false" (cannot be true when -dbCommonForME is also true)
-configureBspace	"false"

Table 70 shows manageprofiles command parameters with default values that do not normally have to be changed.

Table 70. Defaulted manageprofiles command parameters

Parameter	Default values
-dbOutputScriptDir	"install_root\profiles\AppServ03\dbscripts\CommonDB\Derby\WPRCSDB"
-dbOutputscriptDir	"install_root\profiles\AppServ03\dbscripts\CEI_event"

### Deployment manager profile (without deployment environment setup)

The following command example augments a WebSphere Application Server deployment manager profile called *Dmgr02* with WebSphere Process Server functionality on a Windows server. The parameters in Table 71 on page 241 and Table 72 on page 241 specify the following:

- The Derby Network Server database product will be used for the Common database, which is set to be created and configured on the localhost during the profile augmentation process. For a complete listing of database-related manageprofiles parameters, see the topic "manageprofiles parameters for Common database configuration (per database product)" on page 269.
- Administrative security was enabled during the profile creation process and will be specified again during profile augmentation.

Table 71 shows manageprofiles command parameters with example values used to create a deployment manager profile.

Table 71. Specified manageprofiles command parameters

Parameter	Value
-augment	N/A
-templatePath	"install_root\profileTemplates\ dmgr.wbiserver" (must be fully qualified)
-profileName	"Dmgr02"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-ndtopology	"false" (configuration of a deployment environment is not supported during profile augmentation)
-dbType	"DERBY_NETWORKSERVER"
-dbName	"WPRCSDB"
-dbCreateNew	"true"
-dbDelayConfig	"false"
-dbHostName	"localhost"
-dbUserId	"db_id"
-dbPassword	"db_pwd"
-dbServerPort	"1528"

Table 72 shows a manageprofiles command parameter with a default value that does not normally have to be changed.

Table 72. Defaulted manageprofiles command parameters

Parameter	Default values
-dbOutputScriptDir	"install_root\profiles\Dmgr02\dbscripts\ CommonDB\Derby\WPRCSDB"

### WebSphere Enterprise Service Bus example

Here is a similar example that augments a WebSphere Application Server deployment manager profile called *Dmgr04* with WebSphere Enterprise Service Bus functionality.

Table 73 shows manageprofiles command parameters with example values used to create a deployment manager profile.

Table 73. Specified manageprofiles command parameters

Parameter	Value
-augment	N/A
-templatePath	"install_root\profileTemplates\ dmgr.esbserver" (must be fully qualified)
-profileName	"Dmgr04"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"

Table 73. Specified manageprofiles command parameters (continued)

Parameter	Value
-ndtopology	"false" (configuration of a deployment environment is not supported during profile augmentation)
-dbType	"DERBY_NETWORKSERVER"
-dbName	"WPRCSDB"
-dbCreateNew	"true"
-dbDelayConfig	"false"
-dbHostName	"localhost"
-dbUserId	"db_id"
-dbPassword	"db_pwd"
-dbServerPort	"1529"

Table 74 shows a manageprofiles command parameter with a default value that does not normally have to be changed.

Table 74. Defaulted manageprofiles command parameters

Parameter	Default values
-dbOutputScriptDir	"install_root\profiles\Dmgr04\dbscripts\CommonDB\Derby\WPRCSDB"

### Custom profile (without deployment environment setup)

The following command example augments a WebSphere Application Server custom profile called *Custom21* with WebSphere Process Server functionality on a Windows server. This example is set to operate with the deployment manager profile created above.

The parameters in Table 75 specify the following:

- The Derby Network Server database product is used for the Common database, which is assumed to already exist. The custom profile creation simply needs to point to the database used by the deployment manager to which the custom profile will be federated. For a complete listing of database-related manageprofiles parameters, see the topic "manageprofiles parameters for Common database configuration (per database product)" on page 269.
- Administrative security is enabled on the deployment manager to which the custom profile will be federated.

See "manageprofiles parameters" on page 253 for a listing of all valid manageprofiles parameters.

Table 75 shows manageprofiles command parameters with example values used to create a custom profile.

Table 75. Specified manageprofiles command parameters

Parameter	Value
-augment	N/A



Table 75. Specified manageprofiles command parameters (continued)

Parameter	Value
-templatePath	"install_root\profileTemplates\managed.wbiserver" (must be fully qualified)
-profileName	"Custom21"
-dmgrHost	"localhost"
-dmgrPort	"8903" (To find the -dmgrPort value, go to the dmgr_profile_root\logs directory for the deployment manager associated with this custom profile. In this directory, open the AboutThisProfile.txt file and find the value for the entry "Deployment manager SOAP connector port:".)
-dmgrAdminPassword	"admin_pwd"
-dmgrAdminUserName	"admin_id"
-ndtopology	"false"
-dbType	"DERBY_NETWORKSERVER"
-dbJDBCClasspath	"install_root\derby\lib"

### WebSphere Enterprise Service Bus example

Here is a similar example that augments a WebSphere Application Server custom profile called *Custom05* with WebSphere Enterprise Service Bus functionality.

Table 76 shows manageprofiles command parameters with example values used to create a custom profile.

Table 76. Specified manageprofiles command parameters

Parameter	Value
-augment	N/A
-templatePath	"install_root\profileTemplates\managed.esbserver" (must be fully qualified)
-profileName	"Custom05"
-dmgrHost	"localhost"
-dmgrPort	"8902" (To find the -dmgrPort value, go to the dmgr_profile_root\logs directory for the deployment manager associated with this custom profile. In this directory, open the AboutThisProfile.txt file and find the value for the entry "Deployment manager SOAP connector port:".)
-dmgrAdminPassword	"admin_pwd"
-dmgrAdminUserName	"admin_id"
-ndtopology	"false"
-dbType	"DERBY_NETWORKSERVER"
-dbJDBCClasspath	"install_root\derby\lib"

## Augmenting profiles with manageprofiles command with Oracle database – examples:

Example profile augmentation commands to help you augment stand-alone server and deployment manager profiles using the manageprofiles command on your installation.

### Stand-alone server profile

The following command example augments a WebSphere Application Server stand-alone server profile called *AppServ04* with WebSphere Process Server functionality on a Windows server. The parameters in Table 77, Table 78 on page 245 and Table 79 on page 245 specify the following:

- The Oracle 9i database product will be used for both the Common and Common Event Infrastructure databases, which are both assumed to already exist on the localhost. Both databases are set to be configured later (the **-dbDelayConfig "true"** command parameter value specifies that configuration scripts be created but not run). For complete listings of database-related manageprofiles parameters, see the topics “manageprofiles parameters for Common database configuration (per database product)” on page 269 and “manageprofiles parameters for Common Event Infrastructure database configuration (per database product)” on page 275.
- A sample Business Process Choreographer configuration will be created.
- Business Rules Manager will *not* be configured.
- Business Space powered by WebSphere will *not* be configured.
- Administrative security was enabled during the profile creation process and will be specified again during profile augmentation.

Table 77 shows manageprofiles command parameters with example values used to create a stand-alone server profile.

Table 77. Specified manageprofiles command parameters

Parameter	Value
-augment	N/A
-templatePath	"install_root\profileTemplates\default.wbiserver" (must be fully qualified)
-profileName	"AppServ04"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-configureBPC	"true"
-dbType	"ORACLE9I"
-dbName	"WPRCSDB"
-ceiDbName	"EVENT"
-dbDelayConfig	"true"
-fileStoreForME	"false" (cannot be true when -dbCommonForME is also true)
-dbCommonForME	"true"
-dbPassword	"db_pwd"
-dbDriverType	"oracle_thin"
-dbJDBCClasspath	"oracle_library_directory"

Table 77. Specified manageprofiles command parameters (continued)

Parameter	Value
-dbServerPort	"1521"
-configureBSpace	"false"
-configureBRM	"false"

Table 78 shows manageprofiles command parameters with default values that do not normally have to be changed.

Table 78. Defaulted manageprofiles command parameters

Parameter	Default values
-dbOutputScriptDir	"install_root\profiles\AppServ04\dbscripts\"
-dbHostName	"local_host_name"

Table 79 shows additional manageprofiles command parameters that are not displayed via the Profile Management Tool that can be specified to select your own user name and password combinations for Oracle.

Table 79. Additional manageprofiles command parameters for Oracle

Parameter	Default values	Remarks
-dbSysUserId	"sys_user_id"	This ID must have SYSDBA privileges. Do not use the Oracle internal user 'sys'.  This parameter is needed if you want to configure the database and its objects during profile creation [when dbDelayConfig = "FALSE"]
-dbSysPassword	"sys_pwd"	This parameter is needed if you want to configure the database and its objects during profile creation [when dbDelayConfig = "FALSE"]
-dbCommonUserId	"common_db_userID" (used to create Common DB objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation. For the Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbCommonUserId is ORCCOMM
-dbCommonPassword	"common_db_pwd"	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCommonPassword will be set to dbPassword. For example: dbCommonPassword = dbPassword
-dbBSpaceUserId	"bspace_db_userID" (used to configure Business Space)	This parameter is needed if you require your own Business Space schema. If not, the default value (IBMBUSSP) will be set.
-dbBSpacePassword	"bspace_db_pwd" (used to configure Business Space)	This parameter is needed if you need your own Business Space password otherwise default value will be set in the following order: dbBSpacePassword = "YouNameIt" else dbBSpacePassword = dbPassword [if exists] else dbBspacePassword = IBMBUSSP

Table 79. Additional manageprofiles command parameters for Oracle (continued)

Parameter	Default values	Remarks
-dbCeiUserId	"cei_userID" (used to create CEI objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbCeiUserId is ORCCEID
-dbCeiPassword	"cei_db_pwd"	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCeiPassword will be set to dbPassword. For example, dbCeiPassword = dbPassword
	All the parameters below are only valid if -dbCommonForME = "true"	
-dbBPCMeUserId	"bpc_me_userID" (used to create BPC ME objects) (only valid if -configureBPC = "true")	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbBPCMeUserId is ORCBM00
-dbBPCMePassword	"bpc_me_pwd" (only valid if -configureBPC = "true")	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCeiPassword will be set to dbPassword. For example, dbBPCMePassword = dbPassword
-dbCeiMeUserId	"cei_me_userID" (used to create CEI ME objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbCeiMeId is ORCCM00
-dbCeiMePassword	"cei_me_pwd"	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCeiPassword will be set to dbPassword. For example: dbCeiMePassword = dbPassword
-dbAppMeUserId	"app_me_userID" (used to create SCAAPP ME objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbAppMeId is ORCSA00
-dbAppMePassword	"app_me_pwd"	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCeiPassword will be set to dbPassword. For example: dbAppMePassword = dbPassword

Table 79. Additional manageprofiles command parameters for Oracle (continued)

Parameter	Default values	Remarks
-dbSysMeUserId	"sys_me_userID" (used to create SCASYS ME objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbSysMeUserId is ORCSS00
-dbSysMePassword	"sys_me_pwd"	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCeiPassword will be set to dbPassword. For example: dbAppMePassword = dbPassword

### WebSphere Enterprise Service Bus example

Here is a similar example that augments a WebSphere Application Server stand-alone server profile called *AppServ03* with WebSphere Enterprise Service Bus functionality. The difference is the database is set to be configured now (the -dbDelayConfig "false" command parameter value specifies that configuration scripts be run).

Table 80 shows manageprofiles command parameters with example values used to create a stand-alone server profile.

Table 80. Specified manageprofiles command parameters

Parameter	Value
-augment	N/A
-templatePath	"install_root\profileTemplates\default.esbserver" (must be fully qualified)
-profileName	"AppServ03"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-dbType	"ORACLE9I"
-dbName	"WPRCSDB"
-ceiDbName	"EVENT"
-dbDelayConfig	"false"
-fileStoreForME	"false" (cannot be true when -dbCommonForME is also true)
-dbCommonForME	"true"
-dbLocation	"oracle_install_directory"
-dbPassword	"db_pwd"
-dbDriverType	"oracle_thin"
-dbJDBCClasspath	"oracle_library_directory"
-dbServerPort	"1521"
-dbSysUserId	"sys_user_id"
-dbSysPassword	"sys_pwd"

Table 80. Specified manageprofiles command parameters (continued)

Parameter	Value
-configureBSpace	"false"

Table 81 shows manageprofiles command parameters with default values that do not normally have to be changed.

Table 81. Defaulted manageprofiles command parameters

Parameter	Default values
-dbOutputScriptDir	"install_root\profiles\AppServ03\dbscripts\"
-dbHostName	"local_host_name"

Table 82 shows additional manageprofiles command parameters that are not displayed via the Profile Management Tool that can be specified to select your own user name and password combinations for Oracle.

Table 82. Additional manageprofiles command parameters for Oracle

Parameter	Default values	Remarks
-dbCommonUserId	"common_db_userID" (used to create Common DB objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation. For the Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbCommonUserId is ORCCOMM
-dbCommonPassword	"common_db_pwd"	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCommonPassword will be set to dbPassword. For example: dbCommonPassword = dbPassword
-dbBSpaceUserId	"bspace_db_userID" (used to configure Business Space)	This parameter is needed if you require your own Business Space schema. If not, the default value (IBMBUSSP) will be set.
-dbBSpacePassword	"bspace_db_pwd" (used to configure Business Space)	This parameter is needed if you need your own Business Space password otherwise default value will be set in the following order: dbBSpacePassword = "YouNameIt" else dbBSpacePassword = dbPassword [if exists] else dbBSpacePassword = IBMBUSSP
-dbCeiUserId	"cei_userID" (used to create CEI objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbCeiUserId is ORCCEID
-dbCeiPassword	"cei_db_pwd"	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCeiPassword will be set to dbPassword. For example, dbCeiPassword = dbPassword

Table 82. Additional manageprofiles command parameters for Oracle (continued)

Parameter	Default values	Remarks
	All the parameters below are only valid if -dbCommonForME = "true"	
-dbCeiMeUserId	"cei_me_userID" (used to create CEI ME objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbCeiMeId is ORCCM00
-dbCeiMePassword	"cei_me_pwd"	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCeiPassword will be set to dbPassword. For example: dbCeiMePassword = dbPassword
-dbAppMeUserId	"app_me_userID" (used to create SCAAPP ME objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbAppMeId is ORCSA00
-dbAppMePassword	"app_me_pwd"	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCeiPassword will be set to dbPassword. For example: dbAppMePassword = dbPassword
-dbSysMeUserId	"sys_me_userID" (used to create SCASYS ME objects)	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, this user will be generated automatically based on Oracle Database name [SID]. For example: If SID is ORCL, dbSysMeUserId is ORCSS00
-dbSysMePassword	"sys_me_pwd"	This parameter is needed if you select the Custom Users and Passwords option during profile creation.  For the Generate Users with Single Password option, dbCeiPassword will be set to dbPassword. For example: dbAppMePassword = dbPassword

### Deployment manager profile (without deployment environment setup)

The following command example augments a WebSphere Application Server deployment manager profile called *Dmgr02* with WebSphere Process Server functionality on a Windows server. The parameters in Table 83 on page 250 and Table 84 on page 250 specify the following:

- The Oracle 10g database product will be used for the Common database, which is assumed to exist on a remote host. The database is set to be configured later (the -dbDelayConfig "true" command parameter value specifies that configuration scripts be created but not run). For a complete listing of

database-related manageprofiles parameters, see the topic “manageprofiles parameters for Common database configuration (per database product)” on page 269.

- Administrative security was enabled during the profile creation process and will be specified again during profile augmentation.

Table 83 shows manageprofiles command parameters with example values used to create a deployment manager profile.

*Table 83. Specified manageprofiles command parameters*

Parameter	Value
-augment	N/A
-templatePath	"install_root\profileTemplates\dmgr.wbiserver" (must be fully qualified)
-profileName	"Dmgr02"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-ndtopology	"false" (configuration of a deployment environment is not supported during profile augmentation)
-dbType	"ORACLE10G"
-dbName	"WPRCSDB"
-dbDelayConfig	"true"
-dbPassword	"db_pwd"
-dbDriverType	"oracle_thin"
-dbHostName	"remote_host_name"
-dbJDBCClasspath	"oracle_library_directory"
-dbServerPort	"1521"

Table 84 shows a manageprofiles command parameter with a default value that does not normally have to be changed.

*Table 84. Defaulted manageprofiles command parameters*

Parameter	Default values
-dbOutputScriptDir	"install_root\profiles\Dmgr02\dbscripts\"

### WebSphere Enterprise Service Bus example

Here is a similar example that augments a WebSphere Application Server deployment manager profile called *Dmgr04* with WebSphere Enterprise Service Bus functionality. The difference is the database is set to be configured now (the -dbDelayConfig "false" command parameter value specifies that configuration scripts be run).

Table 85 on page 251 shows manageprofiles command parameters with example values used to create a deployment manager profile.



Table 85. Specified manageprofiles command parameters

Parameter	Value
-augment	N/A
-templatePath	"install_root\profileTemplates\ dmgr.esbserver" (must be fully qualified)
-profileName	"Dmgr04"
-adminPassword	"admin_pwd"
-adminUserName	"admin_id"
-ndtopology	"false" (configuration of a deployment environment is not supported during profile augmentation)
-dbType	"ORACLE10G"
-dbName	"WPRCSDB"
-dbDelayConfig	"false"
-dbLocation	"oracle_install_directory"
-dbPassword	"db_pwd"
-dbDriverType	"oracle_thin"
-dbHostName	"remote_host_name"
-dbJDBCClasspath	"oracle_library_directory"
-dbServerPort	"1521"
-dbSysUserId	"sys_user_id"
-dbSysPassword	"sys_pwd"

Table 86 shows a manageprofiles command parameter with a default value that does not normally have to be changed.

Table 86. Defaulted manageprofiles command parameters

Parameter	Default values
-dbOutputScriptDir	"install_root\profiles\Dmgr04\dbscripts\"

## manageprofiles command

The manageprofiles command creates a profile, which is the set of files that define the runtime environment for a deployment manager, a managed node, or a stand-alone server.

The profile defines the runtime environment and includes all of the files that the server processes can change during runtime.

The manageprofiles command and its graphical user interface, the Profile Management Tool, are the only ways to create profiles, or the only ways to create runtime environments. You can also augment profiles and delete profiles with the manageprofiles command.

The command file is located in the *install\_root*/bin directory. The command file is a script named manageprofiles for i5/OS platforms, manageprofiles.sh for Linux and UNIX platforms or manageprofiles.bat for Windows platforms.

The `manageprofiles` command creates a log for every profile that it creates, deletes, or augments. The logs are in the following directory, depending on platform:

- **Linux** **UNIX** `install_root/logs/manageprofiles`
- **Windows** `install_root\logs\manageprofiles`
- **i5/OS** `user_data_root/profileRegistry/logs/manageprofiles`

The files are named as follows:

- `profile_name_create.log`
- `profile_name_augment.log`
- `profile_name_delete.log`

Templates for each profile are located in the `install_root/profileTemplates` directory. Within this directory are various directories that correspond to different profile types. The directories are the paths that you indicate while using the `manageprofiles` command with the **-templatePath** option. You can also specify profile templates that lie outside the installation root if they exist. Use the following templates with WebSphere Process Server:

- `default.wbiserver`: for a WebSphere Process Server stand-alone server profile, which defines a stand-alone server.
- `dmgr.wbiserver`: for a WebSphere Process Server deployment manager profile, which defines a deployment manager.
- `managed.wbiserver`: for a WebSphere Process Server custom profile, which, when federated to a deployment manager, defines a managed node.
- `default.esbserver`: for a WebSphere Enterprise Service Bus stand-alone server profile, which defines a stand-alone server.
- `dmgr.esbserver`: for a WebSphere Enterprise Service Bus deployment manager profile, which defines a deployment manager.
- `managed.esbserver`: for a WebSphere Enterprise Service Bus custom profile, which, when federated to a deployment manager, defines a managed node.

## Syntax

The `manageprofiles` command is used to perform the following tasks:

- Creating a profile (**-create** parameter).  
Follow the instructions in “Creating profiles using the `manageprofiles` command” on page 203.
- Augmenting a profile (**-augment** parameter).  
Follow the instructions in “Augmenting profiles using the `manageprofiles` command” on page 235.

**Note:** Using profiles that have been unaugmented (**-unaugment** parameter) is not supported.

- Deleting a profile (**-delete** parameter).  
Follow the instructions in “Deleting profiles using the `manageprofiles` command” on page 370.
- Deleting all profiles (**-deleteAll** parameter)
- Listing all profiles (**-listProfiles** parameter)
- Getting the name of an existing profile from its name (**-getName** parameter)
- Getting the name of an existing profile from its path (**-getPath** parameter)
- Validating a profile registry (**-validateRegistry** parameter)

- Validating and updating a profile registry (**-validateAndUpdateRegistry** parameter)
- Getting the default profile name (**-getDefaultName** parameter)
- Setting the default profile name (**-setDefaultName** parameter)
- Backing up a profile (**-backupProfile** parameter)
- Restoring a profile (**-restoreProfile** parameter)
- Using a response file containing the information required to run a `manageprofiles` command (**-response** parameter)

For detailed help including the required parameters for each of the tasks accomplished with the `manageprofiles` command, use the **-help** parameter. The following is an example of using the help parameter with the `manageprofiles` command **-augment** parameter on Windows operating systems: `manageprofiles.bat -augment -help`. The output specifies which parameters are required and which are optional.

## Parameters

Depending on the operation that you want to perform with the `manageprofiles` command, you might need to provide one or more of the parameters described in “`manageprofiles` parameters.” The Profile Management Tool validates that the required parameters are provided and the values entered for those parameters are valid. Be sure to type the name of the parameters with the correct case, because the command line does not validate the case of the parameter name. Incorrect results can occur when the parameter case is not typed correctly.

## Command output

On completion, the command displays a statement similar to one of the following messages. (Exact wording varies depending on whether you created, deleted or augmented a profile.)

- `INSTCONFSUCCESS: Profile creation succeeded.`
- `INSTCONFFAILED: Profile creation failed.`
- `INSTCONFPARTIALSUCCESS: Some non-critical post installation configuration actions did not succeed.`

In some cases, the statement is displayed more than once. For example, the `INSTCONFSUCCESS` line is displayed three times at the command line. For more information, see `Installation and profile creation log files`

## `manageprofiles` parameters

Use the following parameters with the `manageprofiles` command for WebSphere Process Server.

The `manageprofiles` command file is located in the `install_root/bin` directory. The command file is a script named `manageprofiles` for i5/OS platforms, `manageprofiles.sh` for Linux and UNIX platforms, or `manageprofiles.bat` for Windows platforms.

Before you begin using the `manageprofiles` command, make sure that you understand all prerequisites for creating and augmenting profiles. For more information about prerequisites, see “Prerequisites for creating or augmenting profiles” on page 192. For more information about creating and augmenting profiles, see “Creating profiles using the `manageprofiles` command” on page 203 and “Augmenting profiles using the `manageprofiles` command” on page 235.

**Attention:** When creating a WebSphere Process Server profile, use only the parameters that are documented in the information center for WebSphere Process Server.

**Note:** All parameters are case-sensitive.

The following options are available for the `manageprofiles` command:

**-adminUserName** *adminUser\_ID*

Specifies the user ID that is used for administrative security. For augmenting an existing profile that has administrative security enabled, this parameter is required.

**-adminPassword** *adminPassword*

Specifies the password for the administrative security user ID specified with the `-adminUserName` parameter. For augmenting an existing profile that has administrative security enabled, this parameter is required.

**-appSchedulerServerName**

The name of the server where the WebSphere Process Server Application Scheduler is configured to run. This parameter is valid for profile augmentation when the profile has multiple servers defined.

**-augment**

Use the `augment` parameter to make changes to an existing profile with an augmentation template. The `augment` parameter causes the `manageprofiles` command to update or augment the profile identified in the `-profileName` parameter using the template in the `-templatePath` parameter. The augmentation templates that you can use are determined by which IBM products and versions are installed in your environment.

**Note:** Do not manually modify the files that are located in the `install_dir/profileTemplates` directory. For example, if you are changing the ports during profile creation, use the Profile Management Tool or the `-startingPort` or `-portsFile` arguments on the `manageprofiles` command instead of modifying the file in the profile template directory.

Specify the fully qualified file path for `-templatePath`. For example:

```
manageprofiles(.bat)(.sh) -augment -profileName profile_name
  -templatePath fully_qualified_template_path
```

**-backupProfile**

Performs a file system back up of a profile folder and the profile metadata from the profile registry file.

This parameter is not supported with WebSphere Process Server.

**-backupFile** *backupFile\_name*

Backs up the profile registry file to the specified file. You must provide a fully qualified file path for the `backupFile_name`.

**-cbeServerName**

The name of the server where the WebSphere Process Server Common Base Event Browser is configured to run.

**-ceiBufferPool4k**

Specifies the name of the 4K buffer pool for the Common Event Infrastructure. This buffer pool must be active before the database DDL scripts can be run.

**Note:** Deprecated in 6.2 for all databases except DB2 for z/OS.

**-ceiBufferPool8k**

Specifies the name of the 8K buffer pool for the Common Event Infrastructure. This buffer pool must be active before the database DDL scripts can be run.

**Note:** Deprecated in 6.2 for all databases except DB2 for z/OS.

**-ceiBufferPool16k**

Specifies the name of the 16K buffer pool for the Common Event Infrastructure. This buffer pool must be active before the database DDL scripts can be run.

**Note:** Deprecated in 6.2 for all databases except DB2 for z/OS.

**-ceiDbInstallDir**

The directory where the database is installed for the Common Event Infrastructure. This parameter is required only if you specified true for the dbDelayConfig parameter.

**-ceiDbName**

The name of the Common Event Infrastructure event database to be created. For DB2 databases, Derby databases, Informix databases, and Microsoft SQL Server databases, the default value is event if not specified. For DB2 iSeries (i5/OS) Native databases, the default value is \*LOCAL if not specified. For DB2 iSeries (i5/OS) Toolbox databases, the default value is \*SYSBAS if not specified.

For Oracle databases, the Oracle System Identifier (SID) must have been already created and available for the event service command to create the tables and populate the tables with data. The default value is orcl if not specified.

**-ceiDbNodeName**

The DB2 node name (must be 8 characters or less) for the Common Event Infrastructure. This node must be already cataloged and configured to communicate with the DB2 server. This parameter must be set if the current workstation is configured as a DB2 client and the parameter **dbDelayConfig** is set to true.

**Note:** Deprecated in 6.2 for all databases except DB2 client.

**-ceiDbUser**

**Note:** Deprecated in 6.2 for all databases except Microsoft SQL Server. Specifies the user ID to use for the Common Event Infrastructure event database.

For DB2 databases, the default value is db2inst1 if not specified. For DB2 for z/OS databases, it specifies the user ID that has privileges to create and drop the databases. This parameter is required.

**i5/OS** For iSeries (i5/OS) databases, it specifies the user ID that has privileges to create and drop the databases. This parameter is required.

For Derby databases, it is the user ID used by the data source for the Derby database authentication. This parameter is optional when the WebSphere domain security is disabled and is required when the WebSphere domain security is enabled.

For Informix databases, it specifies the Informix database schema user ID that will own the event service database tables. The WebSphere data source uses this user ID to authenticate the Informix database connection. This parameter is required.

For Oracle databases, it specifies the Oracle schema user ID that will own the event service Oracle tables. The user ID will be created during the database creation and the WebSphere data source uses this user ID to authenticate the Oracle database connection. The default value is `ceiuser` if not specified.

For Microsoft SQL Server databases, it specifies the SQL Server user ID that will own the event service tables. The default value is `ceiuser` if not specified.

**-dbCeiUserId**

For Oracle databases, specifies the CEI user ID.

**-dbUserId**

Specifies the user ID to use for the Common Event Infrastructure event database.

For DB2 databases, the default value is `db2inst1` if not specified. For DB2 for z/OS databases, it specifies the user ID that has privileges to create and drop the databases. This parameter is required.

**i5/OS** For iSeries (i5/OS) databases, it specifies the user ID that has privileges to create and drop the databases. This parameter is required.

For Derby databases, it is the user ID used by the data source for the Derby database authentication. This parameter is optional when the WebSphere domain security is disabled and is required when the WebSphere domain security is enabled.

For Informix databases, it specifies the Informix database schema user ID that will own the event service database tables. The WebSphere data source uses this user ID to authenticate the Informix database connection. This parameter is required.

For Oracle databases, it specifies the Oracle schema user ID that will own the event service Oracle tables. The user ID will be created during the database creation and the WebSphere data source uses this user ID to authenticate the Oracle database connection. The default value is `ceiuser` if not specified.

For Microsoft SQL Server databases, it specifies the SQL Server user ID that will own the event service tables. The default value is `ceiuser` if not specified.

**-ceiDiskSizeInMB**

The database size in MB to be created for the Common Event Infrastructure event database. The lowest value that can be set is 10 MB. For DB2 for z/OS, the default value is 100 MB if not specified.

**Note:** Deprecated in 6.2 for all databases except DB2 for z/OS.

**-ceiInstancePrefix**

For Informix, Oracle, and Microsoft SQL Server databases, the command uses the Common Event Infrastructure event database instance name to group the database files in a directory with unique names. The default value is `ceiinst1` if not specified.

**Note:** Deprecated in 6.2 for all databases except Informix, Oracle, Microsoft SQL Server.

**-dbLocation**

The directory of the `ORACLE_HOME`. This parameter is required when the parameter `dbDelayConfig` is set to `true`.

**-ceiOverrideDataSource**

When this parameter is set to `true`, the command removes any existing

Common Event Infrastructure service data source at the specified scope before creating a new one. When this parameter is set to false, the command does not create an event service data source at the specified scope if another event service data source is found at the same scope. The default value is false if not specified.

**-ceiSaUser**

The Microsoft SQL Server ID that has privileges to create tables, devices, and caches for the Common Event Infrastructure. This parameter is required if the **dbDelayConfig** parameter is set to true.

**Note:** Deprecated in 6.2 for all databases except Microsoft SQL Server.

**-ceiSaPassword**

The password for the Microsoft SQL Server ID that has privileges to create tables, devices, and caches for the Common Event Infrastructure. This parameter is required if you specify a value for the **ceiSaUser** parameter, unless the sa user ID does not have a password.

**Note:** Deprecated in 6.2 for all databases except Microsoft SQL Server.

**-cellName** *cell\_name*

Specifies the cell name of the profile for the Common Event Infrastructure. Use a unique cell name for each profile. This parameter is for profile creation only. Do not supply this parameter when augmenting an existing profile.

The default value for this parameter is based on a combination of the short host name, the constant *Cell*, and a trailing number, for example:

```
if (DMgr)
  shortHostNameCellCellNumber
else
  shortHostNameNodeNodeNumberCell
```

where *CellNumber* is a sequential number starting at 01 and *NodeNumber* is the node number that you used to define the node name.

The value for this parameter must not contain spaces or any characters that are not valid such as the following: \*, ?, ", <, >, ,, /, \, and |.

**-configureBPC true | false**

Determines whether the Business Process Choreographer sample configuration is created. If you set this parameter to true, the **-adminUserName** and **-adminPassword** parameters also must be set. The default for this parameter is the same value as the **-enableAdminSecurity** parameter.

**Note:** The Business Process Choreographer sample configuration does not use the common database (WPRCSDB). It always uses a Derby database, which is not supported in a network deployment environment. If you plan to federate this stand-alone profile later, do not set **-configureBPC** to true.

**-configureBRM true | false**

Configures the business rules manager. The default value is false.

**-configureBSpace true | false**

Configures Business Space powered by WebSphere, which provides an integrated user experience for application users across the IBM Websphere Business Process Management portfolio. The default value is true. Business Space is supported with the following database products: Derby Embedded, Derby Network Server, DB2 Universal, DB2 Universal Runtime Client, DB2 for i5/OS, DB2 for z/OS, Oracle 9i, Oracle 10g, and Oracle 11g.

**Important:** If the Common database you use for WebSphere Process Server does not match the supported databases for Business Space, the `manageprofiles` command uses a Derby Embedded database for the Business Space configuration. You cannot federate this profile into a deployment environment later, because Derby Embedded is not supported for deployment environments.

For more information about configuring Business Space for deployment environments, see *Configuring Business Space* under *Related information*.

**-create**

Creates the profile.

Specify `manageprofiles -create -templatePath fully_qualified_file_path_to_template -help` for specific information about creating a profile. Available templates include:

- `default.wbiserver`: for a WebSphere Process Server stand-alone server profile, which defines a stand-alone server.
- `dmgr.wbiserver`: for a WebSphere Process Server deployment manager profile, which defines a deployment manager.
- `managed.wbiserver`: for a WebSphere Process Server custom profile, which, when federated to a deployment manager, defines a managed node.
- `default.esbserver`: for a WebSphere Enterprise Service Bus stand-alone server profile, which defines a stand-alone server.
- `dmgr.esbserver`: for a WebSphere Enterprise Service Bus deployment manager profile, which defines a deployment manager.
- `managed.esbserver`: for a WebSphere Enterprise Service Bus custom profile, which, when federated to a deployment manager, defines a managed node.

**-dbCommonForME**

Indicates whether to use the Common database for messaging engines. For DB2 for z/OS databases, the default value is `true`. For all other databases, the default value is `false`. If this parameter is set to `false`, the messaging engines will use a file store data store.

**-dbConnectionLocation**

The location of DB2 for z/OS database.

**-dbCreateNew**

Indicates if you will create or reuse a database. Valid values are `true` or `false`.

**-dbDelayConfig**

Indicates if you will postpone table creation until after the profile is created. Valid values are `true` or `false`. The parameter is set to `false` by default.

**-dbDriverType**

The database driver type. For Oracle databases, valid values are `ORACLE_THIN` or `ORACLE_OCI`. For DB2 databases, valid values are `2` or `4`.

**-dbHostName**

The database server host name or IP address. The default value is `localhost`.

**-dbInstance**

The database instance name for Informix databases.

**-dbJDBCClasspath**

The location of JDBC driver files.



**-dbLocation**

Indicates the database installation directory if you are using Informix databases. You can only use this parameter if the **dbCreateNew** parameter is set to true.

**-dbName**

The name of the database. The value is set to WPRCSDB by default.

**-dbOutputScriptDir**

The location for exported database scripts.

**-dbPassword**

The password required for database authentication. This parameter is required for all databases except Derby Embedded.

**-dbSchemaName**

The database schema name for DB2 for iSeries, DB2 for i5/OS, and DB2 for z/OS databases.

**Note:** This parameter is not valid for use with the DB2 Universal database.

**-dbServerPort**

The database server port number. Depending on the database you are using, you can specify a different port number instead of the default port number.

**-dbStorageGroup**

The storage group name for DB2 z/OS databases.

**-dbType**

The database type.

Set one of the following values for the type of database product you are using with WebSphere Process Server.

- DERBY\_EMBEDDED for a Derby Embedded database
- DERBY\_NETWORKSERVER for a Derby Network Server database
- DB2\_UNIVERSAL for a DB2 Universal database
- DB2UDBOS390\_V8\_1 for a DB2 for z/OS v8 database
- DB2UDBOS390\_V9\_1 for a DB2 for z/OS v9 database
- DB2UDBISERIES\_NATIVE for a DB2 UDB for iSeries or DB2 for i5/OS database using a Native driver
- DB2UDBISERIES\_TOOLBOX for a DB2 UDB for iSeries or DB2 for i5/OS database using a Toolbox driver
- INFORMIX for an Informix Dynamic Server database
- MSSQLSERVER\_EMBEDDED for a Microsoft SQL Server database using an Embedded driver
- MSSQLSERVER\_DATADIRECT for a Microsoft SQL Server database using a DataDirect driver
- MSSQLSERVER\_MICROSOFT for a Microsoft SQL Server database using a Microsoft driver

**Note:** Support for the Microsoft SQL Server JDBC Driver, version 1.2 Microsoft SQL Server (Microsoft) driver was added in WebSphere Process Server, version 6.2.0.1.

- ORACLE9I for an Oracle 9i database
- ORACLE10G for an Oracle 10g or Oracle 11g database

**-debug**

Turns on the debug function of the Apache Ant utility, which the `manageprofiles` command uses.

**-defaultPorts**

Assigns the default or base port values to the profile.

Do not use this parameter when using the `-startingPort` or `-portsFile` parameter.

During profile creation, the `manageprofiles` command uses an automatically generated set of recommended ports if you do not specify the `-startingPort` parameter, the `-defaultPorts` parameter or the `-portsFile` parameter. The recommended port values can be different than the default port values based on the availability of the default ports.

**Note:** Do not use this parameter if you are using the managed profile template.

**-delete**

Deletes the profile.

Deleting a profile does not delete the profile directory. For example, if you create a profile in the `/usr/WebSphere/ProcServer/profiles/managedProfile` directory or on i5/OS platforms, in the `QIBM/UserData/WebSphere/ProcServer/profiles/managedProfile` directory, the directory remains after you delete the profile.

You can delete or leave the directory. However, the `profile_root/logs` directory contains information about uninstalling the profile. For example, you might retain the `_nodeuninst.log` file to determine the cause of any problem during the uninstallation procedure.

If you delete a profile that has augmenting templates registered to it in the profile registry, then unaugment actions are performed automatically.

**-deleteAll**

Deletes all registered profiles.

Deleting a profile does not delete the profile directory. For example, suppose that you create a profile in the `/usr/WebSphere/ProcServer/profiles/managedProfile` directory or on i5/OS platforms, in the `QIBM/UserData/WebSphere/ProcServer/profiles/managedProfile` directory. The directory remains after you delete the profile.

You can delete or leave the directory. However, the `profile_root/logs` directory contains information about uninstalling the profile. For example, you might retain the `_nodeuninst.log` file to determine the cause of any problem during the uninstallation procedure.

If you delete a profile that has augmenting templates registered to it in the profile registry, then unaugment actions are performed automatically.

**-dmgrHost** *dmgr\_host\_name*

Identifies the workstation where the deployment manager is running. Specify this parameter and the **dmgrPort** parameter to federate a custom profile as it is created or augmented. This parameter is available with the `managed.wbiserver` and `managed.esbserver` profile templates.

The host name can be the long or short DNS name or the IP address of the deployment manager workstation.

Specifying this optional parameter directs the `manageprofiles` command to attempt to federate the custom node into the deployment manager cell as it creates the custom profile. This parameter is ignored when creating a deployment manager profile or stand-alone server profile.

If you federate a custom node when the deployment manager is not running, the installation indicator in the logs is `INSTCONFFAILED` to indicate a complete failure. The resulting custom profile is unusable. You must move the custom profile directory out of the profile repository (the profile's installation root directory) before creating another custom profile with the same profile name.

If you have enabled security or changed the default JMX connector type, you cannot federate with the `manageprofiles` command. Use the `addNode` command instead.

The default value for this parameter is `localhost`. The value for this parameter must be a properly formed host name and must not contain spaces or characters that are not valid such as the following: `*`, `?`, `"`, `<`, `>`, `,`, `/`, `\`, and `|`. A connection to the deployment manager must also be available in conjunction with the `dmgrPort` parameter.

**-dmgrPort** *dmgr\_port\_number*

Identifies the SOAP port of the deployment manager. Specify this parameter and the `dmgrHost` parameter to federate a custom profile as it is created or augmented. The deployment manager must be running and accessible.

If you have enabled security or changed the default JMX connector type, you cannot federate with the `manageprofiles` command. Use the `addNode` command instead.

The default value for this parameter is `8879`. The port that you indicate must be a positive integer and a connection to the deployment manager must be available in conjunction with the `dmgrHost` parameter.

**-enableAdminSecurity true | false**

Enables administrative security. Valid values include `true` or `false`. The default value is `false`. If you are creating profiles for a deployment environment, you must set this parameter to `true`. Use this parameter when creating profiles only. Do not supply this parameter when augmenting an existing profile.

When `enableAdminSecurity` is set to `true`, you must also specify the parameters `-adminUserName` and `-adminPassword` along with the values for these parameters. If samples were installed during the application server installation, you must also specify the `-samplesPassword` parameter when creating a profile for which administrative security is enabled. If the `-samplesPassword` parameter is not specified when administrative security is enabled, the profile is created successfully, but when you attempt to run the samples, exceptions and failures will be put in the server system out log.

**Linux -enableService true | false**

Enables the creation of a Linux service. Valid values include `true` or `false`. The default value for this parameter is `false`. Use this parameter when creating profiles only. Do not supply this parameter when augmenting an existing profile.

When the `manageprofiles` command is run with the `-enableService` option set to `true`, the Linux service is created with the profile when the command is run by the root user. When a non-root user runs the `manageprofiles` command, the profile is created, but the Linux service is not. The Linux service is not created because the non-root user does not have sufficient permission to set up

the service. An INSTCONPARTIALSUCCESS result is displayed at the end of the profile creation and the profile creation log *install\_root/logs/manageprofiles/profile\_name\_create.log* contains a message indicating the current user does not have sufficient permission to set up the Linux service.

**-federateLater true | false**

Indicates if the managed profile will be federated during profile creation or if you will federate it later using the addNode command. If you are creating a WebSphere Process Server profile, do not supply a value; use the default of true.

**-federateLaterProcServer true | false**

Indicates if the managed profile will be federated later using the managed.wbiserver template. Valid values are true or false. If the **dmgrHost**, **dmgrPort**, **dmgrAdminUserName** and **dmgrAdminPassword** parameters are not set, the default value for this parameter is true.

**-federateLaterWESB true | false**

Indicates if the managed profile will be federated later using the managed.wesbserver template. Valid values are true or false. If the **dmgrHost**, **dmgrPort**, **dmgrAdminUserName** and **dmgrAdminPassword** parameters are not set, the default value for this parameter is true.

**-fileStoreForME true | false**

If set to true, the file store data store will be used for the messaging engines. The default value for this parameter is false.

**Note:** The **-dbCommonForME** and **-fileStoreForME** parameters cannot both be set to true. This causes a validation error.

**-getDefaultName**

Returns the name of the default profile.

**-getName**

Gets the name for a profile registered at a given **-profilePath** parameter.

**-getPath**

Gets the file system location for a profile of a given name. Requires the **-profileName** parameter.

**-help**

Displays command syntax.

**-hostName** *host\_name*

Specifies the host name where you are creating the profile. Do not supply this parameter when augmenting an existing profile. This should match the host name that you specified during installation of the initial product. The default value for this parameter is the long form of the domain name system. This parameter is required for profile creation only. The value for this parameter must be a valid IPv6 host name and must not contain spaces or any characters that are not valid such as the following: \*, ?, ", <, >, ,, /, \, and |.

**-ignoreStack**

An optional parameter that is used with the **-templatePath** parameter to unaugment a particular profile that has been augmented.

**Note:** Using profiles that have been unaugmented (**-unaugment** parameter) is not supported for WebSphere Process Server.

**-isDefault**

Specifies that the profile identified by the accompanying **-profileName**

parameter is to be the default profile once it is registered. When issuing commands that address the default profile, it is not necessary to use the `-profileName` attribute of the command.

#### **-isDeveloperServer**

Specifies whether the server is intended for development purposes only. This parameter is useful when creating profiles to test applications on a non-production server prior to deploying the applications on their production application servers. This parameter is valid only for creating profiles on WebSphere Process Server.

If **-isDeveloperServer** is set when creating a WebSphere Process Server profile, then a preconfigured VMM file repository is installed. This file repository contains a sample organization that can be used to test Business Process Choreographer people resolution, ready for you to use as is.

#### **-listProfiles**

Lists all defined profiles.

#### **-ndtopology**

Indicates if you want to use the deployment environment path for creating the profile. Valid values are true or false.

#### **-nodeName** *node\_name*

Specifies the node name for the node that is created with the new profile. Do not supply this parameter when augmenting an existing profile. Use a unique value within the cell or on the workstation. Each profile that shares the same set of product binaries must have a unique node name. This parameter is required for profile creation only with the default.wbiserver, dmgr.wbiserver, and managed.wbiserver templates.

**Linux** **UNIX** **Windows** The default value for this parameter is based on the short host name, profile type, and a trailing number, for example:

```
if (DMgr)
  shortHostNameCellManagerNodeNumber
else
  shortHostNameNodeNodeNumber
```

where *NodeNumber* is a sequential number starting at 01.

**i5/OS** The default node names are as follows:

- dmgr template: *profilenameManager*
- default template: *shorthostname\_profilename*
- managed template: *shorthostname\_profilename*
- cell: See the previous dmgr and default template examples and apply as appropriate to the two profiles that are created.

The value for this parameter must not contain spaces or any characters that are not valid such as the following: \*, ?, ", <, >, ,, /, \, and |, .

#### **-omitAction** *feature1 feature2... featureN*

An optional parameter that excludes profile features.

Each profile template comes predefined with certain optional features. The `samplesInstallAndConfig` option is only available when the product is installed with samples applications selected. The following optional features can be used with the `-omitAction` parameter for the following profile templates:

- **default** - Application server
  - `deployAdminConsole`

- samplesInstallAndConfig
- defaultAppDeployAndConfig
- **dmgr** - Deployment manager
  - deployAdminConsole

**-portsFile** *file\_path*

An optional parameter that specifies the path to a file that defines port settings for the new profile. Do not supply this parameter when augmenting an existing profile.

Do not use this parameter when using the `-startingPort` or `-defaultPorts` parameter.

During profile creation, the `manageprofiles` command uses an automatically generated set of recommended ports if you do not specify the `-startingPort` parameter, the `-defaultPorts` parameter or the `-portsFile` parameter. The recommended port values can be different than the default port values based on the availability of the default ports.

**-profileName** *profile\_name*

Specifies the name of the profile. Use a unique value when creating a profile.

Each profile that shares the same set of product binaries must have a unique name. The default profile name is based on the profile type and a trailing number, for example:

*profileType ProfileNumber*

where *profileType* is a value such as `ProcSrv`, `Dmgr`, or `Custom` and *ProfileNumber* is a sequential number that creates a unique profile name.

The value for this parameter must not contain spaces or characters that are not valid such as the following: `*`, `?`, `"`, `<`, `>`, `,`, `/`, `\`, and `|`. The profile name that you choose must not be in use.

**-profilePath** *profile\_root*

Specifies the fully qualified path to the profile, which is referred to throughout the information center as the *profile\_root*.

For example:

`-profilePath profile_root`

Use this parameter when creating profiles only. Do not set this parameter for augmenting an existing profile.

**Windows** **On Windows platforms:** If the fully qualified path contains spaces, enclose the value in quotation marks.

The default value is based on the *install\_root* directory, the profiles subdirectory, and the name of the file.

For example, the default for profile creation is:

`WS_WSPROFILE_DEFAULT_PROFILE_HOME/profileName`

where `WS_WSPROFILE_DEFAULT_PROFILE_HOME` is defined in the `wasprofile.properties` file in the *install\_root/properties* directory.

The value for this parameter must be a valid path for the target system and must not be currently in use.

You must have permissions to write to the directory.

**-response** *response\_file*

Accesses all API functions from the command line using the `manageprofiles` command.

The command line interface can be driven by a response file that contains the input arguments for a given command in the properties file in key and value format. The following is an example response file for a create operation:

```
create
profileName=testResponseFileCreate
profilePath=profile_root
templatePath=install_root/profileTemplates/default
nodeName=myNodeName
cellName=myCellName
hostName=myHostName
omitAction=myOptionalAction1, myOptionalAction2
```

**Windows**

**On Windows platforms:** The path statement in the Windows operating system can use either forward slashes (/) or back slashes (\). If the path statement uses back slashes, then the response file requires double back slashes for the response file to correctly understand the path. Here is an example of a response file for a create operation that uses the double back slashes:

```
create
templatePath=C:\\WebSphere\\ProcServer\\profileTemplates\\default
```

To determine which input arguments are required for the various types of profile templates and action, use the `manageprofiles` command with the **-help** parameter.

**-restoreProfile**

Restores a profile backup. Must be used with the `-backupFile` parameter. This parameter is not supported for WebSphere Process Server.

**-samplesPassword** *samplesPassword*

Creates a password to be used for samples. The password is used to restrict access to Web application samples installed during the installation of the application server.

**Linux**

**-serviceUserName** *service\_user\_ID*

Specifies the user ID that is used during the creation of the Linux service so that the Linux service will run under this user ID. The Linux service runs whenever the user ID is logged on.

**-setDefaultName**

Sets the default profile to one of the existing profiles. Must be used with the `-profileName` parameter, for example:

```
manageprofiles(.bat)(.sh) -setDefaultName -profileName profile_name
```

**-startingPort** *startingPort*

Specifies the starting port number for generating and assigning all ports for the profile.

Do not set this parameter if you are augmenting an existing profile. Port values are assigned sequentially from the **-startingPort** value, omitting those ports that are already in use. On all systems, except i5/OS, the system recognizes and resolves ports that are currently in use and determines the port assignments to avoid port conflicts.

Do not use this parameter with the **-defaultPorts** or **-portsFile** parameters.

During profile creation, the `manageprofiles` command uses an automatically generated set of recommended ports if you do not specify the **-startingPort**

parameter, the **-defaultPorts** parameter or the **-portsFile** parameter. The recommended port values can be different than the default port values based on the availability of the default ports.

**Note:** Do not use this parameter if you are using the managed profile template.

**-templatePath** *template\_path*

Specifies the directory path to the template files in the installation root directory. Within the profileTemplates directory are various directories that correspond to different profile types and that vary with the type of product installed. The profile directories are the paths that you indicate while using the **-templatePath** option. You can specify profile templates that lie outside the installation root, if you have any.

Use absolute paths. This parameter must exist as a directory and point to a valid template directory. Use the following templates with WebSphere Process Server:

- default.wbiserver: for a WebSphere Process Server stand-alone server profile, which defines a stand-alone server.
- dmgr.wbiserver: for a WebSphere Process Server deployment manager profile, which defines a deployment manager.
- managed.wbiserver: for a WebSphere Process Server custom profile, which, when federated to a deployment manager, defines a managed node.
- default.esbserver: for a WebSphere Enterprise Service Bus stand-alone server profile, which defines a stand-alone server.
- dmgr.esbserver: for a WebSphere Enterprise Service Bus deployment manager profile, which defines a deployment manager.
- managed.esbserver: for a WebSphere Enterprise Service Bus custom profile, which, when federated to a deployment manager, defines a managed node.

**-topologyPattern**

Determines the deployment environment patterns for the deployment manager you are creating. Valid values are CondensedSync, CondensedAsync or Reference.

**-topologyRole**

Indicates the function that the profile will play in the deployment environment, when you are federating a profile that has been created. Valid values are ADT for a deployment target, Messaging for host messaging or Support for supporting services. You can indicate one value or more than one value, each separated by a space, for example ADT Messaging Support or Messaging or ADT Support.

**-unaugment**

**Note:** Using profiles that have been unaugmented (**-unaugment** parameter) is not supported for WebSphere Process Server.

**-validateAndUpdateRegistry**

Checks all of the profiles that are listed in the profile registry to see if the profiles are present on the file system. Removes any missing profiles from the registry. Returns a list of the missing profiles that were deleted from the registry.

**-validateRegistry**

Checks all of the profiles that are listed in the profile registry to see if the profiles are present on the file system. Returns a list of missing profiles.

**-validatePorts**

Specifies the ports should be validated to ensure they are not reserved or in



use. This parameter helps you to identify ports that are not being used. If a port is determined to be in use, the profile creation stops and an error message displays. You can use this parameter at any time on the create command line. It is recommended to use this parameter with the `-portsFile` parameter.

**-webServerCheck true | false**

Indicates if you want to set up Web server definitions. Valid values include true or false. The default value for this parameter is false. Use this parameter when creating profiles only. Do not supply this parameter when augmenting an existing profile.

**-webServerHostname *webserver\_host\_name***

The host name of the server. The default value for this parameter is the long host name of the local workstation. Use this parameter when creating profiles only. Do not supply this parameter when augmenting an existing profile.

**-webServerInstallPath *webserver\_installpath\_name***

The installation path of the Web server, local or remote. Use this parameter when creating profiles only. Do not supply this parameter when augmenting an existing profile.

The default value for this parameter is dependent on the operating system of the local workstation and the value of the `webServerType` parameter. For

example: **AIX**

```
webServerType=IHS: webServerInstallPath defaulted to "/usr/IBM/HTTPServer"  
webServerType=IIS: webServerInstallPath defaulted to "n\a"  
webServerType=SUNJAVASYSTEM: webServerInstallPath defaulted to "/opt/sun/webserver"  
webServerType=DOMINO: webServerInstallPath defaulted to "?"  
webServerType=APACHE: webServerInstallPath defaulted to "?"  
webServerType=HTTPSERVER_ZOS: webServerInstallPath defaulted to "n/a"
```

**HP-UX**

```
webServerType=IHS: webServerInstallPath defaulted to "/opt/IBM/HTTPServer"  
webServerType=IIS: webServerInstallPath defaulted to "n\a"  
webServerType=SUNJAVASYSTEM: webServerInstallPath defaulted to "/opt/sun/webserver"  
webServerType=DOMINO: webServerInstallPath defaulted to ""  
webServerType=APACHE: webServerInstallPath defaulted to ""  
webServerType=HTTPSERVER_ZOS: webServerInstallPath defaulted to "n/a"
```

**Linux**

```
webServerType=IHS: webServerInstallPath defaulted to "/opt/IBM/HTTPServer"  
webServerType=IIS: webServerInstallPath defaulted to "n\a"  
webServerType=SUNJAVASYSTEM: webServerInstallPath defaulted to "/opt/sun/webserver"  
webServerType=DOMINO: webServerInstallPath defaulted to ""  
webServerType=APACHE: webServerInstallPath defaulted to ""  
webServerType=HTTPSERVER_ZOS: webServerInstallPath defaulted to "n/a"
```

**Solaris**

```
webServerType=IHS: webServerInstallPath defaulted to "/opt/IBM/HTTPServer"  
webServerType=IIS: webServerInstallPath defaulted to "n\a"  
webServerType=SUNJAVASYSTEM: webServerInstallPath defaulted to "/opt/sun/webserver"  
webServerType=DOMINO: webServerInstallPath defaulted to ""  
webServerType=APACHE: webServerInstallPath defaulted to ""  
webServerType=HTTPSERVER_ZOS: webServerInstallPath defaulted to "n/a"
```

**Windows**

```
webServerType=IHS: webServerInstallPath defaulted to "C:\Program Files\IBM\HTTPServer"  
webServerType=IIS: webServerInstallPath defaulted to "C:\"  
webServerType=SUNJAVASYSTEM: webServerInstallPath defaulted to "C:\"
```

webServerType=DOMINO: webServerInstallPath defaulted to ""  
webServerType=APACHE: webServerInstallPath defaulted to ""  
webServerType=HTTPSERVER\_ZOS: webServerInstallPath defaulted to "n/a"

**-webServerName** *webserver\_name*

The name of the Web server. The default value for this parameter is `webserver1`. Use this parameter when creating profiles only. Do not supply this parameter when augmenting an existing profile.

**-webServerOS** *webserver\_operating\_system*

The operating system from where the Web server resides. Valid values include: `windows`, `linux`, `solaris`, `aix`, `hpux`, `os390`, and `os400`. Use this parameter with the **webServerType** parameter.

Use this parameter when creating profiles only. Do not supply this parameter when augmenting an existing profile.

**-webServerPluginPath** *webserver\_pluginpath*

The path to the plug-ins that the Web server uses. The default value for this parameter is `install_root/plugins`. Use this parameter when creating profiles only. Do not supply this parameter when augmenting an existing profile.

**-webServerPort** *webserver\_port*

Indicates the port from where the Web server will be accessed. The default value for this parameter is `80`. Use this parameter when creating profiles only. Do not supply this parameter when augmenting an existing profile.

**-webServerType** *webserver\_type*

The type of the Web server. Valid values include: `IHS`, `SUNJAVASYSTEM`, `IIS`, `DOMINO`, `APACHE`, and `HTTPSERVER_ZOS`. Use this parameter with the **webServerOS** parameter. Use this parameter when creating profiles only. Do not supply this parameter when augmenting an existing profile.

**Windows** **-winserviceAccountType** *specifieduser* | **localsystem**

The type of the owner account of the Windows service created for the profile. Use this parameter when creating profiles only. Do not supply this parameter when augmenting an existing profile.

Valid values include `specifieduser` or `localsystem`. The `localsystem` value runs the Windows service under the local account of the user who creates the profile. The default value for this parameter is `system`.

**Windows** **-winserviceCheck** **true** | **false**

The value can be either `true` or `false`. Specify `true` to create a Windows service for the server process that is created within the profile. Specify `false` to not create the Windows service. The default value for this parameter is `false`.

Use this parameter when creating profiles only. Do not supply this parameter when augmenting an existing profile.

**Windows** **-winservicePassword** *winservice\_password*

Specify the password for the specified user or the local account that is to own the Windows service. Use this parameter when creating profiles only. Do not supply this parameter when augmenting an existing profile.

**Windows** **-winserviceStartupType** **manual** | **automatic** | **disabled**

Possible values for Windows service startup are:

- `manual`
- `automatic`
- `disabled`

The default value for this parameter is manual.

Use this parameter when creating profiles only. Do not supply this parameter when augmenting an existing profile.

**Windows** **-winserviceUserName** *winservice\_user\_ID*

Specify your user ID so that the Windows operating system can verify you as an ID that is capable of creating a Windows service. Your user ID must belong to the Administrator group and have the following advanced user rights:

- Act as part of the operating system
- Log on as a service

The default value for this parameter is the current user name. The value for this parameter must not contain spaces or characters that are not valid such as the following: \*, ?, ", <, >, ,, /, \, and |. The user that you specify must have the proper permissions to create a Windows service. You must specify the correct password for the user name that you choose.

Use this parameter when creating profiles only. Do not supply this parameter when augmenting an existing profile.

### **manageprofiles parameters for Common database configuration (per database product)**

You use specific manageprofiles command parameters to configure the Common database. Parameters you specify can differ depending on the database product you are using and on the type of profile you are creating.

The tables in this topic show the manageprofiles parameters available to configure the Common database using any supported database product. Parameters associated with Common database configuration generally have a **-db** prefix (**-dbType**, **-dbDelayConfig**, etc.). For a complete list of manageprofiles parameters, including default values, see the topic “manageprofiles parameters” on page 253. Example manageprofiles commands used to create or augment various types of profiles can be viewed in the topics “Creating profiles with manageprofiles command with Derby or DB2 databases – examples” on page 205 and “Augmenting profiles with manageprofiles command with Derby or DB2 databases – examples” on page 238.

To view available parameters for database configuration, choose your database product from the following list:

- “On Derby Embedded” on page 270
- “On Derby Network Server” on page 270
- “On DB2 Universal” on page 270
- “On DB2 Universal Runtime Client” on page 271
- “On DB2 UDB for iSeries (Native), DB2 UDB for iSeries (Toolbox), DB2 for i5/OS (Native), and DB2 for i5/OS (Toolbox)” on page 272
- “On DB2 for z/OS v8 and DB2 for z/OS v9” on page 272
- “On Oracle 9i, Oracle 10g, and Oracle 11g” on page 273
- “On Informix Dynamic Server” on page 274
- “On Microsoft SQL Server” on page 274

Note that only the **-dbType** and **-dbJDBCClasspath** parameters are available for custom profiles. This is because you are simply identifying the type and driver location for the Common database used by the deployment manager to which you will federate the custom profile.

## On Derby Embedded

Table 87 shows the manageprofiles parameters available to configure the Common database used by a stand-alone server profile on Derby Embedded.

*Table 87. Available manageprofiles parameters for configuration of Common database using Derby Embedded*

Parameter
<b>For stand-alone server profiles</b>
-dbCreateNew (must always be true)
-dbName
-dbOutputScriptDir
-dbType
-fileStoreForME (for stand-alone server profiles only)

## On Derby Network Server

Table 88 shows the manageprofiles parameters available to configure the Common database used by a stand-alone server, deployment manager, or custom profile on Derby Network Server.

*Table 88. Available manageprofiles parameters for configuration of Common database using Derby Network Server*

Parameter
<b>For custom profiles</b>
-dbType
-dbJDBCClasspath
<b>For stand-alone server or deployment manager profiles</b>
-dbCommonForME (for stand-alone server profiles only)
-dbCreateNew (must always be true)
-dbHostName
-dbName
-dbOutputScriptDir
-dbPassword
-dbServerPort
-dbType
-dbUserId
-fileStoreForME (for stand-alone server profiles only)

## On DB2 Universal

Table 89 on page 271 shows the manageprofiles parameters available to configure the Common database used by a stand-alone server, deployment manager, or custom profile on DB2 Universal.

Table 89. Available manageprofiles parameters for configuration of Common database using DB2 Universal

Parameter
<b>For custom profiles</b>
-dbJDBCClasspath
-dbType
<b>For stand-alone server or deployment manager profiles</b>
-dbCommonForME (for stand-alone server profiles only)
-dbCreateNew
-dbDelayConfig
-dbDriverType
-dbHostName
-dbJDBCClasspath
-dbName
-dbOutputScriptDir
-dbPassword
-dbServerPort
-dbType
-dbUserId
-fileStoreForME (for stand-alone server profiles only)

## On DB2 Universal Runtime Client

Table 90 shows the manageprofiles parameters available to configure the Common database used by a stand-alone server, deployment manager, or custom profile on DB2 Universal Runtime Client.

Table 90. Available manageprofiles parameters for configuration of Common database using DB2 Universal Runtime Client

Parameter
<b>For custom profiles</b>
-dbJDBCClasspath
-dbType
<b>For stand-alone server or deployment manager profiles</b>
-dbCommonForME (for stand-alone server profiles only)
-dbCreateNew
-dbDelayConfig
-dbJDBCClasspath
-dbName
-dbOutputScriptDir
-dbPassword
-dbType

Table 90. Available manageprofiles parameters for configuration of Common database using DB2 Universal Runtime Client (continued)

Parameter
-dbUserId
-fileStoreForME (for stand-alone server profiles only)

### On DB2 UDB for iSeries (Native), DB2 UDB for iSeries (Toolbox), DB2 for i5/OS (Native), and DB2 for i5/OS (Toolbox)

Table 91 shows the manageprofiles parameters available to configure the Common database used by a stand-alone server, deployment manager, or custom profile on a database supplied with an i5/OS operating system.

Table 91. Available manageprofiles parameters for configuration of Common database using a database supplied with an i5/OS operating system

Parameter
<b>For custom profiles</b>
-dbJDBCClasspath
-dbType
<b>For stand-alone server or deployment manager profiles</b>
-dbCommonForME (for stand-alone server profiles only)
-dbCreateNew
-dbDelayConfig
-dbHostName (for Toolbox driver, you need to specify the remote database host name)
-dbJDBCClasspath
-dbName
-dbOutputScriptDir
-dbPassword
-dbSchemaName
-dbType
-dbUserId
-fileStoreForME (for stand-alone server profiles only)

### On DB2 for z/OS v8 and DB2 for z/OS v9

Table 92 shows the manageprofiles parameters available to configure the Common database used by a stand-alone server, deployment manager, or custom profile on DB2 for z/OS v8 or DB2 for z/OS v9.

Table 92. Available manageprofiles parameters for configuration of Common database using DB2 for z/OS v8 or DB2 for z/OS v9

Parameter
<b>For custom profiles</b>
-dbJDBCClasspath
-dbType

Table 92. Available manageprofiles parameters for configuration of Common database using DB2 for z/OS v8 or DB2 for z/OS v9 (continued)

Parameter
<b>For stand-alone server or deployment manager profiles</b>
-dbCommonForME (for stand-alone server profiles only)
-dbConnectionLocation
-dbCreateNew (must always be false)
-dbDelayConfig
-dbHostName
-dbJDBCClasspath
-dbName
-dbOutputScriptDir
-dbPassword
-dbSchemaName
-dbServerPort
-dbStorageGroup
-dbType
-dbUserId
-fileStoreForME (for stand-alone server profiles only)

## On Oracle 9i, Oracle 10g, and Oracle 11g

Table 93 shows the manageprofiles parameters available to configure the Common database used by a stand-alone server, deployment manager, or custom profile on Oracle 9i, Oracle 10g, or Oracle 11g.

Table 93. Available manageprofiles parameters for configuration of Common database using Oracle 9i, Oracle 10g, or Oracle 11g

Parameter
<b>For custom profiles</b>
-dbJDBCClasspath
-dbType
<b>For stand-alone server or deployment manager profiles</b>
-dbCommonForME (for stand-alone server profiles only)
-dbCreateNew (must always be false)
-dbDelayConfig
-dbDriverType
-dbHostName
-dbJDBCClasspath
-dbName
-dbOutputScriptDir
-dbPassword

Table 93. Available manageprofiles parameters for configuration of Common database using Oracle 9i, Oracle 10g, or Oracle 11g (continued)

Parameter
-dbServerPort
-dbType
-dbUserId
-fileStoreForME (for stand-alone server profiles only)

## On Informix Dynamic Server

Table 94 shows the manageprofiles parameters available to configure the Common database used by a stand-alone server, deployment manager, or custom profile on Informix Dynamic Server.

Table 94. Available manageprofiles parameters for configuration of Common database using Informix Dynamic Server

Parameter
<b>For custom profiles</b>
-dbJDBCClasspath
-dbType
<b>For stand-alone server or deployment manager profiles</b>
-dbCommonForME (for stand-alone server profiles only)
-dbCreateNew
-dbDelayConfig
-dbHostName
-dbInstance
-dbJDBCClasspath
-dbLocation (only if <b>-dbCreateNew</b> is true)
-dbName
-dbOutputScriptDir
-dbPassword
-dbServerPort
-dbType
-dbUserId
-fileStoreForME (for stand-alone server profiles only)

## On Microsoft SQL Server

Table 95 on page 275 shows the manageprofiles parameters that are available to configure the Common database that is used by a stand-alone server, deployment manager, or custom profile on Microsoft SQL Server. Three JDBC drivers are available for this database: DataDirect Connect JDBC (XA) 3.5 build 37 (type 4), IBM WebSphere embedded Connect JDBC (XA) 3.5 build 37 (type 4), and Microsoft SQL Server JDBC Driver, version 1.2. The driver names that are displayed on the



Database Configuration page are Microsoft SQL Server (DataDirect), Microsoft SQL Server (Embedded), and Microsoft SQL Server (Microsoft), respectively.

**Note:** Support for the Microsoft SQL Server JDBC Driver, version 1.2 was added in WebSphere Process Server, version 6.2.0.1.

*Table 95. Available manageprofiles parameters for configuration of Common database using Microsoft SQL Server.*

Parameter
<b>For custom profiles</b>
-dbJDBCClasspath
-dbType
<b>For stand-alone server or deployment manager profiles</b>
-dbCommonForME (for stand-alone server profiles only)
-dbCreateNew
-dbDelayConfig
-dbHostName
-dbJDBCClasspath
-dbName
-dbOutputScriptDir
-dbPassword
-dbServerPort
-dbType
-dbUserId
-fileStoreForME (for stand-alone server profiles only)

### **manageprofiles parameters for Common Event Infrastructure database configuration (per database product)**

You use specific manageprofiles command parameters to configure the Common Event Infrastructure database used by a stand-alone server profile. Parameters you specify can differ depending on the database product you are using.

The tables in this topic show the manageprofiles parameters available to configure the Common Event Infrastructure database using any supported database product. You configure the Common Event Infrastructure database using the manageprofiles command only for stand-alone server profiles. Configuration of this database for use by deployment manager profiles must be done through the administrative console or scripting. See the topic *Configuring the event database* for more information.

For a complete list of manageprofiles parameters, including default values, see the topic *manageprofiles parameters* on page 253. Example manageprofiles commands used to create or augment various types of profiles can be viewed in the topics *Creating profiles with manageprofiles command with Derby or DB2 databases – examples* on page 205 and *Augmenting profiles with manageprofiles command with Derby or DB2 databases – examples* on page 238.

To view available parameters for database configuration, choose your database product from the following list:

- “On Derby Embedded”
- “On Derby Network Server”
- “On DB2 Universal”
- “On DB2 UDB for iSeries (Native), DB2 UDB for iSeries (Toolbox), DB2 for i5/OS (Native), and DB2 for i5/OS (Toolbox)” on page 277
- “On DB2 for z/OS v8 and DB2 for z/OS v9” on page 277
- “On Oracle 9i, Oracle 10g, and Oracle 11g” on page 278
- “On Informix Dynamic Server” on page 279
- “On Microsoft SQL Server” on page 279

## On Derby Embedded

Table 96 shows the manageprofiles parameters available to configure the Common Event Infrastructure database used by a stand-alone server profile on Derby Embedded.

*Table 96. Available manageprofiles parameters for configuration of Common Event Infrastructure database using Derby Embedded*

Parameter
-dbDelayConfig
-ceiDbName
-dbType
-dbOutputscriptDir
-ceiOverrideDataSource

## On Derby Network Server

Table 97 shows the manageprofiles parameters available to configure the Common Event Infrastructure database used by a stand-alone server profile on Derby Network Server.

*Table 97. Available manageprofiles parameters for configuration of Common Event Infrastructure database using Derby Network Server*

Parameter
-dbDelayConfig
-dbHostName
-ceiDbName
-dbPassword
-dbServerPort
-dbType
-dbUserId
-dbOutputscriptDir
-ceiOverrideDataSource

## On DB2 Universal

Table 98 on page 277 shows the manageprofiles parameters available to configure the Common Event Infrastructure database used by a stand-alone server profile on

DB2 Universal.

*Table 98. Available manageprofiles parameters for configuration of Common Event Infrastructure database using DB2 Universal*

Parameter
-dbDelayConfig
-dbHostName
-ceiDbName
-ceiDbNodeName (required only if the server is configured as a DB2 client and -dbDelayConfig is set to true)
-dbPassword
-dbServerPort
-dbType
-dbUserId
-dbJDBCClasspath
-dbOutputscriptDir
-ceiOverrideDataSource

### **On DB2 UDB for iSeries (Native), DB2 UDB for iSeries (Toolbox), DB2 for i5/OS (Native), and DB2 for i5/OS (Toolbox)**

Table 99 shows the manageprofiles parameters available to configure the Common Event Infrastructure database used by a stand-alone server profile on the database supplied with an i5/OS operating system.

*Table 99. Available manageprofiles parameters for configuration of Common Event Infrastructure database using a database supplied with an i5/OS operating system*

Parameter
-dbSchemaName
-ceiDbAlreadyConfigured
-dbDelayConfig
-dbHostName
-ceiDbName
-dbPassword
-dbType
-dbUserId
-dbJDBCClasspath
-dbOutputscriptDir
-ceiOverrideDataSource

### **On DB2 for z/OS v8 and DB2 for z/OS v9**

Table 100 on page 278 shows the manageprofiles parameters available to configure the Common Event Infrastructure database used by a stand-alone server profile on DB2 for z/OS v8 or DB2 for z/OS v9.

Table 100. Available manageprofiles parameters for configuration of Common Event Infrastructure database using DB2 for z/OS v8 or DB2 for z/OS v9

Parameter
-ceiBufferPool4k
-ceiBufferPool8k
-ceiBufferPool16k
-dbSchemaName
-dbDelayConfig
-dbHostName
-ceiDbName
-dbPassword
-dbType
-dbConnectionLocation
-dbUserId
-ceiDiskSizeInMB
-dbJDBCClasspath
-dbOutputscriptDir
-ceiOverrideDataSource
-dbStorageGroup

## On Oracle 9i, Oracle 10g, and Oracle 11g

Table 101 shows the manageprofiles parameters available to configure the Common Event Infrastructure database used by a stand-alone server profile on Oracle 9i, Oracle 10g, or Oracle 11g.

Table 101. Available manageprofiles parameters for configuration of Common Event Infrastructure database using Oracle 9i, Oracle 10g, or Oracle 11g

Parameter
-dbDelayConfig
-dbHostName
-ceiDbName
-dbPassword
-dbServerPort
-dbType
-dbSysPassword
-dbSysUserId
-dbUserId
-ceiInstancePrefix
<b>Note:</b> Deprecated in 6.2 for all databases except Informix, Oracle, Microsoft SQL Server.
-dbJDBCClasspath
-dbLocation (required only if -dbDelayConfig is set to true)
-dbOutputscriptDir
-ceiOverrideDataSource

## On Informix Dynamic Server

Table 102 shows the manageprofiles parameters available to configure the Common Event Infrastructure database used by a stand-alone server profile on Informix Dynamic Server.

*Table 102. Available manageprofiles parameters for configuration of Common Event Infrastructure database using Informix Dynamic Server*

Parameter
-dbDelayConfig
-dbHostName
-dbLocation (required only if -dbDelayConfig is set to true)
-ceiDbName
-dbPassword
-dbServerPort
-dbType
-dbInstance
-dbUserId
-ceiInstancePrefix <b>Note:</b> Deprecated in 6.2 for all databases except Informix, Oracle, Microsoft SQL Server.
-dbJDBCClasspath
-dbOutputscriptDir
-ceiOverrideDataSource

## On Microsoft SQL Server

Table 103 shows the manageprofiles parameters that are available to configure the Common database that is used by a stand-alone server, deployment manager, or custom profile on Microsoft SQL Server. Three JDBC drivers are available for this database: DataDirect Connect JDBC (XA) 3.5 build 37 (type 4), IBM WebSphere embedded Connect JDBC (XA) 3.5 build 37 (type 4), and Microsoft SQL Server JDBC Driver, version 1.2. The driver names that are displayed on the Database Configuration page are Microsoft SQL Server (DataDirect), Microsoft SQL Server (Embedded), and Microsoft SQL Server (Microsoft), respectively.

**Note:** Support for the Microsoft SQL Server JDBC Driver, version 1.2 was added in WebSphere Process Server, version 6.2.0.1.

*Table 103. Available manageprofiles parameters for configuration of Common Event Infrastructure database using Microsoft SQL Server.*

Parameter
-dbDelayConfig
-dbHostName
-ceiDbInstallDir (required only if -dbDelayConfig is set to true)
-ceiDbName
-dbPassword
-dbServerPort
-dbType

Table 103. Available manageprofiles parameters for configuration of Common Event Infrastructure database using Microsoft SQL Server. (continued)

Parameter
-dbInstance (required only if -dbDelayConfig is set to true)
-ceiDbUser <b>Note:</b> Deprecated in 6.2 for all databases except Microsoft SQL Server.
-ceiInstancePrefix <b>Note:</b> Deprecated in 6.2 for all databases except Informix, Oracle, Microsoft SQL Server.
-dbOutputscriptDir
-ceiOverrideDataSource
-ceiSaPassword <b>Note:</b> Deprecated in 6.2 for all databases except Microsoft SQL Server.
-ceiSaUser <b>Note:</b> Deprecated in 6.2 for all databases except Microsoft SQL Server.

## Configuring profiles with default values

Learn how to create or augment profiles using the Profile Management Tool with default configuration settings.

### Before you begin

The topics in this section assume that you are using the Profile Management Tool to create or augment profiles and are following the procedure in either “Creating profiles using the Profile Management Tool” on page 198 or “Augmenting profiles using the Profile Management Tool” on page 231. As a result, it is assumed that you have started the Profile Management Tool, have chosen to create or augment a stand-alone server, deployment manager, or custom profile, and have selected the **Typical** profile creation or augmentation option.

### About this task

When you choose to configure profiles with default values, the Profile Management Tool assigns default values to ports, profile location, profile names, node, host, and cell (when applicable), and also to any required database configurations.

For stand-alone server profiles, the Profile Management Tool also does the following tasks:

- Installs the administrative console.
- Lets you enable administrative security.
- If you enable administrative security, creates a sample Business Process Choreographer configuration.
- Configures Business Space powered by WebSphere using Derby Embedded.
- Configures the Common Event Infrastructure using Derby Embedded.
- Configures the Common database using Derby Embedded.
- Creates a system service to run the server if your operating system and the privileges of your user account permit the creation of services.
- Installs the default application (which contains the Snoop, Hello, and HitCount applications).

For deployment manager profiles, the Profile Management Tool also does the following tasks:

- Creates a system service to run the server if your operating system and the privileges of your user account permit the creation of services.
- Configures the Common database using Derby Network Server.

For custom profiles, the Profile Management Tool also lets you federate the node to an existing deployment manager during the creation or augmentation process, or federate it later using the `addNode` command. If you choose to federate the node to an existing deployment manager, that deployment manager must be configured to use Derby Network Server.

The following sub-topics explain how to configure a profile, depending on the profile type:

- “Configuring stand-alone server profiles using default values”
- “Configuring deployment manager profiles using default values” on page 284
- “Configuring custom profiles (managed nodes) using default values” on page 286

## Configuring stand-alone server profiles using default values

Learn how to use the Profile Management Tool to create and configure a WebSphere Process Server or WebSphere Enterprise Service Bus stand-alone server profile with default configuration settings.

### Before you begin

This topic assumes that you are using the Profile Management Tool to create or augment profiles and are following the procedure in either “Creating profiles using the Profile Management Tool” on page 198 or “Augmenting profiles using the Profile Management Tool” on page 231. As a result, it is assumed that you have started the Profile Management Tool, have chosen to create or augment a stand-alone server profile, and have selected the **Typical** profile creation or augmentation option.

### About this task

Selecting the **Typical** profile creation or augmentation option creates or augments a profile with default configuration settings. In this type of configuration, the Profile Management Tool assigns default values to ports, to the location of the profile, and to the names of the profile, node, host, and cell. The administrative console is installed, as is the default application (which contains the Snoop, Hello, and HitCount applications). You can optionally enable administrative security (unless you are augmenting a profile that has security enabled – then you must re-enter the administrative user ID and password of that profile to augment it to a WebSphere Process Server or WebSphere Enterprise Service Bus profile). If your operating system and the privileges of your user account permit, the tool creates a system service to run the server. The Common Event Infrastructure and Common database configurations are set to Derby Embedded.

If you enable security, the tool creates a sample Business Process Choreographer configuration for the profile. If you do not enable security, the sample configuration is not created.

It also configures Business Space powered by WebSphere using Derby Embedded.

**Restriction:** If you plan to federate this stand-alone server profile to a deployment manager, do not use the **Typical** option to create it. The default values for

messaging engine storage and database type provided in a **Typical** profile creation or augmentation are not suitable deployment environment installations. Use the **Advanced** option to create or augment the profile instead. See “Configuring stand-alone server profiles using customized values” on page 289 for instructions.

As a result of following the procedure in either “Augmenting profiles using the Profile Management Tool” on page 231 or “Creating profiles using the Profile Management Tool” on page 198, you are viewing either the Administrative security panel or the Profile summary panel. Complete the following steps to configure a new stand-alone server profile with default configuration values.

**Procedure**

1. The panel you see displayed in the Profile Management Tool depends on whether you are creating or augmenting a profile. If you are augmenting a profile, it also depends on whether security is enabled on that profile.

If you are performing	First step
<b>Typical profile augmentation</b> and administrative security <i>is</i> enabled on the profile you are augmenting.	The Administrative security panel is displayed. Proceed to step 2.
<b>Typical profile augmentation</b> and administrative security <i>is not</i> enabled on the profile you are augmenting.	The Profile summary panel is displayed. Proceed to step 3.
<b>Typical profile creation</b>	The Administrative security panel is displayed. Proceed to step 2.

2. Enable administrative security.

This screen differs depending on whether you are creating or augmenting a profile.

If you are creating a profile, you can enable administrative security now, or later from the administrative console. To enable administrative security now, leave the **Enable administrative security** check box selected, supply a user name and password to log onto the administrative console, and click **Next**. To disable administrative security, clear the check box. To enable administrative security later from the administrative console, open the console and select **Security > Business Integration Security**.

**Important:** If you want the Profile Management Tool to create a Business Process Choreographer sample configuration, you must enable administrative security.

If you are augmenting a profile and see this panel, the profile you are augmenting has security enabled. You must re-enter the administrative user ID and password for that profile.

The Profile summary panel is displayed.

3. In the Profile summary panel, click **Create** or **Augment** to create or augment the profile or **Back** to change the characteristics of the profile.

When the profile creation or augmentation is complete, the Profile complete panel is displayed with the message **The Profile Management tool created the profile successfully** or **The Profile Management tool augmented the profile successfully**.



**Attention:** If errors are detected during profile creation or augmentation, other messages might appear in place of the success message, for example:

- **The Profile Management tool created the profile but errors occurred**, which indicates that profile creation completed but errors were generated.
- **The Profile Management tool cannot create the profile**, which indicates that profile creation failed completely.
- **The Profile Management tool augmented the profile but errors occurred**, which indicates that profile augmentation completed but errors were generated.
- **The Profile Management tool cannot augment the profile**, which indicates that profile augmentation failed completely.

The Profile complete panel identifies the log file to reference in order to troubleshoot the problems. See the descriptions of relevant log files listed in “Installation and profile creation log files” on page 669.

You can review other useful troubleshooting information in the following topics:

- Chapter 15, “Troubleshooting installation and configuration,” on page 665
  - “Troubleshooting the launchpad application” on page 674
  - “Troubleshooting a silent installation” on page 675
  - “i5/OS installation troubleshooting tips” on page 676
  - “Diagnosing a failing Ant configuration script” on page 677
  - “Messages: installation and profile creation” on page 668
  - “Recovering from profile creation or augmentation failure” on page 678
4. In the Profile complete panel, select **Launch the First steps console**, **Create another profile**, or both; click **Finish** to exit. Use the First steps console to start the server. Use the **Create another profile** option to restart the Profile Management Tool to create additional profiles.

## Results

You have completed one of the following tasks:

- Created a WebSphere Process Server or WebSphere Enterprise Service Bus profile.
- Augmented a WebSphere Application Server, WebSphere Application Server Network Deployment, or WebSphere Enterprise Service Bus profile into a Websphere Process Server profile.
- Augmented a WebSphere Application Server or WebSphere Application Server Network Deployment profile into a WebSphere Enterprise Service Bus profile.

The node within the profile has a server named server1 for Linux, UNIX, and Windows platforms or servername for i5/OS platforms and the number is incremented if there is more than one WebSphere Process Server installation.

## What to do next

Check the server operation by selecting **Start the server** from the First steps console. An output window opens. If you see a message similar to the following, your server is operating properly:

```
ADMU3000I: Server server1 open for e-business; process id is 3348
```

You can also check server operation by running the Installation Verification Test (IVT) from the First steps console or running the `wbi_ivt` command. This test is to verify that your deployment manager or stand-alone server installation is operating properly. For a stand-alone server profile, it also runs a Health Monitor check and generates a report.

## Configuring deployment manager profiles using default values

Learn how to use the Profile Management Tool to create and configure a WebSphere Process Server or WebSphere Enterprise Service Bus deployment manager profile using default configuration values.

### Before you begin

This topic assumes that you are using the Profile Management Tool to create or augment profiles and are following the procedure in either “Creating profiles using the Profile Management Tool” on page 198 or “Augmenting profiles using the Profile Management Tool” on page 231. As a result, it is assumed that you have started the Profile Management Tool, have chosen to create or augment a deployment manager profile, and have selected the **Typical** profile creation or augmentation option.

### About this task

Selecting the **Typical** profile creation or augmentation option creates or augments a profile with default configuration settings. In this type of configuration, the Profile Management Tool assigns default values to ports, to the location of the profile, and to the names of the profile, node, host, and cell. The administrative console is installed. You can optionally enable administrative security (unless you are augmenting a profile that has security enabled – then you must re-enter the administrative user ID and password of that profile to augment it to a WebSphere Process Server or WebSphere Enterprise Service Bus profile). If your operating system and the privileges of your user account permit, the tool creates a system service to run the server. The Common database configuration is set to Derby Network Server.

As a result of following the procedure in either “Augmenting profiles using the Profile Management Tool” on page 231 or “Creating profiles using the Profile Management Tool” on page 198, you are viewing the Administrative security panel or the Profile summary panel. Complete the following steps to configure a new deployment manager profile using default values.

### Procedure

1. The panel you see in the Profile Management Tool depends on whether you are creating or augmenting a profile, and if you are augmenting, on whether administrative security is enabled on the profile.

If you are performing	First step
<b>Typical profile augmentation</b> and administrative security <i>is</i> enabled on the profile you are augmenting.	The Administrative security panel is displayed. Proceed to step 2 on page 285.
<b>Typical profile augmentation</b> and administrative security is <i>not</i> enabled on the profile you are augmenting.	The Profile summary panel is displayed. Proceed to step 3 on page 285.
<b>Typical profile creation</b>	The Administrative security panel is displayed. Proceed to step 2 on page 285.

2. Enable administrative security.

This screen differs depending on whether you are creating or augmenting a profile.

If you are creating a profile, you can enable administrative security now, or later from the administrative console. To enable administrative security now, leave the **Enable administrative security** check box selected, supply a user name and password to log onto the administrative console, and click **Next**. To disable administrative security, clear the check box. To enable administrative security later from the administrative console, open the console and click **Security > Business Integration Security**.

If you are augmenting a profile and see this panel, the profile you are augmenting has security enabled. You must re-enter the administrative user ID and password for that profile.

The Profile summary panel is displayed.

3. In the Profile summary panel, click **Create** or **Augment** to create or augment the profile or **Back** to change the characteristics of the profile.

When the profile creation or augmentation is complete, the Profile complete panel is displayed with the message **The Profile Management tool created the profile successfully** or **The Profile Management tool augmented the profile successfully**.

4. In the Profile complete panel, select **Launch the First steps console, Create another profile**, or both; click **Finish** to exit. Use the First steps console start the server. Use the **Create another profile** option to restart the Profile Management Tool to create additional profiles.

5. If you plan to use the Business Process Choreographer component in your environment, you must configure it. You might need your DBA to create and configure the Business Process Choreographer database.

For more information, see the topics under Configuring Business Process Choreographer.

## Results

You have completed one of the following tasks:

- Created a WebSphere Process Server or a Websphere Enterprise Service Bus profile.
- Augmented a WebSphere Application Server Network Deployment or WebSphere Enterprise Service Bus profile into a WebSphere Process Server profile.
- Augmented a WebSphere Application Server Network Deployment profile into a WebSphere Enterprise Service Bus profile.

The node defined by the profile has a deployment manager named Dmgr.

## What to do next

Check the server operation by selecting **Start the deployment manager** from the First steps console. An output window opens. If you see a message similar to the following, your deployment manager is operating properly:

```
ADMU3000I: Server dmgr open for e-business; process id is 3072
```

In a deployment environment, you must create and configure other databases, create custom profiles and federate them to your deployment manager, create servers, create clusters if you desire workload management capabilities, and

perform other tasks specific to your planned installation environment. Your planned environment dictates which tasks you must perform and the order in which you perform them.

For more information on planning your installation and on the databases required by WebSphere Process Server, see the topics under Planning for WebSphere Process Server.

## **Configuring custom profiles (managed nodes) using default values**

Learn how to use the Profile Management Tool to create and configure a custom profile using default configuration values.

### **Before you begin**

This topic assumes that you are using the Profile Management Tool to create or augment profiles and are following the procedure in either “Creating profiles using the Profile Management Tool” on page 198 or “Augmenting profiles using the Profile Management Tool” on page 231. As a result, it is assumed that you have started the Profile Management Tool, have chosen to create or augment a custom profile, and have selected the **Typical** profile creation or augmentation option.

### **About this task**

In this type of configuration, the Profile Management Tool assigns default values to ports, to the location of the profile, and to the names of the profile, node, and host. You can choose to federate the node to an existing deployment manager during the creation or augmentation process, or federate it later using the addNode command. If you decide to federate the profile during the creation or augmentation process, the tool sets the Common database configuration to the same database as the deployment manager. If you decide not to federate, the database configuration is left unconfigured.

As a result of following the procedure in either “Creating profiles using the Profile Management Tool” on page 198 or “Augmenting profiles using the Profile Management Tool” on page 231, the Federation panel is displayed. Complete the following steps to configure a new custom profile using default values.

### **Procedure**

1. In the Federation panel, choose to federate the node into the deployment manager now as part of the profile creation or augmentation, or at a later time and apart from profile creation or augmentation.
  - If you choose to federate the node as part of the profile creation or augmentation, specify the host name or IP address and SOAP port of the deployment manager, and an authentication user ID and password if administrative security is enabled on the deployment manager. Leave the **Federate this node later** check box unselected. Then click **Next**.

The Profile Management Tool verifies that the deployment manager exists and can be contacted, and that the authentication user ID and password are valid for that deployment manager (if it is secured).

**Attention:** Federate the custom node during profile creation or augmentation only if all of the following conditions are true:

- You do not plan to use this custom node as a migration target.
- No other node is being federated. (Node federation must be serialized.)
- The deployment manager is running.
- The deployment manager is a WebSphere Process Server deployment manager. WebSphere Process Server profiles cannot use a WebSphere Enterprise Service Bus deployment manager, but WebSphere Enterprise Service Bus profiles can use a WebSphere Process Server deployment manager.
- The deployment manager is at a release level the same or higher than that of the custom profile you are creating or augmenting.
- The deployment manager has a JMX administrative port enabled. The default protocol is SOAP.

Do *not* federate the custom node during profile creation or augmentation if any one of the following conditions are true:

- You plan to use this custom node as a migration target.
- Another profile is being federated. (Node federation must be serialized.)
- The deployment manager is not running or you are not sure if it is running.
- The deployment manager has not yet been augmented into a WebSphere Process Server deployment manager.
- The deployment manager is not at a release level the same or higher than that of the custom profile you are creating or augmenting.
- The deployment manager does not have a JMX administrative port enabled.
- The deployment manager is reconfigured to use the non-default remote method invocation (RMI) as the preferred Java Management Extensions (JMX) connector. (Click **System administration > Deployment manager > Administration services** in the administrative console of the deployment manager to verify the preferred connector type.)

If you attempt to federate a custom node when the deployment manager is not running or is not available for other reasons, a warning panel prevents you from continuing. If this warning panel appears, click **OK** to exit from it, and then make different selections on the Federation panel.

- If you choose to federate the node at a later time and apart from profile creation or augmentation, select the **Federate this node later** check box and click **Next**.

See “Federating custom nodes to a deployment manager” on page 333 for more information on how to federate a node by using the addNode command. Read more about this command in the addNode command topic in the WebSphere Application Server Network Deployment, version 6.1, information center.

The Profile summary panel is displayed.

2. In the Profile summary panel, click **Create** or **Augment** to create or augment the profile or **Back** to change the characteristics of the profile.

When the profile creation or augmentation is complete, the Profile complete panel is displayed with the message **The Profile Management tool created the profile successfully** or **The Profile Management tool augmented the profile successfully**.

3. In the Profile complete panel, select **Launch the First steps console, Create another profile**, or both; click **Finish** to exit. Use the First steps console access the product documentation. Use the **Create another profile** option to restart the Profile Management Tool to create additional profiles.

## Results

You have completed one of the following tasks:

- Created a WebSphere Process Server or WebSphere Enterprise Service Bus profile.
- Augmented a WebSphere Application Server Network Deployment or WebSphere Enterprise Service Bus profile into a WebSphere Process Server profile.
- Augmented a WebSphere Application Server Network Deployment profile into a WebSphere Enterprise Service Bus profile.

## What to do next

If you did not federate the profile during profile creation or augmentation, federate it now. The node within the profile is empty until you federate the node and use the deployment manager to customize the node.

## Configuring profiles with customized values

Learn how to create or augment a profile with customized configuration settings using the Profile Management Tool.

### Before you begin

In this topic, it is assumed that you are using the Profile Management Tool to create or augment profiles and are following the procedure in either “Creating profiles using the Profile Management Tool” on page 198 or “Augmenting profiles using the Profile Management Tool” on page 231. As a result, it is assumed you have started the Profile Management Tool, have chosen to create or augment a stand-alone server, deployment manager, or custom profile, and have selected the **Advanced** profile creation or augmentation option.

### About this task

When you choose to configure profiles with customized values, you can assign customized values to ports, to the location of the profile, to the names of the profile, node, host, and cell (when applicable), and to any required database configurations.

For stand-alone server profiles, the Profile Management Tool also lets you perform the following tasks:

- Configure the Common Event Infrastructure.
- Configure the Common database.
- Install the administrative console and create a Web server definition.
- Enable administrative security.
- Create a system service to run the server, if your operating system and the privileges of your user account permit the creation of services.
- Deploy the default application (which contains the Snoop, Hello, and HitCount applications) and WebSphere Application Server sample application.
- Configures Business Space powered by WebSphere using Derby Embedded.

- Configure Business Rules Manager and create a Business Process Choreographer sample configuration.

For deployment manager profiles, the Profile Management Tool also lets you perform the following tasks:

- Configure the Common database.
- Install the administrative console.
- Enable administrative security.
- Create a system service to run the server, if your operating system and the privileges of your user account permit the creation of services.

For custom profiles, the Profile Management Tool also lets you federate the node to an existing deployment manager during the creation or augmentation process, or federate it later using the addNode command.

The following sub-topics explain how to configure a profile, depending on the profile type:

- “Configuring stand-alone server profiles using customized values”
- “Configuring deployment manager profiles using customized values” on page 312
- “Configuring custom profiles (managed nodes) using customized values” on page 329

## Configuring stand-alone server profiles using customized values

Learn how to use the Profile Management Tool to create and configure a WebSphere Process Server or WebSphere Enterprise Service Bus stand-alone server profile with customized configuration settings.

### Before you begin

This topic assumes that you are using the Profile Management Tool to create or augment profiles and are following the procedure in either “Creating profiles using the Profile Management Tool” on page 198 or “Augmenting profiles using the Profile Management Tool” on page 231. As a result, it is assumed that you have started the Profile Management Tool, have chosen to create or augment a stand-alone server profile, and have selected the **Advanced** profile creation or augmentation option.

### About this task

By selecting the **Advanced** option, you can specify your own values for settings such as ports, the location of the profile, and the names for the profile, node, host, and cell. You can optionally choose whether to deploy the administrative console, the default application (which contains the Snoop, Hello, and HitCount Servlets), the WebSphere Application Server sample application, or create a Web server definition. You can optionally enable administrative security. If your operating system and the privileges of your user account permit, you can create a system service to run the server. You can also specify your own configuration values for the Common Event Infrastructure and Common databases and configure Business Space. Optionally, you can configure the Business Rules Manager and create a Business Process Choreographer sample configuration.

**Important:** If you plan to federate the profile to a deployment manager, do not select the file store option for the messaging engines or Derby Embedded for the

Common Event Infrastructure, Business Process Choreographer, or Common databases. The file store option and Derby Embedded database cannot be used in a deployment environment configuration.

As a result of following the procedure in either “Augmenting profiles using the Profile Management Tool” on page 231 or “Creating profiles using the Profile Management Tool” on page 198, you are viewing either the Administrative security panel or the Optional application deployment panel. Complete the following steps to configure a new stand-alone server profile with customized configuration values.

### Procedure

1. The panel you see displayed in the Profile Management Tool depends on whether you are creating or augmenting a profile. If you are augmenting a profile, it also depends on whether security is enabled on that profile and on whether the Common Event Infrastructure is configured on the system.

If you are performing	First step
Advanced profile augmentation to a WebSphere Process Server or WebSphere Enterprise Service Bus profile and Security <i>is</i> enabled on the profile you are augmenting.	The Administrative security panel is displayed. Proceed to step 5 on page 292.
Advanced profile augmentation to a WebSphere Process Server profile and security <i>is not</i> enabled on the profile that you are augmenting:	The Business Process Choreographer sample configuration panel is displayed. Proceed to step 10 on page 294.
Advanced profile augmentation to a WebSphere Enterprise Service Bus profile and: <ul style="list-style-type: none"> <li>• Security is <i>not</i> enabled on the profile you are augmenting</li> <li>• Common database <i>is</i> already configured on your system</li> </ul>	The Business Space Configuration panel is displayed. Proceed to step 11 on page 295.
Advanced profile creation	The Optional application deployment panel is displayed. Proceed to step 2.

2. **For Advanced profile creation only:** In the Optional Application Deployment panel, select the applications that you want to deploy to the stand-alone server profile environment you are creating, then click **Next**.

To choose an application from the following list, leave the check box beside the application selected. Clear the check box to deselect an application.

- **Deploy the administrative console (recommended):** Installs a Web-based administrative console that manages the server.
- **Deploy the default application:** Installs the default application that contains the Snoop, Hello, and HitCount Servlets.
- **Deploy the Sample application:** Installs the WebSphere Application Server sample application. The WebSphere Application Server sample application is not recommended for deployment to production environments.

**Note:** The WebSphere Process Server Samples are *not* deployed when you select this check box.

The Profile Name and Location panel is displayed.



3. **For Advanced profile creation only:** In the Profile Name and Location panel, perform the following steps.

- a. Specify a unique name and directory path for the profile, or accept the defaults.

Each profile that you create must have a name. When you have more than one profile, you can tell them apart at their highest level by this name. If you elect not to use the default name, see “Naming considerations for profiles, nodes, hosts, and cells” on page 554 for information about issues you must consider when naming the profile, such as restrictions on the length of the directory name.

The directory you specify will contain the files that define the runtime environment, such as commands, configuration files, and log files. The default directory is dependent on platform:

- **i5/OS** `user_data_root/profiles/profile_name`
- **Linux** **UNIX** `install_root/profiles/profile_name`
- **Windows** `install_root\profiles\profile_name`

where *profile\_name* is the name you specified. An error message is displayed if:

- The *profile\_name* you specify is not unique.
  - The directory you specify is not empty.
  - Your user ID does not have sufficient permissions for the directory.
  - There is not sufficient space to create the profile.
- b. To create the stand-alone server with configuration settings optimized for development environments, select the **Create the server using the development template** check box. The development template reduces startup time and allows the server to run on less powerful hardware. Do not use this option for production servers.
  - c. You can make the profile you are creating the default profile (so commands work automatically with it) by selecting the **Make this profile the default** check box. This check box appears only if you have an existing profile on your system.

The first profile that you create on a workstation is the default profile.

The default profile is the default target for commands that are issued from the `bin` directory in the product installation root. When only one profile exists on a workstation, every command operates on that profile. If more than one profile exists, certain commands require that you specify the profile to which the command applies. See “Profile commands in a multiprofile environment” on page 567 for more information.

- d. Click **Next**. (If you click **Back** and change the name of the profile, you might have to manually change the name on this panel when it is displayed again.)

The Node, host, and cell names panel is displayed.

4. **For Advanced profile creation only:** In the Node, Host, and Cell names panel, specify the node, host, and cell names for the stand-alone server profile, or accept the defaults and click **Next**. Try to keep the node name as short as possible, but ensure that node names are unique within your deployment environment. See “Naming considerations for profiles, nodes, hosts, and cells” on page 554 for information about reserved terms and other issues you must consider when naming the node, host, and cell.

The Administrative security panel is displayed.

5. Enable administrative security.

This screen differs depending on whether you are creating or augmenting a profile.

If you are creating a profile, you can enable administrative security now, or later from the administrative console. To enable administrative security now, leave the **Enable administrative security** check box selected, supply a user name and password to log onto the administrative console, and click **Next**. To disable administrative security, clear the check box. To enable administrative security later from the administrative console, open the console and click **Security > Business Integration Security**.

**Important:** If you plan to create a Business Process Choreographer sample configuration in step 10 on page 294, you must enable administrative security.

If you chose to deploy the WebSphere Application Server sample application from the Optional application deployment panel in step 2 on page 290, it requires an account under which to run. Supply the password for the account. You cannot change the user name of the account.

If you are augmenting a profile and see this panel, the profile you are augmenting has security enabled. You must re-enter the administrative user ID and password for that profile.

The next step depends on the following conditions:

If you are performing	Next step
Advanced profile augmentation to a WebSphere Process Server profile or Advanced profile augmentation of a WebSphere Enterprise Service Bus profile	The Business Process Choreographer sample configuration panel is displayed. Proceed to step 10 on page 294.
Advanced profile creation	The Port values assignment panel is displayed. Proceed to step 6.

6. **For Advanced profile creation only:** Verify that the ports specified for the profile are unique and click **Next**.

The Profile Management Tool detects ports currently used by other WebSphere products and displays recommended port values that do not conflict with existing ones. If you have applications other than WebSphere ones that use specified ports, verify that the ports do not conflict. If you chose not to deploy the administrative console on the Optional application deployment panel in step 2 on page 290, the administrative console ports are not available on the Port values assignment panel.

Ports are recognized as being in use if the following conditions are satisfied:

- The ports are assigned to a profile created under an installation performed by the current user.
- The ports are currently in use.

Although the tool validates ports when you access the Port values assignment panel, port conflicts can still occur resulting from selections you make on subsequent Profile Management Tool panels. Ports are not assigned until profile creation completes.

If you suspect a port conflict, you can investigate it after the profile is created. Determine the ports used during profile creation by examining the following file:

- `i5/OS profile_root/properties/portdef.props`
- `Linux UNIX profile_root/properties/portdef.props`

- **Windows** `profile_root\properties\portdef.props`

Included in this file are the keys and values used in setting the ports. If you discover port conflicts, you can reassign ports manually. To reassign ports, see the topic Updating ports in an existing profile in the WebSphere Application Server Network Deployment, version 6.1 information center and run the `updatePorts.ant` file through the `ws_ant` script.

The next step depends on your platform and whether you are installing as a root (Administrator) or non-root user.

If you are installing	Next step
On a Linux platform <i>and are running the Profile Management Tool as the root user</i>	The Linux service definition panel is displayed. Proceed to step 8 on page 294.
On a Windows platform <i>and have Administrator group privileges</i>	The Windows service definition panel is displayed. Proceed to step 7.
On any other platform or as a non-root user on a Linux or Windows platform.	The Web server definition panel is displayed. Proceed to step 9 on page 294.

7. **Windows** **For Advanced profile creation only:** Choose whether to run the server as a Windows service and click **Next**.

The Windows Service Definition panel is displayed for the Windows platform only if the ID that installs the Windows service has the Administrator group privilege. If the profile is configured as a Windows service, the product starts Windows services for server processes started by a `startServer` command. For example, if you configure a server as a Windows service and issue the `startServer` command, the `wasservice` command starts the defined service.

**Important:** If you choose to log on as a specified user account, you must specify the user ID and the password for the user who is to run the service, and the startup type (default is Manual). The user ID must not have spaces in its name, it must belong to the Administrator group, and it must have the advanced user rights *Log on as a service* and *Act as part of the operating system*. If the user ID belongs to the Administrator group, the Profile Management Tool grants it the advanced user rights if it does not already have them.

During profile deletion you can remove the Windows service that is added during profile creation.

#### **IPv6 considerations when running profiles as Windows services**

Profiles created to run as a Windows service fail to start when using IPv6 if the service is configured to run as Local System. Create a user-specific environment variable to enable IPv6. Because this environment variable is a user variable instead of a Local System variable, only a Windows service that runs as that specific user can access this environment variable. By default, when a new profile is created and configured to run as a Windows service, the service is set to run as Local System. When the WebSphere Process Server or WebSphere Enterprise Bus Windows service tries to run, the service is unable to access the user environment variable that specifies IPv6, and thus tries to start as IPv4. The server does not start correctly in this case. To resolve the problem, when creating the profile specify that the WebSphere Process Server or WebSphere Enterprise Bus Windows service runs as the same user ID under which the environment variable that specifies IPv6 is defined, instead of as Local System.

The Web server definition panel is displayed.

8. **Linux** **For Advanced profile creation only:** Choose whether to run the server as a Linux service and click **Next**.

The Linux Service Definition panel is displayed only if the current operating system is a supported version of Linux and the current user has the appropriate permissions.

WebSphere Process Server attempts to start Linux services for server processes that are started by a **startServer** command. For example, if you configure a server as a Linux service and issue the **startServer** command, the **wasservice** command attempts to start the defined service.

By default, WebSphere Process Server is not selected to run as a Linux service.

To create the service, the user who runs the Profile Management Tool must be the root user. If you run the Profile Management Tool with a non-root user ID, the Linux service definition panel is not displayed, and no service is created.

You must specify a user name under which the service runs.

To delete a Linux service, the user must be the root user or have proper privileges for deleting the service. Otherwise, a removal script is created that the root user can run to delete the service on the user's behalf.

The Web server definition panel is displayed.

9. **For Advanced profile creation only:** If you want to include a Web server definition in the profile now, perform the following steps:

**Note:** **i5/OS** On i5/OS, do not create the Web server definition using the Profile Management Tool. Therefore, do not enable this option on the Web server definition panel. You will need to use the IBM HTTP Server for iSeries configuration and administration forms, which create the Web server definition and an HTTP server instance. They also correctly associate the HTTP server to this Web server definition. For more information, see the topic Configuring an HTTP server instance in the WebSphere Application Server Network Deployment for i5/OS, version 6.1 information center.

- a. Select the **Create a Web server definition** check box.
- b. Specify the Web server characteristics on the panel, and click **Next**.
- c. Specify the Web server characteristics on Part 2 of the panel and click **Next**.

If you use a Web server to route requests to WebSphere Process Server or WebSphere Enterprise Bus, you need to include a Web server definition. You can include the definition now, or define the Web server to WebSphere Process Server or WebSphere Enterprise Bus later. If you define the Web server definition during the creation of this profile, you can install the Web server and its plug-in after you create the profile. However, you must install both to the paths that you specify on the Web server definition panels. If you define the Web server to WebSphere Process Server or WebSphere Enterprise Service Bus after you create this profile, you must define the Web server in a separate profile.

10. Choose whether to create a Business Process Choreographer sample configuration.

**Restriction:** Do not create a Business Process Choreographer sample configuration if you plan to use this component in a production environment or federate this stand-alone server profile to a deployment manager. The sample configuration is for development use only. For instructions on how to set up this component in a production setting, see the topics under Configuring Business Process Choreographer.

To create a sample configuration, select the **Configure a sample Business Process Choreographer** check box and click **Next**.

The Business Space Configuration panel is displayed.

11. On the Business Space Configuration panel, select the **Configure Business Space** check box to set up Business Space powered by WebSphere, an integrated user experience for application users across the IBM Websphere Business Process Management portfolio and then click **Next**. Configuring Business Space sets up an integrated GUI for the business users of your application for this profile.

**Important:** Business Space is supported with the following database products: Derby Embedded, Derby Network Server, DB2 Universal, DB2 Universal Runtime Client, DB2 for i5/OS, DB2 for z/OS, Oracle 9i, Oracle 10g, and Oracle 11g.

If the database you use for WebSphere Process Server does not match the supported databases for Business Space, a Derby Embedded database is selected for the Business Space configuration. You cannot federate this profile into a deployment environment later, because Derby Embedded is not supported for deployment environments.

The Business Rules Manager configuration panel is displayed.

12. Select whether to configure a Business Rules Manager for the installation and then click **Next**. Business Rules Manager is a Web application that customizes the business rules templates for your business application needs.

The next step depends on whether you are creating or augmenting a profile and if multiple servers are defined on your system.

If you are	Next step
<ul style="list-style-type: none"> <li>• Creating a profile</li> <li>• Augmenting a profile and multiple servers are <i>not</i> defined on your system</li> </ul>	<p>The Database configuration panel is displayed. Proceed to step 14.</p>
<ul style="list-style-type: none"> <li>• Augmenting a profile and multiple servers <i>are</i> defined on your system</li> </ul>	<p>The Application Scheduler configuration panel is displayed. Proceed to step 13.</p>

13. **For Advanced profile augmentation when profile has multiple servers defined:** In the Application Scheduler configuration panel, accept the default value of server1 for the name of the server on the node from the drop-down list and click **Next**.

The Database configuration panel is displayed.

14. In the Database Configuration panel, configure both the Common database and the database used by the Common Event Infrastructure component used by selected WebSphere Process Server and WebSphere Enterprise Bus components.

Refer to the “Configuring the Common database and the Common Event Infrastructure database using the Profile Management Tool” on page 297 topic for details and return to this step when you have completed the fields on the Database Configuration panel and the Database Configuration (part 2) panel.

The Profile summary panel is displayed.

15. In the Profile summary panel, click **Create** or **Augment** to create or augment the profile or **Back** to change the characteristics of the profile.

When the profile creation or augmentation is complete, the Profile complete panel is displayed with the message **The Profile Management tool created the profile successfully** or **The Profile Management tool augmented the profile successfully**.

16. Complete the stand-alone server profile configuration by doing one of the following, depending on whether you must manually configure the Common Event Infrastructure and Common databases.
  - If you completed configuration of the Common Event Infrastructure and Common databases using the Profile Management Tool, select **Launch the First steps console, Create another profile**, or both; click **Finish** to exit. Use the First steps console to start the server. Use the **Create another profile** option to restart the Profile Management Tool to create additional profiles.
  - If you chose to postpone actual database configuration by producing scripts to be run manually, perform the following steps:
    - a. Clear the check box to launch the First steps console and click **Finish** to close the Profile Management Tool.
    - b. Use your site's standard database definition tools and procedures to edit and run the scripts the Profile Management Tool generated to create, or create and configure, the event, eventcat, and WPRCSDB databases (or their equivalents if they have different names on your system). You identified the location for these scripts in step 2 on page 298 of the topic "Configuring the Common database and the Common Event Infrastructure database using the Profile Management Tool" on page 297. Also see the topics that describe manually creating new databases or new tables in existing databases:
      - For the Common Event Infrastructure database: Configuring the event database and its subtopics.
      - For the Common database: "Creating the Common database and tables after profile creation or augmentation" on page 359 or "Creating tables on an existing Common database after profile creation or augmentation" on page 360.

When the databases are configured, start the First steps console associated with the profile, as described in "Starting the First steps console" on page 133.

17. If you plan to use the Business Process Choreographer component in your environment, you might need your DBA to create and configure the Business Process Choreographer database.

For more information, see the topics under Configuring Business Process Choreographer.

## Results

You have completed one of the following tasks:

- Created a WebSphere Process Server or WebSphere Enterprise Service Bus profile.
- Augmented a WebSphere Application Server, WebSphere Application Server Network Deployment, or WebSphere Enterprise Service Bus profile into a WebSphere Process Server profile.
- Augmented a WebSphere Application Server or WebSphere Application Server Network Deployment profile into a WebSphere Enterprise Service Bus profile.

The node within the profile has a server named server1.

## What to do next

Check server operation by selecting **Start the server** from the First steps console. An output window opens. If you see a message similar to the following message, your server is operating properly:

```
ADMU3000I: Server server1 open for e-business; process id is 3348
```

You can also check server operation by running the Installation Verification Test (IVT) from the First steps console or running the `wbi_ivt` command. This test is to verify that your deployment manager or stand-alone server installation is operating properly. For a stand-alone server profile, it also runs a Health Monitor check and generates a report.

### Configuring the Common database and the Common Event Infrastructure database using the Profile Management Tool:

Selected WebSphere Process Server components require a database, called the *Common* database, and a Common Event Infrastructure local database to operate. Using values you provide on the Database Configuration panels, the Profile Management Tool automatically creates these databases and the required tables on a local system. You must configure these databases to have a working installation.

### Before you begin

**Note:**  The reference to database refers to a database collection.

This procedure assumes that you have started the Profile Management Tool and have chosen to create or augment a profile through either the Advanced or Deployment environment profile creation or augmentation option. You are performing the procedure in one of the following topics:

- “Configuring stand-alone server profiles using customized values” on page 289
- “Configuring deployment manager profiles using customized values” on page 312
- “Configuring deployment manager profiles for a deployment environment” on page 336

In the topic, you are at the step in the procedure that asks you to configure the Common database by completing the Database Configuration panel.

### About this task

The following WebSphere Process Server components use the Common database:

- Application Scheduler
- Business rule group
- Mediation
- Recovery
- Relationship service
- Selector
- Event Sequencing (Lock Manager)
- Enterprise Service Bus Logger Mediation Primitive
- Messaging Engines (if you selected the **Use this database for Messaging Engines (MEs)** check box detailed in step 5 on page 299).

For more information on the various databases and database tables the WebSphere Process Server product uses, see *Choosing a database*.

**Important:** If you choose Derby Network Server as your database product, ensure that the server is running on the host and port you specified during profile creation or augmentation, even if the database host is local. You can make sure that the server is running only after the profile is created or augmented.

### Procedure

1. In the **Choose a database product** field, select the database product you want to use, or accept the default value of Derby Embedded (for stand-alone server profiles) or Derby Network Server (for deployment manager profiles).

#### Restrictions:

- Informix Dynamic Server, and Microsoft SQL Server are not supported on deployment managers using the deployment environment configuration.
  - **i5/OS** DB2 UDB for iSeries (Native), DB2 for i5/OS (Native), and Derby Embedded can be used only *locally* as a database on i5/OS. Derby Network Server, DB2 UDB for iSeries (Toolbox), and DB2 for i5/OS (Toolbox) can be used both locally and remotely on i5/OS. All other databases listed can be used with i5/OS only as remote databases provided the proper remote database driver is used.
2. To store the database creation and configuration scripts that the Profile Management Tool will create in a location other than the default location in the **Database script output directory** field, select the **Override the destination directory for generated scripts** check box and designate your new location in the **Database script output directory** field. The default root directory for both the CommonDB and Common Event Infrastructure scripts is `<WPS home>/profiles/<profile name>/dbscripts/`.

For example:

Common Event Infrastructure: `<WPS home>/profiles/<profile name>/dbscripts/CEI_<ceiDbName>`

CommonDB: `<WPS home>/profiles/<profile name>/dbscripts/CommonDB/<dbType>/<dbName>`

The profile creation or augmentation process will create scripts that you or the database administrator can run manually to create a new database and its required tables, if you choose not to have the Profile Management Tool do this automatically. (You prevent automatic creation and configuration of this database by selecting the **Delay execution of database scripts (must select if using a remote database)** check box in this panel, described in step 4 on page 299.)

3. Enter your database name or accept the default value.

**i5/OS** **On i5/OS platforms:** The name of the database on i5/OS using Independent Auxiliary Storage Pools (IASPs) can be the name of the IASP.

Default common database names differ based on the database product:

- **i5/OS** \*LOCAL for DB2 UDB for iSeries (Native) and DB2 for i5/OS (Native)
- **i5/OS** \*SYSBAS for DB2 UDB for iSeries (Toolbox) and DB2 for i5/OS (Toolbox)
- WPRCSDB for all other database products

Default Common Event Infrastructure database names differ based on the database product:

- **i5/OS** \*LOCAL for DB2 UDB for iSeries (Native) and DB2 for i5/OS (Native)



- **i5/OS** \*SYSBAS for DB2 UDB for iSeries (Toolbox) and DB2 for i5/OS (Toolbox)
- EVENT for all other database products

If you plan to use an existing database, this name must match the name of that database. If you plan to create a new database and the name you specify is already associated with another WebSphere Process Server profile, you must use a different database name.

**Note:** **i5/OS** This does not apply to i5/OS. All profiles on i5/OS will use the same database name.

**Note:** Note: The Oracle database name (dbName) is actually the Oracle Identifier (SID) and must exist in order to create tables. It can be shared between the common database and the Common Event Infrastructure database. It is recommended that you remove all Oracle database resources before creating a new profile, as the Common Event Infrastructure database creates unique database resources, such as table spaces, which will fail if it is already exists in the Oracle server.

4. Select the **Delay execution of database scripts (must select if using a remote database)** check box if you do not want the Profile Management Tool to create and configure a local database automatically or create tables in an existing one during profile creation or augmentation. A local database will be created if this check box is not selected. If you select this option, you or the database administrator must manually run the scripts that the Profile Management Tool creates and stores in the location specified in the **Database script output directory** field on this panel. For instructions on manually creating and configuring a new Common database or creating tables in an existing one, see “Creating the Common database and tables after profile creation or augmentation” on page 359 or “Creating tables on an existing Common database after profile creation or augmentation” on page 360.

**Important:** Do not use the scripts located in the following directories (where the variable *db\_type* represents the supported database product):

- **Linux** **UNIX** *install\_root*/dbscripts/CommonDB/*db\_type*
- **Windows** *install\_root*\dbscripts\CommonDB\*db\_type*

These default scripts have not been updated by the Profile Management Tool.

**Restriction:** The **Delay execution of database scripts (must select if using a remote database)** option is not available for the following configurations:

- If you chose the Derby Embedded or Derby Network Server product.
- In a network deployment environment.

The next step depends on whether you are creating or augmenting a stand-alone server or deployment manager profile.

Type of profile you are creating or augmenting	Next step
Stand-alone server	Proceed to step 5.
Deployment manager	Proceed to step 7 on page 300.

5. **For stand-alone server profiles only:** Select the **Use a file store for Messaging Engines (MEs)** check box to use a file store for messaging engines. If you select

this check box, the messaging engines are created and configured on a file store (except for the Common Event Infrastructure messaging engine, which uses a Derby Embedded local database even if this option is selected). If you do not select this check box, and do not select the **Use this database for Messaging Engines (MEs)** check box detailed in step 6, the messaging engines are created and configured on the default Derby Embedded database. Derby Embedded databases cannot be created on remote workstations. For more information on file stores, see File stores in the WebSphere Application Server Network Deployment, version 6.1 information center.

6. **For stand-alone server profiles only:** Select the **Use this database for Messaging Engines (MEs)** check box to use the Common database for messaging engines. If you do not select this check box, and do not select the **Use a file store for Messaging Engines (MEs)** check box detailed in step 5 on page 299, the messaging engines are created and configured on the default Derby Embedded database. Derby Embedded databases cannot be created on remote workstations. For more information on data stores, see Data stores in the WebSphere Application Server Network Deployment, version 6.1 information center.

**Restriction:** This option is not available if you chose the Derby Embedded product.

7. Click **Next**. The next step depends on the type of profile you are creating or augmenting and on the database product you chose.

Type of profile you are creating or augmenting	Next step
Stand-alone server profile with the default value of <i>Derby Embedded</i> selected.	The Profile summary panel is displayed. Return to step 15 on page 295 in the topic "Configuring stand-alone server profiles using customized values" on page 289.

Type of profile you are creating or augmenting	Next step
<p>Stand-alone server profile with any database product other than <i>Derby Embedded</i> selected.</p> <p>Deployment manager profile with any database product selected.</p>	<p>The Database configuration (Part 2) panel is displayed with fields specific to the database product you selected. Review the topic “Database configuration (Part 2) panel for Common database configuration” for information on how to complete this panel. When you have completed entering information on this panel, click <b>Next</b>. The tool checks that a valid database connection exists. If the database connection does not exist, you need to correct the problem either by starting up the database or altering the specified parameters before continuing. The Profile summary panel is displayed. Depending on the topic from which you accessed this one, return to one of the following steps:</p> <ul style="list-style-type: none"> <li>• Step 15 on page 295 in the topic “Configuring stand-alone server profiles using customized values” on page 289</li> <li>• Step 10 on page 316 in the topic “Configuring deployment manager profiles using customized values” on page 312</li> <li>• Step 9 on page 341 in the topic “Configuring deployment manager profiles for a deployment environment” on page 336</li> </ul>

*Database configuration (Part 2) panel for Common database configuration:*

When you select your database product on the Database configuration panel in the Profile Management Tool, a follow-up panel asks you for database-specific information. This panel, which does not appear if you selected Derby Embedded when configuring a stand-alone server profile is called the **Database configuration (Part 2) panel**. It contains slightly different fields and default values, depending on your database product selection.

You must complete this panel even if you chose to postpone creating a new database or adding tables to an existing one by selecting the **Delay execution of database scripts** check box on the **Database configuration (Part 2) panel**. The values you choose on this panel are added to the database configuration scripts that the Profile Management Tool creates and stores in the directory you specified in the **Database script output directory** field on the previous panel.

**Restriction:** You cannot create a new database if you are using DB2 for z/OS V8 or V9, Oracle 9i, Oracle 10g, or 11g. If you select one of these databases and the option **Create a new local database**, the **Next** button is disabled. Make different selections on the Database configuration panel.

Choose the link for your database product from the following list to determine how to complete the Database configuration (Part 2) panel:

- “Derby Network Server” on page 302
- “DB2 Universal Database” on page 303

- “DB2 for z/OS V8 and V9” on page 303
- “DB2 UDB for iSeries (Toolbox)” on page 304
- **i5/OS** “DB2 UDB for iSeries (Native)” on page 304
- “DB2 Universal Runtime Client” on page 305
- “Informix Dynamic Server” on page 306
- “Microsoft SQL Server (Embedded)” on page 306
- “Microsoft SQL Server (DataDirect) and Microsoft SQL Server (Microsoft)” on page 307
- “Oracle 9i” on page 307
- “Oracle 10g or 11g” on page 308

**Important:** If you are creating or augmenting a stand-alone server profile and selected the Derby Embedded database product, no additional database configuration is necessary.

When you have completed the Database configuration (Part 2) panel, click **Next**. The tool checks that a valid database connection exists. If the tool identifies an error, you must correct the problem before continuing by either making sure the database is up and running or altering parameters in order to make a good connection.

The Profile summary panel is displayed. Depending on the topic from which you accessed this one, return to one of the following steps:

- Step 15 on page 295 in the topic “Configuring stand-alone server profiles using customized values” on page 289
- Step 10 on page 316 in the topic “Configuring deployment manager profiles using customized values” on page 312
- Step 9 on page 341 in the topic “Configuring deployment manager profiles for a deployment environment” on page 336

### Derby Network Server

Table 104 lists the fields you must complete on the Database configuration (Part 2) panel when you select Derby Network Server as your database product.

**Important:** If you choose Derby Network Server as your database product, after profile creation or augmentation completes, ensure that the server is running on the host and port you specified during profile creation, even if the database host is local.

*Table 104. Required Common database configuration fields for Derby Network Server*

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Database server host name (for example IP address)	Accept the default value of localhost or enter the correct database server host name.
Server port	Accept the default value of 1527 or enter the correct server port number.

## DB2 Universal Database

Table 105 lists the fields you must complete on the Database configuration (Part 2) panel when you select DB2 Universal Database as your database product.

Table 105. Required Common database configuration fields for DB2 Universal Database

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Accept the default value of <i>install_root/universalDriver_wbi/lib</i> on Linux, UNIX or i5/OS platforms, or <i>install_root\universalDriver_wbi\lib</i> on Windows platforms, or browse to the location on your system that contains the following files: <ul style="list-style-type: none"><li>• db2jcc.jar</li><li>• db2jcc_license_cu.jar or db2jcc_license_cisuz.jar</li></ul> An error message is displayed if the files cannot be found at the specified location.
JDBC driver type	Accept the default value of 4 or select the radio button beside the correct JDBC driver type.
Database server host name (for example IP address)	Accept the default value of localhost or enter the correct database server host name.
Server port	Accept the default value of 50000 or enter the correct server port number.

## DB2 for z/OS V8 and V9

Table 106 lists the fields you must complete on the Database configuration (Part 2) panel when you select DB2 for z/OS V8 and V9 as your database product.

Table 106. Required Common database configuration fields for DB2 for z/OS V8 and V9

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Enter the location on your system that contains the following files: <ul style="list-style-type: none"><li>• db2jcc.jar</li><li>• db2jcc_license_cisuz.jar</li></ul> An error message is displayed if the files cannot be found at the specified location.
Database server host name (for example IP address)	Enter the database server host name.

Table 106. Required Common database configuration fields for DB2 for z/OS V8 and V9 (continued)

Field	Action needed
Server port	Accept the default value of 446 or enter the correct server port number.
Database alias name	Enter the database alias name.
Connection location	Enter the connection location.
Storage group name	Enter the storage group name.

### DB2 UDB for iSeries (Toolbox)

Table 107 lists the fields you must complete on the Database configuration (Part 2) panel when you select DB2 UDB for iSeries (Toolbox) as your database product. This selection is also valid for DB2 for i5/OS (Toolbox).

Table 107. Required Common database configuration fields for DB2 UDB for iSeries (Toolbox) or DB2 for i5/OS (Toolbox)

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Accept the default value of /QIBM/ProdData/HTTP/Public/jt400/lib on i5/OS platforms, or browse to the location on your system that contains the following file: <ul style="list-style-type: none"> <li>• jt400.jar</li> </ul> An error message is displayed if the file cannot be found at the specified location.
Database server host name (for example IP address)	Enter the database server host name.
Database collection name	Accept the default value of WPRCSDB or enter the correct schema name. To prevent naming conflicts within the specified database, specify a schema name whose first three characters are unique from the names of other schemas residing in the database.

### DB2 UDB for iSeries (Native)

**Note:** i5/OS On i5/OS platforms: This database configuration applies only to i5/OS platforms.

Table 108 on page 305 lists the fields you must complete on the Database configuration (Part 2) panel when you select DB2 UDB for iSeries (Native) as your database product. This selection is also valid for DB2 for i5/OS (Native).

Table 108. Required Common database configuration fields for DB2 UDB for iSeries (Native) or DB2 for i5/OS (Native)

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Accept the default value of /QIBM/ProdData/Java400/ext on i5/OS platforms, or browse to the location on your system that contains the following file: <ul style="list-style-type: none"> <li>db2_classes.jar</li> </ul> An error message is displayed if the file cannot be found at the specified location.
Database server host name (for example IP address)	Enter the database server host name.
Database collection name	Accept the default value of WPRCSDB or enter the correct schema name. To prevent naming conflicts within the specified database, specify a schema name whose first three characters are unique from the names of other schemas residing in the database.

## DB2 Universal Runtime Client

Table 109 lists the fields you must complete on the Database configuration (Part 2) panel when you select DB2 Universal Runtime Client as your database product.

Table 109. Required Common database configuration fields for DB2 Universal Runtime Client

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Enter the location on your system that contains the db2java.zip file. An error message is displayed if the file cannot be found at the specified location.
Database server host name (for example IP address)	Enter the database server host name.
Server port	Accept the default value of 50000 or enter the correct server port number.
DB2 node name (must be 8 characters or less)	Enter the DB2 node name.

## Informix Dynamic Server

Table 110 lists the fields you must complete on the Database configuration (Part 2) panel when you select Informix Dynamic Server as your database product.

*Table 110. Required Common database configuration fields for Informix Dynamic Server*

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Enter the location on your system that contains the following files: <ul style="list-style-type: none"><li>• ifxjdbc.jar</li><li>• ifxjdbcx.jar</li></ul> An error message is displayed if the files cannot be found at the specified location.
Database server host name (for example IP address)	Accept the default value of localhost or enter the correct database server host name.
Database server name	Enter the database server name.
Server port	Accept the default value of 1526 or enter the correct server port number.
Event service instance name	Enter the correct event service instance name.

## Microsoft SQL Server (Embedded)

Table 111 lists the fields you must complete on the Database configuration (Part 2) panel when you select Microsoft SQL Server Embedded as your database product.

**Note:** Microsoft SQL Server (Embedded)

*Table 111. Required Common database configuration fields for Microsoft SQL Server Embedded*

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Database server host name (for example IP address)	Accept the default value of localhost or enter the correct database server host name.
Database server name	Enter the database server name.
Server port	Accept the default value of 1433 or enter the correct server port number.



Table 111. Required Common database configuration fields for Microsoft SQL Server Embedded (continued)

Field	Action needed
Admin user name	Enter the user ID that has privileges to create and drop databases and users or accept the default value of sa. This ID is required when the <b>Delay execution of database scripts</b> option is NOT selected in the previous screen.
Password	Enter the password for the user <b>Admin user name ID</b> .
Confirm password	Confirm the password.

### Microsoft SQL Server (DataDirect) and Microsoft SQL Server (Microsoft)

Table 112 lists the fields you must complete on the Database configuration (Part 2) panel when you select Microsoft SQL Server (DataDirect) or Microsoft SQL Server (Microsoft) as your database product.

Table 112. Required Common database configuration fields for Microsoft SQL Server DataDirect and Microsoft SQL Server (Microsoft)

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	<p>Enter the location on your system that contains the following files:</p> <ul style="list-style-type: none"> <li>sqlserver.jar</li> <li>base.jar</li> <li>util.jar</li> </ul> <p>Also, the file spy.jar must be available in the following location relative to the location of the JDBC driver class path files:</p> <ul style="list-style-type: none"> <li><b>Linux</b> <b>UNIX</b> ../spy/spy.jar</li> <li><b>Windows</b> ..\spy\spy.jar</li> </ul> <p>An error message is displayed if the files cannot be found at the specified location.</p>
Database server host name (for example IP address)	Accept the default value of localhost or enter the correct database server host name.
Database server name	Enter the database server name.
Server port	Accept the default value of 1433 or enter the correct server port number.

### Oracle 9i

Table 113 on page 308 lists the fields you must complete on the Database configuration (Part 2) panel when you select Oracle 9i as your database product.

Table 113. Required Common database configuration fields for Oracle 9i

Field	Action needed
Directory of database server installation	Enter or browse for the database server installation. Required when the <b>Delay execution of database scripts</b> option is selected in the previous screen.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Enter the location on your system that contains the file <code>ojdbc14.jar</code> . An error message is displayed if the files cannot be found at the specified location.
JDBC driver type	Click <b>OCI</b> or <b>Thin</b> .
Database server host name (for example IP address)	Accept the default value of <code>localhost</code> or enter the correct database server host name.
Server port	Accept the default value of 1521 or enter the correct server port number.
Admin user name	Enter the user ID that has privileges to create and drop databases and users. Required when the <b>Delay execution of database scripts</b> option is NOT selected in the previous screen.
Password	Enter the password for the user <b>Admin user name</b> ID.
Confirm password	Confirm the password.

### Oracle 10g or 11g

Table 114 lists the fields you must complete on the Database configuration (Part 2) panel when you select Oracle 10g or 11g as your database product.

**Important:** For Oracle 11g you must have a user ID that has SYSDBA privileges before creating any profile.

Table 114. Required Common database configuration fields for Oracle 10g or 11g

Field	Action needed
Directory of database server installation	Enter or browse for the database server installation. Required when the <b>Delay execution of database scripts</b> option is selected in the previous screen.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Enter the location on your system that contains the file <code>ojdbc14.jar</code> . An error message is displayed if the files cannot be found at the specified location.
JDBC driver type	Click <b>OCI</b> or <b>Thin</b> .

Table 114. Required Common database configuration fields for Oracle 10g or 11g (continued)

Field	Action needed
Database server host name (for example IP address)	Accept the default value of localhost or enter the correct database server host name.
Server port	Accept the default value of 1521 or enter the correct server port number.
Admin user name	Enter the user ID that has privileges to create and drop databases and users. Required when the <b>Delay execution of database scripts</b> option is NOT selected in the previous screen.
Password	Enter the password for the user <b>Admin user name ID</b> .
Confirm password	Confirm the password.

### Federating stand-alone server profiles to a deployment manager:

Learn how to use the **addNode** command to federate a stand-alone server profile into a deployment manager cell. After federation, a node agent process is created. Both this node agent and the server process are managed by the deployment manager. If you federate a stand-alone server profile and include all of its applications, the act of federation installs the applications on the deployment manager. A stand-alone server profile can be federated only if there are no other federated profiles.

#### Before you begin

Ensure that the following prerequisites are met:

- You have installed WebSphere Process Server and created a WebSphere Process Server deployment manager.
- The stand-alone server profile is a WebSphere Process Server profile.
- The stand-alone server profile does not use file store or Derby Embedded data store for its messaging engines. If you created the profile using the Typical option in the Profile Management Tool, the profile uses these options. You cannot federate it to a deployment manager.
- The stand-alone server uses a database driver that supports remote access, such as Derby Network or Java toolbox JDBC.
- The deployment manager is running. If it is not, start it either by selecting **Start the deployment manager** from its First steps console or by entering the following command, where *profile\_root* represents the installation location of the deployment manager profile:
  - **i5/OS** `profile_root/bin/startManager`
  - **Linux** **UNIX** `profile_root/bin/startManager.sh`
  - **Windows** `profile_root\bin\startManager.bat`
- The stand-alone server is *not* running. If it is, stop it either by selecting **Stop the server** from its First steps console or by entering the following command, where *profile\_root* represents the installation location of the stand-alone server profile (by default, /QIBM/UserData/WebSphere/ProcServer on i5/OS platforms):
  - **i5/OS** `profile_root/bin/stopServer`

- `Linux` `UNIX` `profile_root/bin/stopServer.sh`
- `Windows` `profile_root\bin\stopServer.bat`

- The deployment manager has been augmented into a WebSphere Process Server deployment manager. WebSphere Process Server profiles cannot use a WebSphere Enterprise Service Bus deployment manager, but WebSphere Enterprise Service Bus profiles can use a WebSphere Process Server deployment manager.
- The deployment manager is at the same release level or higher than the custom profile you created or augmented.
- The deployment manager has a JMX administrative port enabled. The default protocol is SOAP.
- No other nodes are federated to the deployment manager.

**Attention:** Do *not* federate a stand-alone server profile at this time if any one of the following is true:

- The deployment manager is not running or you are not sure if it is running.
- The stand-alone server is running or you are not sure if it is stopped.
- The stand-alone server does *not* use a database driver that supports remote access, such as Derby Network or Java toolbox JDBC.
- The deployment manager has not yet been augmented into a WebSphere Process Server deployment manager. WebSphere Process Server profiles cannot use a WebSphere Enterprise Service Bus deployment manager, but WebSphere Enterprise Service Bus profiles can use a WebSphere Process Server deployment manager.
- The deployment manager is not at the same release level or higher than the stand-alone server profile you created or augmented.
- The deployment manager does not have a JMX administrative port enabled.
- The deployment manager is reconfigured to use the non-default remote method invocation (RMI) as the preferred Java Management Extensions (JMX) connector. (Select **System administration > Deployment manager > Administration services** in the administrative console of the deployment manager to verify the preferred connector type.)
- Another node has already been federated to the deployment manager.

If you federate a stand-alone server profile when the deployment manager is not running or is not available for other reasons, profile federation will fail and the resulting profile will be unusable. You must then move this stand-alone server profile directory out of the profile repository before creating another profile with the same profile name.

### About this task

Perform this task when you have an existing stand-alone server profile and you need to add the capabilities that network deployment offers to that server (central management or clustering). This function provides a growth path for an existing stand-alone server profile. However, you will be limited to a single cluster configuration for this deployment environment. See Deployment environment patterns for a description of the single cluster pattern.

Perform this task once for each cell and only for the first profile federated to the cell. Do not perform this task if the cell already has federated nodes. When you create an environment where you do not have an existing stand-alone server

profile, create the environment using custom profiles. See “Creating profiles” on page 197 for information on creating custom profiles.

Use the **addNode** command to federate a stand-alone server profile’s node into a deployment manager cell by performing the following steps.

### Procedure

1. Go to the bin directory of the stand-alone server profile you want to federate. Open a command window and go to one of the following directories, depending on platform, where *profile\_root* represents the installation location of the stand-alone server profile. By default, the directory is /QIBM/UserData/WebSphere/ProcServer on i5/OS platforms::

- **i5/OS** `profile_root/bin/`
- **Linux** **UNIX** `profile_root/bin`
- **Windows** `profile_root\bin`

2. Issue the **addNode** command.

Issue one of following commands if security is not enabled. The port parameter is optional and can be omitted if you used the default port numbers when creating the deployment manager profile:

- **i5/OS** `addNode deployment_manager_host deployment_manager_SOAP_port -includeapps -includebuses`
- **Linux** **UNIX** `./addNode.sh deployment_manager_host deployment_manager_SOAP_port -includeapps -includebuses`
- **Windows** `addNode.bat deployment_manager_host deployment_manager_SOAP_port -includeapps -includebuses`

Issue one of the following commands if security is enabled:

- **i5/OS** `addNode deployment_manager_host deployment_manager_SOAP_port -username userID_for_authentication -password password_for_authentication -localusername localuserID_for_authentication -localpassword localpassword_for_authentication -includeapps -includebuses`
- **Linux** **UNIX** `./addNode.sh deployment_manager_host deployment_manager_SOAP_port -username userID_for_authentication -password password_for_authentication -localusername localuserID_for_authentication -localpassword localpassword_for_authentication -includeapps -includebuses`
- **Windows** `addNode.bat deployment_manager_host deployment_manager_SOAP_port -username userID_for_authentication -password password_for_authentication -localusername localuserID_for_authentication -localpassword localpassword_for_authentication -includeapps -includebuses`

An output window opens. If you see a message similar to the following, your stand-alone server profile was federated successfully:

```
ADMU0003I: Node DMNDID2Node02 has been successfully federated.
```

### Results

The stand-alone server profile is federated into the deployment manager. For more information on the **addNode** command and its parameters, see the topic `addNode` command in the WebSphere Application Server Network Deployment, version 6.1.x, information center.

## Configuring deployment manager profiles using customized values

While configuring the deployment manager, you might need to need to specify your own settings for ports, nodes and profiles. This topic provides instructions on how to use the Profile Management Tool to create and configure a WebSphere Process Server or WebSphere Enterprise Service Bus deployment manager profile with customized configuration settings.

### Before you begin

**Note:** This topic assumes that you are using the Profile Management Tool to create or augment profiles and are following the procedure in either “Creating profiles using the Profile Management Tool” on page 198 or “Augmenting profiles using the Profile Management Tool” on page 231. As a result, it is assumed that you have started the Profile Management Tool, have chosen to create or augment a deployment manager profile, and have selected the **Advanced** profile creation or augmentation option.

### About this task

In this type of configuration, you can specify your own values for settings such as ports, the location of the profile, and names for the profile, node, host, and cell. You can optionally choose whether to deploy the administrative console or enable administrative security. If your operating system and the privileges of your user account permit, you can create a system service to run the server. You can also specify your own configuration values for the Common database.

As a result of following the procedure in either “Augmenting profiles using the Profile Management Tool” on page 231 or “Creating profiles using the Profile Management Tool” on page 198 one of the following panels is displayed, the Administrative security panel, the Database configuration panel, or the Optional application deployment panel. Complete the following steps to configure a new deployment manager profile with customized configuration values.

### Procedure

1. The panel you see in the Profile Management Tool depends on whether you are creating or augmenting a profile, and if you are augmenting, on whether administrative security is enabled on the profile.

Task	Next Step
<b>Advanced profile augmentation</b> with administrative security enabled on the profile you are augmenting.	The Administrative security panel is displayed. Proceed to step 5 on page 313.
<b>Advanced profile augmentation</b> with administrative security disabled on the profile you are augmenting.	The Database configuration panel is displayed. Proceed to step 9 on page 316.
<b>Advanced profile creation</b>	The Optional application deployment panel is displayed. Proceed to step 2.

2. In the Optional application deployment panel, select whether to deploy the administrative console to the profile environment you are creating, then click **Next**.





The administrative console is a Web-based tool that manages the server. To choose to deploy the administrative console, leave the **Deploy the administrative console (recommended)** check box selected. Clear the check box to deselect it.

The Profile name and location panel is displayed.

3. In the Profile name and location panel, perform the following steps.
  - a. Specify a unique name and directory path for the profile, or accept the defaults.

Each profile that you create must have a name. When you have more than one profile, you can tell them apart at their highest level by this name. If you choose not to use the default name, see “Naming considerations for profiles, nodes, hosts, and cells” on page 554 for information about issues you must consider when naming the profile, such as restrictions on the length of the directory name.

The directory you specify will contain the files that define the runtime environment, such as commands, configuration files, and log files. By default, this directory location is:

-  `user_data_root/profiles/profile_name`
-   `install_root/profiles/profile_name`
-  `install_root\profiles\profile_name`

where *profile\_name* is the name you specified. An error message is displayed if:

- The *profile\_name* you specify is not unique.
  - The directory you specify is not empty.
  - Your user ID does not have sufficient permissions for the directory.
  - There is insufficient space to create the profile.
- b. You can make the profile that you are creating the default profile (so that commands work automatically with it) by selecting the **Make this profile the default** check box. This check box appears only if you have an existing profile on your system.

The first profile that you create on a workstation is the default profile.

The default profile is the default target for commands that are issued from the `bin` directory in the product installation root. When only one profile exists on a workstation, every command operates on that profile. If more than one profile exists, certain commands require that you specify the profile to which the command applies. See “Profile commands in a multiprofile environment” on page 567 for more information.

- c. Click **Next**. (If you click **Back** and change the name of the profile, you might have to manually change the name on this panel when it is displayed again.)

The Node, host, and cell names panel is displayed.

4. In the Node, host, and cell names panel, specify the node, host, and cell names for the deployment manager, or accept the defaults and click **Next**. Try to keep the node name as short as possible, but ensure that node names are unique within your deployment environment. See “Naming considerations for profiles, nodes, hosts, and cells” on page 554 for information about reserved terms and other issues you must consider when naming the node and host.

The Administrative security panel is displayed.

5. Enable administrative security.

This screen differs depending on whether you are creating or augmenting a profile.

If you are creating a profile, you can enable administrative security now, or later from the administrative console. To enable administrative security now, leave the **Enable administrative security** check box selected, supply a user name and password to log onto the administrative console, and click **Next**. To disable administrative security, clear the check box. To enable administrative security later from the administrative console, open the console and select **Security > Business Integration Security**.

If you are augmenting a profile and see the Administrative security panel, the profile you are augmenting has security enabled. You must reenter the administrative user ID and password for that profile.

The next step depends on whether you are creating or augmenting a profile.

Task	Next step
Advanced profile augmentation	The Database configuration panel is displayed. Proceed to step 9 on page 316.
Advanced profile creation	The Port values assignment panel is displayed. Proceed to step 6.

6. Verify that the ports specified for the profile are unique and click **Next**.

The Profile Management Tool detects ports currently used by other WebSphere products and displays recommended port values that do not conflict with existing ones. If you have applications other than WebSphere ones that use specified ports, verify that the ports do not conflict. If you chose not to deploy the administrative console on the Optional application deployment panel in step 2 on page 312, the administrative console ports are not available on the Port values assignment panel.

Ports are recognized as being in use if the following conditions are satisfied:

- They are assigned to a profile created under an installation performed by the current user.
- They are currently in use.

Although the tool validates ports when you access the Port values assignment panel, port conflicts can still occur resulting from selections you make on subsequent Profile Management Tool panels. Ports are not assigned until profile creation completes.

If you suspect a port conflict, you can investigate it after the profile is created. Determine the ports used during profile creation by examining the following file:

- **i5/OS** `profile_root/properties/portdef.props`
- **Linux** **UNIX** `profile_root/properties/portdef.props`
- **Windows** `profile_root\properties\portdef.props`

Included in this file are the keys and values used in setting the ports. If you discover port conflicts, you can reassign ports manually. To reassign ports, see the topic Updating ports in an existing profile in the WebSphere Application Server Network Deployment, version 6.1 information center, and run the `updatePorts.ant` file through the `ws_ant` script.

The next step depends on your platform and whether you are installing as a root (Administrator) or non-root user.



Installation type	Next step
On a Linux platform with the Profile Management Tool running as the root user	The Linux service definition panel is displayed. Proceed to step 8.
On a Windows platform with Administrator group privileges	The Windows service definition panel is displayed. Proceed to step 7.
On any other platform, or as a non-root user on a Linux or Windows platform.	The Database configuration panel is displayed. Proceed to step 9 on page 316.

7. **Windows** Choose whether to run the server as a Windows service and click **Next**.

The Windows service definition panel is displayed for the Windows platform only if the ID that installs the Windows service has the Administrator group privilege. If the profile is configured as a Windows service, the product starts Windows services for server processes started by a **startManager** command. For example, if you configure a server as a Windows service and issue the **startManager** command, the **wasservice** command starts the defined service.

**Important:** If you choose to log on as a specified user account, you must specify the user ID and the password for the user who is to run the service, and you must specify the startup type (default is Manual). The user ID must not have spaces in its name, it must belong to the Administrator group, and it must have the advanced user rights "Log on as a service" and "Act as part of the operating system." If the user ID belongs to the Administrator group, the Profile Management Tool grants it the advanced user rights if it does not already have them.

During profile deletion you can remove the Windows service that is added during profile creation.

#### IPv6 considerations when running profiles as Windows services

Servers created to run as a Windows service fail to start when using IPv6 if the service is configured to run as Local System. Create a user-specific environment variable to enable IPv6. Because this environment variable is a user variable instead of a Local System variable, only a Windows service that runs as that specific user can access this environment variable. By default, when a new profile is created and configured to run as a Windows service, the service is set to run as Local System. When the WebSphere Process Server service tries to run, the service is unable to access the user environment variable that specifies IPv6, and thus tries to start as IPv4. The server does not start correctly in this case. To resolve the problem, when creating the profile, specify that the WebSphere Process Server service runs as the same user ID under which the environment variable that specifies IPv6 is defined, instead of as Local System.

After you have finished the Advanced profile creation the Database configuration panel is displayed.

8. **Linux** Choose whether to run the server as a Linux service and click **Next**.

The Linux service definition panel is displayed only if the current operating system is a supported version of Linux and the current user has the appropriate permissions.

WebSphere Process Server attempts to start Linux services for server processes that are started by a **startManager** command. For example, if you configure a server as a Linux service and issue the **startManager** command, the **wasservice** command attempts to start the defined service.

By default, WebSphere Process Server is not selected to run as a Linux service.

To create the service, the user that runs the Profile Management Tool must be the root user. If you run the Profile Management Tool with a non-root user ID, the Linux service definition panel is not displayed, and no service is created.

You must specify a user name under which the service runs.

To delete a Linux service, the user must be the root user or have proper privileges for deleting the service. Otherwise, a removal script is created that the root user can run to delete the service on the user's behalf.

The Database configuration panel is displayed.

9. In the Database configuration panel, configure the Common database used by the selected product components.

See the topic "Configuring the Common database and the Common Event Infrastructure database using the Profile Management Tool" on page 297 for details and return to this step when you have completed the fields on the Database configuration and Database configuration (Part 2) panels. The Profile summary panel is displayed.

10. In the Profile summary panel, click **Create** or **Augment** to create or augment the profile or **Back** to change the characteristics of the profile.

When the profile creation or augmentation is complete, the Profile complete panel is displayed with the message **The Profile Management tool created the profile successfully** or **The Profile Management tool augmented the profile successfully**.

11. Complete the profile configuration by doing one of the following tasks, depending on whether you must manually configure the Common database.
  - If you completed configuration of the Common database using the Profile Management Tool, click **Launch the First steps console, Create another profile**, or both; click **Finish** to exit. Use the First steps console to start the server. Use the **Create another profile** option to restart the Profile Management Tool to create additional profiles.
  - If you decided to postpone actual database configuration by producing scripts to be run manually, perform the following steps:
    - a. Clear the check box to start the First steps console and click **Finish** to close the Profile Management Tool.
    - b. Use your site's standard database definition tools and procedures to edit and run the scripts the Profile Management Tool generated to create or create and configure the WPRCSDB database (or its equivalent if it has a different name on your system). You identified the location for this script in step 2 on page 298 of the topic "Configuring the Common database and the Common Event Infrastructure database using the Profile Management Tool" on page 297. Also see the topics that describe manually creating a new Common database or tables in an existing Common database in "Creating the Common database and tables after profile creation or augmentation" on page 359 or "Creating tables on an existing Common database after profile creation or augmentation" on page 360. When you have completed configuring the databases, start the First steps console associated with the profile, as instructed in "Starting the First steps console" on page 133.

## Results

You have completed one of the following tasks:

- Created a WebSphere Process Server profile.

- Augmented a WebSphere Application Server, WebSphere Application Server Network Deployment, or Websphere ESB profile into a WebSphere Process Server profile.
- Augmented a WebSphere Application Server or WebSphere Application Server Network Deployment profile into a Websphere ESB profile.

## What to do next

Check server operation by selecting **Start the deployment manager** from the First steps console. An output window opens. If you see a message similar to the following, your deployment manager is operating properly:

```
ADMU3000I: Server dmgr open for e-business; process id is 3072
```

In a deployment environment, you must create and configure other databases, create custom profiles and federate them to your deployment manager, create servers, create clusters if you want workload management capabilities, and perform other tasks specific to your planned installation environment. Your planned environment dictates which tasks you must perform and the order in which you perform them.

For more information about planning your installation and about the databases required by WebSphere Process Server, see the topics under *Planning for WebSphere Process Server* in the *WebSphere Process Server for Multiplatforms, version 6.2 Planning PDF*. Or view the topics in the WebSphere Process Server for Multiplatforms, version 6.2 online information center at <http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r2mx/> by navigating to **Planning for WebSphere Process Server**.

## Configuring the Common database and the Common Event Infrastructure database using the Profile Management Tool:

Selected WebSphere Process Server components require a database, called the *Common* database, and a Common Event Infrastructure local database to operate. Using values you provide on the Database Configuration panels, the Profile Management Tool automatically creates these databases and the required tables on a local system. You must configure these databases to have a working installation.

## Before you begin

**Note:** i5/OS The reference to database refers to a database collection.

This procedure assumes that you have started the Profile Management Tool and have chosen to create or augment a profile through either the Advanced or Deployment environment profile creation or augmentation option. You are performing the procedure in one of the following topics:

- “Configuring stand-alone server profiles using customized values” on page 289
- “Configuring deployment manager profiles using customized values” on page 312
- “Configuring deployment manager profiles for a deployment environment” on page 336

In the topic, you are at the step in the procedure that asks you to configure the Common database by completing the Database Configuration panel.

## About this task

The following WebSphere Process Server components use the Common database:

- Application Scheduler
- Business rule group
- Mediation
- Recovery
- Relationship service
- Selector
- Event Sequencing (Lock Manager)
- Enterprise Service Bus Logger Mediation Primitive
- Messaging Engines (if you selected the **Use this database for Messaging Engines (MEs)** check box detailed in step 5 on page 299).


For more information on the various databases and database tables the WebSphere Process Server product uses, see Choosing a database.

**Important:** If you choose Derby Network Server as your database product, ensure that the server is running on the host and port you specified during profile creation or augmentation, even if the database host is local. You can make sure that the server is running only after the profile is created or augmented.

## Procedure

1. In the **Choose a database product** field, select the database product you want to use, or accept the default value of Derby Embedded (for stand-alone server profiles) or Derby Network Server (for deployment manager profiles).

### Restrictions:

- Informix Dynamic Server, and Microsoft SQL Server are not supported on deployment managers using the deployment environment configuration.
  -  DB2 UDB for iSeries (Native), DB2 for i5/OS (Native), and Derby Embedded can be used only *locally* as a database on i5/OS. Derby Network Server, DB2 UDB for iSeries (Toolbox), and DB2 for i5/OS (Toolbox) can be used both locally and remotely on i5/OS. All other databases listed can be used with i5/OS only as remote databases provided the proper remote database driver is used.
2. To store the database creation and configuration scripts that the Profile Management Tool will create in a location other than the default location in the **Database script output directory** field, select the **Override the destination directory for generated scripts** check box and designate your new location in the **Database script output directory** field. The default root directory for both the CommonDB and Common Event Infrastructure scripts is `<WPS home>/profiles/<profile name>/dbscripts/`.

For example:

Common Event Infrastructure: `<WPS home>/profiles/<profile name>/dbscripts/CEI_<ceiDbName>`

CommonDB: `<WPS home>/profiles/<profile name>/dbscripts/CommonDB/<dbType>/<dbName>`

The profile creation or augmentation process will create scripts that you or the database administrator can run manually to create a new database and its required tables, if you choose not to have the Profile Management Tool do this automatically. (You prevent automatic creation and configuration of this

database by selecting the **Delay execution of database scripts (must select if using a remote database)** check box in this panel, described in step 4 on page 299.)

3. Enter your database name or accept the default value.

**i5/OS** **On i5/OS platforms:** The name of the database on i5/OS using Independent Auxiliary Storage Pools (IASPs) can be the name of the IASP. Default common database names differ based on the database product:

- **i5/OS** \*LOCAL for DB2 UDB for iSeries (Native) and DB2 for i5/OS (Native)
- **i5/OS** \*SYSBAS for DB2 UDB for iSeries (Toolbox) and DB2 for i5/OS (Toolbox)
- WPRCSDB for all other database products

Default Common Event Infrastructure database names differ based on the database product:

- **i5/OS** \*LOCAL for DB2 UDB for iSeries (Native) and DB2 for i5/OS (Native)
- **i5/OS** \*SYSBAS for DB2 UDB for iSeries (Toolbox) and DB2 for i5/OS (Toolbox)
- EVENT for all other database products

If you plan to use an existing database, this name must match the name of that database. If you plan to create a new database and the name you specify is already associated with another WebSphere Process Server profile, you must use a different database name.

**Note:** **i5/OS** This does not apply to i5/OS. All profiles on i5/OS will use the same database name.

**Note:** Note: The Oracle database name (dbName) is actually the Oracle Identifier (SID) and must exist in order to create tables. It can be shared between the common database and the Common Event Infrastructure database. It is recommended that you remove all Oracle database resources before creating a new profile, as the Common Event Infrastructure database creates unique database resources, such as table spaces, which will fail if it is already exists in the Oracle server.

4. Select the **Delay execution of database scripts (must select if using a remote database)** check box if you do not want the Profile Management Tool to create and configure a local database automatically or create tables in an existing one during profile creation or augmentation. A local database will be created if this check box is not selected. If you select this option, you or the database administrator must manually run the scripts that the Profile Management Tool creates and stores in the location specified in the **Database script output directory** field on this panel. For instructions on manually creating and configuring a new Common database or creating tables in an existing one, see “Creating the Common database and tables after profile creation or augmentation” on page 359 or “Creating tables on an existing Common database after profile creation or augmentation” on page 360.

**Important:** Do not use the scripts located in the following directories (where the variable *db\_type* represents the supported database product):

- **Linux** **UNIX** *install\_root/dbscripts/CommonDB/db\_type*

- **Windows** `install_root\dbscripts\CommonDB\db_type`

These default scripts have not been updated by the Profile Management Tool.

**Restriction:** The **Delay execution of database scripts (must select if using a remote database)** option is not available for the following configurations:

- If you chose the Derby Embedded or Derby Network Server product.
- In a network deployment environment.

The next step depends on whether you are creating or augmenting a stand-alone server or deployment manager profile.

Type of profile you are creating or augmenting	Next step
Stand-alone server	Proceed to step 5 on page 299.
Deployment manager	Proceed to step 7 on page 300.

5. **For stand-alone server profiles only:** Select the **Use a file store for Messaging Engines (MEs)** check box to use a file store for messaging engines. If you select this check box, the messaging engines are created and configured on a file store (except for the Common Event Infrastructure messaging engine, which uses a Derby Embedded local database even if this option is selected). If you do not select this check box, and do not select the **Use this database for Messaging Engines (MEs)** check box detailed in step 6 on page 300, the messaging engines are created and configured on the default Derby Embedded database. Derby Embedded databases cannot be created on remote workstations. For more information on file stores, see File stores in the WebSphere Application Server Network Deployment, version 6.1 information center.
6. **For stand-alone server profiles only:** Select the **Use this database for Messaging Engines (MEs)** check box to use the Common database for messaging engines. If you do not select this check box, and do not select the **Use a file store for Messaging Engines (MEs)** check box detailed in step 5 on page 299, the messaging engines are created and configured on the default Derby Embedded database. Derby Embedded databases cannot be created on remote workstations. For more information on data stores, see Data stores in the WebSphere Application Server Network Deployment, version 6.1 information center.

**Restriction:** This option is not available if you chose the Derby Embedded product.

7. Click **Next**. The next step depends on the type of profile you are creating or augmenting and on the database product you chose.

Type of profile you are creating or augmenting	Next step
Stand-alone server profile with the default value of <i>Derby Embedded</i> selected.	The Profile summary panel is displayed. Return to step 15 on page 295 in the topic "Configuring stand-alone server profiles using customized values" on page 289.

Type of profile you are creating or augmenting	Next step
<p>Stand-alone server profile with any database product other than <i>Derby Embedded</i> selected.</p> <p>Deployment manager profile with any database product selected.</p>	<p>The Database configuration (Part 2) panel is displayed with fields specific to the database product you selected. Review the topic “Database configuration (Part 2) panel for Common database configuration” on page 301 for information on how to complete this panel. When you have completed entering information on this panel, click <b>Next</b>. The tool checks that a valid database connection exists. If the database connection does not exist, you need to correct the problem either by starting up the database or altering the specified parameters before continuing. The Profile summary panel is displayed. Depending on the topic from which you accessed this one, return to one of the following steps:</p> <ul style="list-style-type: none"> <li>• Step 15 on page 295 in the topic “Configuring stand-alone server profiles using customized values” on page 289</li> <li>• Step 10 on page 316 in the topic “Configuring deployment manager profiles using customized values” on page 312</li> <li>• Step 9 on page 341 in the topic “Configuring deployment manager profiles for a deployment environment” on page 336</li> </ul>

*Database configuration (Part 2) panel for Common database configuration:*

When you select your database product on the Database configuration panel in the Profile Management Tool, a follow-up panel asks you for database-specific information. This panel, which does not appear if you selected Derby Embedded when configuring a stand-alone server profile is called the **Database configuration (Part 2) panel**. It contains slightly different fields and default values, depending on your database product selection.

You must complete this panel even if you chose to postpone creating a new database or adding tables to an existing one by selecting the **Delay execution of database scripts** check box on the **Database configuration (Part 2) panel**. The values you choose on this panel are added to the database configuration scripts that the Profile Management Tool creates and stores in the directory you specified in the **Database script output directory** field on the previous panel.

**Restriction:** You cannot create a new database if you are using DB2 for z/OS V8 or V9, Oracle 9i, Oracle 10g, or 11g. If you select one of these databases and the option **Create a new local database**, the **Next** button is disabled. Make different selections on the Database configuration panel.

Choose the link for your database product from the following list to determine how to complete the Database configuration (Part 2) panel:

- “Derby Network Server” on page 302
- “DB2 Universal Database” on page 303

- “DB2 for z/OS V8 and V9” on page 303
- “DB2 UDB for iSeries (Toolbox)” on page 304
- **i5/OS** “DB2 UDB for iSeries (Native)” on page 304
- “DB2 Universal Runtime Client” on page 305
- “Informix Dynamic Server” on page 306
- “Microsoft SQL Server (Embedded)” on page 306
- “Microsoft SQL Server (DataDirect) and Microsoft SQL Server (Microsoft)” on page 307
- “Oracle 9i” on page 307
- “Oracle 10g or 11g” on page 308

**Important:** If you are creating or augmenting a stand-alone server profile and selected the Derby Embedded database product, no additional database configuration is necessary.

When you have completed the Database configuration (Part 2) panel, click **Next**. The tool checks that a valid database connection exists. If the tool identifies an error, you must correct the problem before continuing by either making sure the database is up and running or altering parameters in order to make a good connection.

The Profile summary panel is displayed. Depending on the topic from which you accessed this one, return to one of the following steps:

- Step 15 on page 295 in the topic “Configuring stand-alone server profiles using customized values” on page 289
- Step 10 on page 316 in the topic “Configuring deployment manager profiles using customized values” on page 312
- Step 9 on page 341 in the topic “Configuring deployment manager profiles for a deployment environment” on page 336

### Derby Network Server

Table 104 on page 302 lists the fields you must complete on the Database configuration (Part 2) panel when you select Derby Network Server as your database product.

**Important:** If you choose Derby Network Server as your database product, after profile creation or augmentation completes, ensure that the server is running on the host and port you specified during profile creation, even if the database host is local.

*Table 115. Required Common database configuration fields for Derby Network Server*

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Database server host name (for example IP address)	Accept the default value of localhost or enter the correct database server host name.



Table 115. Required Common database configuration fields for Derby Network Server (continued)

Field	Action needed
Server port	Accept the default value of 1527 or enter the correct server port number.

## DB2 Universal Database

Table 105 on page 303 lists the fields you must complete on the Database configuration (Part 2) panel when you select DB2 Universal Database as your database product.

Table 116. Required Common database configuration fields for DB2 Universal Database

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Accept the default value of <i>install_root/universalDriver_wbi/lib</i> on Linux, UNIX or i5/OS platforms, or <i>install_root\universalDriver_wbi\lib</i> on Windows platforms, or browse to the location on your system that contains the following files: <ul style="list-style-type: none"> <li>• db2jcc.jar</li> <li>• db2jcc_license_cu.jar or db2jcc_license_cisuz.jar</li> </ul> An error message is displayed if the files cannot be found at the specified location.
JDBC driver type	Accept the default value of 4 or select the radio button beside the correct JDBC driver type.
Database server host name (for example IP address)	Accept the default value of localhost or enter the correct database server host name.
Server port	Accept the default value of 50000 or enter the correct server port number.

## DB2 for z/OS V8 and V9

Table 106 on page 303 lists the fields you must complete on the Database configuration (Part 2) panel when you select DB2 for z/OS V8 and V9 as your database product.

Table 117. Required Common database configuration fields for DB2 for z/OS V8 and V9

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.

Table 117. Required Common database configuration fields for DB2 for z/OS V8 and V9 (continued)

Field	Action needed
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Enter the location on your system that contains the following files: <ul style="list-style-type: none"> <li>• db2jcc.jar</li> <li>• db2jcc_license_cisuz.jar</li> </ul> An error message is displayed if the files cannot be found at the specified location.
Database server host name (for example IP address)	Enter the database server host name.
Server port	Accept the default value of 446 or enter the correct server port number.
Database alias name	Enter the database alias name.
Connection location	Enter the connection location.
Storage group name	Enter the storage group name.

#### DB2 UDB for iSeries (Toolbox)

Table 107 on page 304 lists the fields you must complete on the Database configuration (Part 2) panel when you select DB2 UDB for iSeries (Toolbox) as your database product. This selection is also valid for DB2 for i5/OS (Toolbox).

Table 118. Required Common database configuration fields for DB2 UDB for iSeries (Toolbox) or DB2 for i5/OS (Toolbox)

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Accept the default value of /QIBM/ProdData/HTTP/Public/jt400/lib on i5/OS platforms, or browse to the location on your system that contains the following file: <ul style="list-style-type: none"> <li>• jt400.jar</li> </ul> An error message is displayed if the file cannot be found at the specified location.
Database server host name (for example IP address)	Enter the database server host name.
Database collection name	Accept the default value of WPRCSDB or enter the correct schema name. To prevent naming conflicts within the specified database, specify a schema name whose first three characters are unique from the names of other schemas residing in the database.

## DB2 UDB for iSeries (Native)

**Note:** i5/OS **On i5/OS platforms:** This database configuration applies only to i5/OS platforms.

Table 108 on page 305 lists the fields you must complete on the Database configuration (Part 2) panel when you select DB2 UDB for iSeries (Native) as your database product. This selection is also valid for DB2 for i5/OS (Native).

*Table 119. Required Common database configuration fields for DB2 UDB for iSeries (Native) or DB2 for i5/OS (Native)*

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Accept the default value of /QIBM/ProdData/Java400/ext on i5/OS platforms, or browse to the location on your system that contains the following file: <ul style="list-style-type: none"><li>db2_classes.jar</li></ul> An error message is displayed if the file cannot be found at the specified location.
Database server host name (for example IP address)	Enter the database server host name.
Database collection name	Accept the default value of WPRCSDB or enter the correct schema name. To prevent naming conflicts within the specified database, specify a schema name whose first three characters are unique from the names of other schemas residing in the database.

## DB2 Universal Runtime Client

Table 109 on page 305 lists the fields you must complete on the Database configuration (Part 2) panel when you select DB2 Universal Runtime Client as your database product.

*Table 120. Required Common database configuration fields for DB2 Universal Runtime Client*

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Enter the location on your system that contains the db2java.zip file. An error message is displayed if the file cannot be found at the specified location.

Table 120. Required Common database configuration fields for DB2 Universal Runtime Client (continued)

Field	Action needed
Database server host name (for example IP address)	Enter the database server host name.
Server port	Accept the default value of 50000 or enter the correct server port number.
DB2 node name (must be 8 characters or less)	Enter the DB2 node name.

### Informix Dynamic Server

Table 110 on page 306 lists the fields you must complete on the Database configuration (Part 2) panel when you select Informix Dynamic Server as your database product.

Table 121. Required Common database configuration fields for Informix Dynamic Server

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Enter the location on your system that contains the following files: <ul style="list-style-type: none"> <li>• ifxjdbc.jar</li> <li>• ifxjdbcx.jar</li> </ul> An error message is displayed if the files cannot be found at the specified location.
Database server host name (for example IP address)	Accept the default value of localhost or enter the correct database server host name.
Database server name	Enter the database server name.
Server port	Accept the default value of 1526 or enter the correct server port number.
Event service instance name	Enter the correct event service instance name.

### Microsoft SQL Server (Embedded)

Table 111 on page 306 lists the fields you must complete on the Database configuration (Part 2) panel when you select Microsoft SQL Server Embedded as your database product.

**Note:** Microsoft SQL Server (Embedded)

Table 122. Required Common database configuration fields for Microsoft SQL Server Embedded

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.

Table 122. Required Common database configuration fields for Microsoft SQL Server Embedded (continued)

Field	Action needed
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Database server host name (for example IP address)	Accept the default value of localhost or enter the correct database server host name.
Database server name	Enter the database server name.
Server port	Accept the default value of 1433 or enter the correct server port number.
Admin user name	Enter the user ID that has privileges to create and drop databases and users or accept the default value of sa. This ID is required when the <b>Delay execution of database scripts</b> option is NOT selected in the previous screen.
Password	Enter the password for the user <b>Admin user name</b> ID.
Confirm password	Confirm the password.

### Microsoft SQL Server (DataDirect) and Microsoft SQL Server (Microsoft)

Table 112 on page 307 lists the fields you must complete on the Database configuration (Part 2) panel when you select Microsoft SQL Server (DataDirect) or Microsoft SQL Server (Microsoft) as your database product.

Table 123. Required Common database configuration fields for Microsoft SQL Server DataDirect and Microsoft SQL Server (Microsoft)

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	<p>Enter the location on your system that contains the following files:</p> <ul style="list-style-type: none"> <li>sqlserver.jar</li> <li>base.jar</li> <li>util.jar</li> </ul> <p>Also, the file spy.jar must be available in the following location relative to the location of the JDBC driver class path files:</p> <ul style="list-style-type: none"> <li><b>Linux</b>    <b>UNIX</b>    ../spy/spy.jar</li> <li><b>Windows</b>    ..\spy\spy.jar</li> </ul> <p>An error message is displayed if the files cannot be found at the specified location.</p>
Database server host name (for example IP address)	Accept the default value of localhost or enter the correct database server host name.

Table 123. Required Common database configuration fields for Microsoft SQL Server DataDirect and Microsoft SQL Server (Microsoft) (continued)

Field	Action needed
Database server name	Enter the database server name.
Server port	Accept the default value of 1433 or enter the correct server port number.

### Oracle 9i

Table 113 on page 308 lists the fields you must complete on the Database configuration (Part 2) panel when you select Oracle 9i as your database product.

Table 124. Required Common database configuration fields for Oracle 9i

Field	Action needed
Directory of database server installation	Enter or browse for the database server installation. Required when the <b>Delay execution of database scripts</b> option is selected in the previous screen.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Enter the location on your system that contains the file <code>ojdbc14.jar</code> . An error message is displayed if the files cannot be found at the specified location.
JDBC driver type	Click <b>OCI</b> or <b>Thin</b> .
Database server host name (for example IP address)	Accept the default value of <code>localhost</code> or enter the correct database server host name.
Server port	Accept the default value of 1521 or enter the correct server port number.
Admin user name	Enter the user ID that has privileges to create and drop databases and users. Required when the <b>Delay execution of database scripts</b> option is NOT selected in the previous screen.
Password	Enter the password for the user <b>Admin user name</b> ID.
Confirm password	Confirm the password.

### Oracle 10g or 11g

Table 114 on page 308 lists the fields you must complete on the Database configuration (Part 2) panel when you select Oracle 10g or 11g as your database product.

**Important:** For Oracle 11g you must have a user ID that has SYSDBA privileges before creating any profile.

Table 125. Required Common database configuration fields for Oracle 10g or 11g

Field	Action needed
Directory of database server installation	Enter or browse for the database server installation. Required when the <b>Delay execution of database scripts</b> option is selected in the previous screen.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Enter the location on your system that contains the file <code>ojdbc14.jar</code> . An error message is displayed if the files cannot be found at the specified location.
JDBC driver type	Click <b>OCI</b> or <b>Thin</b> .
Database server host name (for example IP address)	Accept the default value of <code>localhost</code> or enter the correct database server host name.
Server port	Accept the default value of 1521 or enter the correct server port number.
Admin user name	Enter the user ID that has privileges to create and drop databases and users. Required when the <b>Delay execution of database scripts</b> option is NOT selected in the previous screen.
Password	Enter the password for the user <b>Admin user name ID</b> .
Confirm password	Confirm the password.

## Configuring custom profiles (managed nodes) using customized values

You can create and configure a profile manually or you can use the Profile Management Tool. The instructions in this topic tell you how to use the Profile Management Tool to create and configure a custom profile with customized configuration settings.

### Before you begin

This topic assumes that you are using the Profile Management Tool to create or augment profiles and are following the procedure in either “Creating profiles using the Profile Management Tool” on page 198 or “Augmenting profiles using the Profile Management Tool” on page 231. As a result, it is assumed that you have started the Profile Management Tool, have chosen to create or augment a custom profile, and have selected the **Advanced** profile creation or augmentation option.

### About this task

While configuring custom profiles, you can specify your own values for settings such as ports, the location of the profile, and the names for the profile, node, and host. You can choose to federate the node to an existing deployment manager during the creation or augmentation process, or federate it later using the `addNode` command.

As a result of following the procedure in either “Augmenting profiles using the Profile Management Tool” on page 231 or “Creating profiles using the Profile

Management Tool” on page 198, you are viewing either the Federation panel or the Profile name and location panel. Complete the following steps to configure a new custom profile with customized configuration values.

### Procedure

1. The panel you see in the Profile Management Tool depends on whether you are creating or augmenting a profile.

Tasks	First step
Advanced profile augmentation	The Federation panel is displayed. Proceed to step 4 on page 331.
Advanced profile creation	The Profile name and location panel is displayed. Proceed to step 2.

2. In the Profile name and location panel, perform the following steps:
  - a. Specify a unique name and directory path for the profile, or accept the defaults.

Each profile that you create must have a name. When you have more than one profile, you can tell them apart at their highest level by this name.

The directory you specify will contain the files that define the runtime environment, such as commands, configuration files, and log files. The default directory is dependent on platform:

- **i5/OS** `user_data_root/profiles/profile_name`
- **Linux** **UNIX** `install_root/profiles/profile_name`
- **Windows** `install_root\profiles\profile_name`

where *profile\_name* is the name you specified. An error message is displayed if:

- The *profile\_name* you specify is not unique.
  - The directory you specify is not empty.
  - Your user ID does not have sufficient permissions for the directory.
  - There is insufficient space to create the profile.
- b. You can make the profile you are creating the default profile (so commands work automatically with it) by selecting the **Make this profile the default** check box. This check box appears only if you have an existing profile on your system.

The first profile that you create on a machine is the default profile.

The default profile is the default target for commands that are issued from the `bin` directory in the product installation root. When only one profile exists on a machine, every command operates on that profile. If more than one profile exists, certain commands require that you specify the profile to which the command applies. See “Profile commands in a multiprofile environment” on page 567 for more information.

The Profile Management Tool detects ports currently used by other WebSphere products, but not those of other applications that might use specified ports. When federating a custom profile, the **addNode** command uses non-conflicting ports. This means that you can take the default port assignments as you create the profile, and let the **addNode** command specify non-conflicting ports as you federate the node. Port assignments must be unique on a server. Server processes on different servers can use the same port assignments without conflict.



- c. Click **Next**. (If you click **Back** and change the name of the profile, you might have to manually change the name on this panel when it is displayed again.)

The Node and host names panel is displayed.

3. In the Node and host names panel, specify the node and host names for the profile, or accept the defaults and click **Next**. Try to keep the node name as short as possible, but ensure that node names are unique within the deployment environment. See “Naming considerations for profiles, nodes, hosts, and cells” on page 554 for information about reserved terms and other issues you must consider when naming the node and host.

The Federation panel is displayed.

4. In the Federation panel, choose to federate the node into the deployment manager now as part of the profile creation or augmentation, or at a later time and apart from profile creation or augmentation.
  - If you choose to federate the node as part of the profile creation or augmentation, specify the host name or IP address and SOAP port of the deployment manager, and an authentication user ID and password (if administrative security is enabled on the deployment manager). Leave the **Federate this node later** check box unselected. Then click **Next**.

The Profile Management Tool verifies that the deployment manager exists and can be contacted, and that the authentication user ID and password are valid for that deployment manager (if it is secured).

#### **Important:**

Do *not* federate the custom node during profile creation or augmentation if any one of the following is true:

- You plan to use this custom node as a migration target.
- Another profile is being federated. (Node federation must be serialized.)
- The deployment manager is not running or you are not sure if it is running.
- The deployment manager has not yet been augmented into a WebSphere Process Server deployment manager.
- The deployment manager is not at a release level the same or higher than that of the custom profile you are creating or augmenting.
- The deployment manager does not have a JMX administrative port enabled.
- The deployment manager is reconfigured to use the non-default remote method invocation (RMI) as the preferred Java Management Extensions (JMX) connector. (Select **System administration > Deployment manager > Administration services** in the administrative console of the deployment manager to verify the preferred connector type.)

If you attempt to federate a custom node when the deployment manager is not running or is not available for other reasons, a warning panel prevents you from continuing. If this warning panel appears, click **OK** to exit from it, and then make different selections on the Federation panel.

- If you choose to federate the node at a later time and apart from profile creation or augmentation, select the **Federate this node later** check box and click **Next**.

See “Federating custom nodes to a deployment manager” on page 333 for more information on how to federate a node by using the addNode

command. Read more about this command in the addNode command topic in the WebSphere Application Server Network Deployment, version 6.1, information center.

The next step depends on the type of profile creation or augmentation you are performing and, in an Advanced profile creation, whether you elected to federate the profile as part of the profile creation process.

Tasks	Next step
<ul style="list-style-type: none"> <li>• <b>Advanced profile creation</b> without federating the profile</li> <li>• <b>Advanced profile augmentation</b></li> </ul>	The Database configuration panel is displayed. Proceed to step 6.
<ul style="list-style-type: none"> <li>• <b>Advanced profile creation</b> including federating the profile</li> </ul>	The Port values assignment panel is displayed. Proceed to step 5.

5. **For Advanced profile creation only:** Verify that the ports specified for the profile are unique and click **Next**.

The Profile Management Tool detects ports currently used by other WebSphere products and displays recommended port values that do not conflict with existing ones. If you have applications other than WebSphere ones that use specified ports, verify that the ports do not conflict.

Ports are recognized as being in use if the following conditions are satisfied:

- The ports are assigned to a profile created under an installation performed by the current user.
- The ports are currently in use.

Although the tool validates ports when you access the Port values assignment panel, port conflicts can still occur resulting from selections you make on subsequent Profile Management Tool panels. Ports are not assigned until profile creation completes.

If you suspect a port conflict, you can investigate it after the profile is created. Determine the ports used during profile creation by examining the following file:

- `i5/OS profile_root/properties/portdef.props`
- `Linux UNIX profile_root/properties/portdef.props`
- `Windows profile_root\properties\portdef.props`

Included in this file are the keys and values used in setting the ports. If you discover port conflicts, you can reassign ports manually. To reassign ports, see the topic Updating ports in an existing profile and run the updatePorts.ant file through the ws\_ant script.

The Database configuration panel is displayed.

6. In the Database configuration panel, perform the following steps:
  - a. Review the database product. The database that matches the database used on the deployment manager to which this custom profile will be federated is displayed.
  - b. Provide the location (directory) of the JDBC driver class path files for the database. You can accept the default values for Derby Network Server, DB2 Universal Database, or Microsoft SQL Server Embedded.
  - c. Click **Next**.

The Profile summary panel is displayed.

7. In the Profile summary panel, click **Create** or **Augment** to create or augment the profile, or **Back** to change the characteristics of the profile.

When the profile creation or augmentation is complete, the Profile complete panel is displayed with the message **The Profile Management tool created the profile successfully** or **The Profile Management tool augmented the profile successfully**.

8. In the Profile complete panel, select **Launch the First steps console**, **Create another profile**, or both; click **Finish** to exit. Use the First steps console to access product documentation. Use the **Create another profile** option to restart the Profile Management Tool to create additional profiles.

## Results

You have completed one of the following tasks:

- Created a WebSphere Process Server or WebSphere Enterprise Service Bus profile.
- Augmented a WebSphere Application Server, WebSphere Application Server Network Deployment, or WebSphere Enterprise Service Bus profile into a WebSphere Process Server profile.
- Augmented a WebSphere Application Server or WebSphere Application Server Network Deployment profile into a WebSphere Enterprise Service Bus profile.

## What to do next

The node within the profile is empty until you federate it and use the administrative console to customize it.

In a deployment environment, you must create and configure databases, create other custom profiles and federate them to your deployment manager, create servers, create clusters if you want workload management capabilities, and perform other tasks specific to your planned installation environment. Your planned environment dictates which tasks you must perform and the order in which you perform them.

For more information about planning your installation and on the databases required by WebSphere Process Server, see the topics under *Planning for WebSphere Process Server* in the *WebSphere Process Server for Multiplatforms, version 6.2 Planning* PDF. Or view the topics in the WebSphere Process Server for Multiplatforms, version 6.2 online information center at <http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r2mx/> by navigating to **Planning for WebSphere Process Server**.

## Federating custom nodes to a deployment manager:

You can use the `addNode` command to federate a custom node into a deployment manager cell. The following instructions guide you through the process of federating and deploying custom nodes.

## Before you begin

Before using this procedure, ensure that the following prerequisites are met:

- You have installed WebSphere Process Server and created a WebSphere Process Server deployment manager and a custom profile. This procedure assumes you did *not* federate the custom profile during its creation or augmentation, either with the Profile Management Tool or with the `manageprofiles` command.
- The deployment manager is running. If it is not, start it either by selecting **Start the deployment manager** from its First steps console or by entering the following command from a command line (where *profile\_root* represents the installation location of the deployment manager profile):

- `i5/OS` `profile_root/bin/startManager`
- `Linux` `UNIX` `profile_root/bin/startManager.sh`
- `Windows` `profile_root\bin\startManager.bat`
- The deployment manager has been augmented into a WebSphere Process Server deployment manager. WebSphere Process Server profiles cannot use a WebSphere Enterprise Service Bus deployment manager, but WebSphere Enterprise Service Bus profiles can use a WebSphere Process Server deployment manager.
- The deployment manager is at the same release level or higher than the custom profile you created or augmented.
- The deployment manager has a JMX administrative port enabled. The default protocol is SOAP.
- You do not plan to use this custom node as a migration target.

### About this task

Federate a custom node so that it can be managed by a deployment manager. Use the `addNode` command to federate a custom profile into a deployment manager cell. To federate a custom profile, perform the following steps.

### Procedure

1. Go to the `bin` directory of the custom profile you want to federate. Open a command window and go to one of the following directories (from a command line), depending on platform (where `profile_root` represents the installation location of the custom profile):

- `i5/OS` `profile_root/bin`
- `Linux` `UNIX` `profile_root/bin`
- `Windows` `profile_root\bin`

2. Issue the `addNode` command.

Issue one of the following commands from the command line if security is not enabled:

- `i5/OS` `addNode deployment_manager_host deployment_manager_SOAP_port`
- `Linux` `UNIX` `./addNode.sh deployment_manager_host deployment_manager_SOAP_port`
- `Windows` `addNode.bat deployment_manager_host deployment_manager_SOAP_port`

Issue one of the following commands from the command line if security is enabled:

- `i5/OS` `addNode deployment_manager_host deployment_manager_SOAP_port -username userID_for_authentication -password password_for_authentication`
- `Linux` `UNIX` `./addNode.sh deployment_manager_host deployment_manager_SOAP_port -username userID_for_authentication -password password_for_authentication`
- `Windows` `addNode.bat deployment_manager_host deployment_manager_SOAP_port -username userID_for_authentication -password password_for_authentication`

An output window opens. If you see a message similar to the following message, your custom profile was federated successfully:

```
ADMU0003I: Node DMNDID2Node03 has been successfully federated.
```

## Results

The custom profile is federated into the deployment manager. For more information on the addNode command and its parameters, see the topic addNode command in the WebSphere Application Server Network Deployment, version 6.1.x, information center.

## What to do next

After federating the custom profile, go to the administrative console of the deployment manager to customize the empty node or to create a new application server.

# Configuring profiles for a deployment environment

Learn how to create or augment a profile with customized configuration settings to be used in a new or existing deployment environment pattern. Use the Profile Management Tool to configure the profile.

## Before you begin

This topic assumes that you are using the Profile Management Tool to create or augment profiles and are following the procedure in either “Creating profiles using the Profile Management Tool” on page 198 or “Augmenting profiles using the Profile Management Tool” on page 231. As a result, it is assumed that you have started the Profile Management Tool, have chosen to create a deployment manager profile or create or augment a custom profile, and have selected the **Deployment environment** profile creation or augmentation option.

## About this task

Select the **Deployment environment** profile creation or augmentation option to set up a fully configured profile for your deployment environment. This option configures and installs all components needed for WebSphere Process Server to work. The following components are configured as part of this option:

- Business Process Choreographer
- Common Event Infrastructure
- Business Rules Manager
- Service Component Architecture

By choosing the **Deployment environment** profile creation or augmentation option, you can also assign customized values to ports, to the location of the profile, to names of the profile, node, host, and cell (when applicable), and to any required database configurations.

For deployment manager profiles, the tool also lets you do the following:

- Supply an administrative user ID and password for administrative security.
- If your operating system and the privileges of your user account permit, create a system service to run the server.
- Choose the deployment environment pattern to use for your installation.

For custom profiles, you can also use the tool to federate the node to an existing deployment manager, which already has a defined deployment environment pattern. You can also specify the clusters to define on that deployment environment.

See the following topics for more information:

- **Deployment environment patterns.** A deployment environment pattern specifies the constraints and requirements of the components and resources involved in a deployment environment. The patterns are designed to meet the needs of most business requirements and are intended to help you create a deployment environment in the most straightforward way.
- **Deployment environment functions.** To design a robust deployment environment, you must understand the functions that each cluster can provide in a particular IBM-supplied deployment environment pattern or a custom deployment environment. This knowledge can help you make the correct decisions as to which deployment environment pattern best meets your needs.

The type of configuration is dependent on your profile type. Choose one of the following subtopics based on your profile type.

## **Configuring deployment manager profiles for a deployment environment**

You can use the Profile Management Tool to create and configure a WebSphere Process Server or WebSphere Enterprise Service Bus deployment manager profile. Use the instructions in this topic to configure profiles with customized configuration values and use this profile in a new deployment environment based on a supplied pattern.

### **Before you begin**

This topic assumes that you are using the Profile Management Tool to create profiles and are following the procedure in “Creating profiles using the Profile Management Tool” on page 198. As a result, it is assumed that you have started the Profile Management Tool, have chosen to create a deployment manager profile, and have selected the **Deployment environment** profile creation option. You cannot augment existing deployment manager profiles using the **Deployment environment** option.

### **About this task**

Select the **Deployment environment** profile creation option to set up a fully configured profile for your deployment environment. This option configures and installs all components needed for WebSphere Process Server to work. The following components are configured as part of this option:

- Business Process Choreographer
- Common Event Infrastructure
- Business Rules Manager
- Service Component Architecture

In this type of configuration, you can specify your own values for settings such as ports, the location of the profile, and names for the profile, node, host, and cell. You can supply an administrative user ID and password for administrative security. If your operating system and the privileges of your user account permit,

you can create a system service to run the server. You can also choose the deployment environment pattern to use, as well as your own values for the Common database configuration.

As a result of following the procedure in “Creating profiles using the Profile Management Tool” on page 198, you are viewing the Profile name and location panel. Complete the following steps to configure a new deployment manager profile with customized configuration values for a deployment environment.

### Procedure

1. In the Profile name and location panel, perform the following steps:

- Specify a unique name and directory path for the profile, or accept the defaults.

Each profile that you create must have a name. When you have more than one profile, you can tell them apart at their highest level by this name.

The directory you specify will contain the files that define the runtime environment, such as commands, configuration files, and log files. By default, this directory location is:

- **Linux** **UNIX** `install_root/profiles/profile_name`
- **Windows** `install_root\profiles\profile_name`
- **i5/OS** `user_data_root/profiles/profile_name`

where *profile\_name* is the name you specified. An error message is displayed if:

- The *profile\_name* you specify is not unique.
  - The directory you specify is not empty.
  - Your user ID does not have sufficient permissions for the directory.
  - There is insufficient space to create the profile.
- You can make the profile that you are creating the default profile (so commands work automatically with it) by selecting the **Make this profile the default** check box. This check box appears only if you have an existing profile on your system.

The first profile that you create on a workstation is the default profile.

The default profile is the default target for commands that are issued from the `bin` directory in the product installation root. When only one profile exists on a workstation, every command operates on that profile. If more than one profile exists, certain commands require that you specify the profile to which the command applies. See “Profile commands in a multiprofile environment” on page 567 for more information.

- Click **Next**. (If you click **Back** and change the name of the profile, you might have to manually change the name on this panel when it is displayed again.)

The Node, host, and cell names panel is displayed.

2. In the Node, host, and cell names panel, specify the node, host, and cell names for the deployment manager, or accept the defaults and click **Next**. Try to keep the node name as short as possible, but ensure that node names are unique within the deployment environment. See “Naming considerations for profiles, nodes, hosts, and cells” on page 554 for information about reserved terms and other issues you must consider when naming the node, host, and cell.

The Administrative security panel is displayed.

3. In the Administrative security panel, supply a user name and password to log onto the administrative console and click **Next**.

**Important:** If you are performing a Deployment environment profile creation, administrative security is required.

The Port values assignment panel is displayed.

4. Verify that the ports specified for the profile are unique and click **Next**.

The Profile Management Tool detects ports currently used by other WebSphere products and displays recommended port values that do not conflict with existing ones. If you have applications other than WebSphere ones that use specified ports, verify that the ports do not conflict.

Ports are recognized as being in use if the following conditions are satisfied:

- They are assigned to a profile created under an installation performed by the current user.
- They are currently in use.

Although the tool validates ports when you access the Port values assignment panel, port conflicts can still occur resulting from selections you make on subsequent Profile Management Tool panels. Ports are not assigned until profile creation completes.

If you suspect a port conflict, you can investigate it after the profile is created. Determine the ports used during profile creation by examining the following file:

- **Linux** **UNIX** `profile_root/properties/portdef.props`
- **Windows** `profile_root\properties\portdef.props`
- **i5/OS** `profile_root/properties/portdef.props`

Included in this file are the keys and values used in setting the ports. If you discover port conflicts, you can reassign ports manually. To reassign ports, see the topic Updating ports in an existing profile in the WebSphere Application Server Network Deployment, version 6.1 information center, and run the `updatePorts.ant` file through the **ws\_ant** script.

The next step depends on your platform and whether you are installing as a root (Administrator) or non-root user.

Installation Type	Next step
On a Linux platform with the Profile Management Tool running as the root user	The Linux service definition panel is displayed. Proceed to step 6 on page 339.
On a Windows platform with Administrator group privileges	The Windows service definition panel is displayed. Proceed to step 5.
On any other platform, or as a non-root user on a Linux or Windows platform.	The Deployment environment configuration panel is displayed. Proceed to step 7 on page 339.

5. **Windows** Choose whether to run the server as a Windows service and select **Next**.

The Windows service definition panel is displayed for the Windows platform only if the ID that installs the Windows service has the Administrator group privilege. If the profile is configured as a Windows service, the product starts Windows services for server processes started by a **startManager** command. For example, if you configure a server as a Windows service and issue the **startManager** command, the **wasservice** command starts the defined service.



**Important:** If you choose to log on as a specified user account, you must specify the user ID and the password for the user who is to run the service, and you must specify the startup type (the default is Manual). The user ID must not have spaces in its name, it must belong to the Administrator group, and it must have the advanced user rights Log on as a service and Act as part of the operating system. If the user ID belongs to the Administrator group, the Profile Management Tool grants it the advanced user rights if it does not already have them.

During profile deletion, you can remove the Windows service that is added during profile creation.

### IPv6 considerations when running profiles as Windows services

Servers created to run as a Windows service fail to start when using IPv6 if the service is configured to run as *Local System*. Create a user-specific environment variable to enable IPv6. Because this environment variable is a user variable instead of a *Local System* variable, only a Windows service that runs as that specific user can access this environment variable. By default, when a new profile is created and configured to run as a Windows service, the service is set to run as *Local System*. When the WebSphere Process Server or WebSphere Enterprise Bus Windows service tries to run, the service is unable to access the user environment variable that specifies IPv6, and thus tries to start as IPv4. The server does not start correctly in this case. To resolve the problem, when creating the profile, specify that the WebSphere Process Server or WebSphere Enterprise Bus Windows service runs as the same user ID under which the environment variable that specifies IPv6 is defined, instead of as *Local System*.

After you click the **Next** button, the Deployment environment configuration panel is displayed.

6.  Choose whether to run the server as a Linux service and click **Next**.

The Linux service definition panel is displayed only if the current operating system is a supported version of Linux and the current user has the appropriate permissions.

WebSphere Process Server attempts to start Linux services for server processes that are started by a **startManager** command. For example, if you configure a server as a Linux service and issue the **startManager** command, the **wasservice** command attempts to start the defined service.

By default, WebSphere Process Server is not selected to run as a Linux service.

To create the service, the user that runs the Profile Management Tool must be the root user. If you run the Profile Management Tool with a non-root user ID, the Linux service definition panel is not displayed, and no service is created.

You must specify a user name under which the service runs.

To delete a Linux service, the user must be the root user or have proper privileges for deleting the service. Otherwise, a removal script is created that the root user can run to delete the service on the user's behalf.

The Deployment environment configuration panel is displayed.

7. In the Deployment environment configuration panel, click the pattern to use for the deployment environment on this deployment manager profile.  
Select the radio button beside one of the following patterns and click **Next**.
  - **Remote Messaging and Remote Support** defines one cluster for the application deployment, one remote cluster for the messaging infrastructure, and one remote cluster for the Common Event Infrastructure and other

supporting applications. This pattern configures a setup that performs well for most of your business integration needs. When in doubt, select this pattern.

- **Remote Messaging** defines one cluster for the application deployment and one remote cluster for the messaging infrastructure. The Common Event Infrastructure and other supporting applications are configured on the application deployment target cluster.
- **Single Cluster** defines one cluster for application deployment. Both messaging infrastructure and Common Event Infrastructure with supporting applications are configured on the application deployment cluster.

See the following topics for more information:

- **Deployment environment patterns.** A deployment environment pattern specifies the constraints and requirements of the components and resources involved in a deployment environment. The patterns are designed to meet the needs of most business requirements and are intended to help you create a deployment environment in the most straightforward way.
- **Deployment environment functions.** To design a robust deployment environment, you must understand the functions each cluster can provide in a particular IBM-supplied deployment environment pattern or a custom deployment environment. This knowledge can help you make the correct decisions as to which deployment environment pattern best meets your needs.

After you choose the pattern to use for the deployment environment on this deployment manager profile, the Database configuration panel is displayed.

8. In the Database configuration panel, configure the Common database used by all WebSphere Process Server components, including the Common Event Infrastructure database, the system bus messaging database, and all Business Process Choreographer-related databases.

If you want to use databases other than the Common one for these components, you have the following options:

- Cancel this deployment environment profile creation and instead create your deployment environment using the administrative console. See *Creating deployment environments* for more information.
- If you intend to use a different database product created by the same database vendor, you can still proceed with this profile creation and change the database configuration later in the administrative console. See *Configuring a JDBC provider and data source in the WebSphere Application Server Network Deployment, version 6.1 information center* for more information on configuring JDBC drivers and data sources.

Refer to the topic “Configuring the Common database and the Common Event Infrastructure database using the Profile Management Tool” on page 297 for details and return to this step when you have completed the fields on the Database configuration and Database configuration (Part 2) information panels. The Profile Management Tool validates your database configuration selections and displays a message if any are in error. For example, if you enter a database name that already exists and you are creating a new database, an error message informs you that the database exists.

**Restriction:**

Database administrator (DBA) privileges are required for the database configuration panels that are part of creating a deployment manager profile for a deployment environment. If you plan to use the deployment

environment feature of the product installer or Profile Management Tool, and want to use a database other than Derby Network Server as your database product, the user ID you provide for the "User name to authenticate with the database" field on the database configuration panels must have DBA privileges.

Once you configure the Common database, the Profile summary panel is displayed.

9. In the Profile summary panel, click **Create** to create the profile or **Back** to change the characteristics of the profile.

When the profile creation or augmentation is complete, the Profile complete panel is displayed with the message **The Profile Management tool created the profile successfully** or **The Profile Management tool augmented the profile successfully**.

10. Complete the profile configuration by doing one of the following tasks, depending on whether you must manually configure the Common database.
  - If you completed configuration of the Common database using the Profile Management Tool, select **Launch the First steps console**, **Create another profile**, or both; click **Finish** to exit. Use the First steps console to start the server. Use the **Create another profile** option to restart the Profile Management Tool to create additional profiles.
  - If you decided to postpone database configuration by producing scripts to be run manually, perform the following steps:
    - a. Clear the check box to launch the First steps console and click **Finish** to close the Profile Management Tool.
    - b. Use your site's standard database definition tools and procedures to edit and run the scripts the Profile Management Tool generated to create or create and configure the WPRCSDB database (or its equivalent if it has a different name on your system). You identified the location for this script in step 2 on page 298 of the topic "Configuring the Common database and the Common Event Infrastructure database using the Profile Management Tool" on page 297. Also see the topics that describe manually creating a new Common database or tables in an existing one in "Creating the Common database and tables after profile creation or augmentation" on page 359 or "Creating tables on an existing Common database after profile creation or augmentation" on page 360. When you have completed configuring the databases, start the First steps console associated with the profile, as instructed in "Starting the First steps console" on page 133.

## Results

You have completed created a WebSphere Process Server or WebSphere Enterprise Bus profile.

The node within the profile has a deployment manager named `dmgr`.

## What to do next

Ensure that your database instance is running before starting the deployment manager, even if the database is located locally. Then check server operation by selecting **Start the deployment manager** from the First steps console. An output window opens. If you see a message similar to the following, your deployment manager is operating properly:

```
ADMU3000I: Server dmgr open for e-business; process id is 3072
```

Configure custom nodes in the deployment environment to complete the deployment environment pattern.

For more information on planning your installation, see the topics under Planning for WebSphere Process Server.

### **Configuring the Common database and the Common Event Infrastructure database using the Profile Management Tool:**

Selected WebSphere Process Server components require a database, called the *Common* database, and a Common Event Infrastructure local database to operate. Using values you provide on the Database Configuration panels, the Profile Management Tool automatically creates these databases and the required tables on a local system. You must configure these databases to have a working installation.

#### **Before you begin**

**Note:**  The reference to database refers to a database collection.

This procedure assumes that you have started the Profile Management Tool and have chosen to create or augment a profile through either the Advanced or Deployment environment profile creation or augmentation option. You are performing the procedure in one of the following topics:

- “Configuring stand-alone server profiles using customized values” on page 289
- “Configuring deployment manager profiles using customized values” on page 312
- “Configuring deployment manager profiles for a deployment environment” on page 336

In the topic, you are at the step in the procedure that asks you to configure the Common database by completing the Database Configuration panel.

#### **About this task**

The following WebSphere Process Server components use the Common database:

- Application Scheduler
- Business rule group
- Mediation
- Recovery
- Relationship service
- Selector
- Event Sequencing (Lock Manager)
- Enterprise Service Bus Logger Mediation Primitive
- Messaging Engines (if you selected the **Use this database for Messaging Engines (MEs)** check box detailed in step 5 on page 299).

For more information on the various databases and database tables the WebSphere Process Server product uses, see Choosing a database.

**Important:** If you choose Derby Network Server as your database product, ensure that the server is running on the host and port you specified during profile creation or augmentation, even if the database host is local. You can make sure that the server is running only after the profile is created or augmented.

#### **Procedure**

1. In the **Choose a database product** field, select the database product you want to use, or accept the default value of Derby Embedded (for stand-alone server profiles) or Derby Network Server (for deployment manager profiles).

**Restrictions:**

- Informix Dynamic Server, and Microsoft SQL Server are not supported on deployment managers using the deployment environment configuration.
  - **i5/OS** DB2 UDB for iSeries (Native), DB2 for i5/OS (Native), and Derby Embedded can be used only *locally* as a database on i5/OS. Derby Network Server, DB2 UDB for iSeries (Toolbox), and DB2 for i5/OS (Toolbox) can be used both locally and remotely on i5/OS. All other databases listed can be used with i5/OS only as remote databases provided the proper remote database driver is used.
2. To store the database creation and configuration scripts that the Profile Management Tool will create in a location other than the default location in the **Database script output directory** field, select the **Override the destination directory for generated scripts** check box and designate your new location in the **Database script output directory** field. The default root directory for both the CommonDB and Common Event Infrastructure scripts is `<WPS home>/profiles/<profile name>/dbscripts/`.

For example:

Common Event Infrastructure: `<WPS home>/profiles/<profile name>/dbscripts/CEI_<ceiDbName>`

CommonDB: `<WPS home>/profiles/<profile name>/dbscripts/CommonDB/<dbType>/<dbName>`

The profile creation or augmentation process will create scripts that you or the database administrator can run manually to create a new database and its required tables, if you choose not to have the Profile Management Tool do this automatically. (You prevent automatic creation and configuration of this database by selecting the **Delay execution of database scripts (must select if using a remote database)** check box in this panel, described in step 4 on page 299.)

3. Enter your database name or accept the default value.

**i5/OS** **On i5/OS platforms:** The name of the database on i5/OS using Independent Auxiliary Storage Pools (IASPs) can be the name of the IASP.

Default common database names differ based on the database product:

- **i5/OS** \*LOCAL for DB2 UDB for iSeries (Native) and DB2 for i5/OS (Native)
- **i5/OS** \*SYSBAS for DB2 UDB for iSeries (Toolbox) and DB2 for i5/OS (Toolbox)
- WPRCSDB for all other database products

Default Common Event Infrastructure database names differ based on the database product:

- **i5/OS** \*LOCAL for DB2 UDB for iSeries (Native) and DB2 for i5/OS (Native)
- **i5/OS** \*SYSBAS for DB2 UDB for iSeries (Toolbox) and DB2 for i5/OS (Toolbox)
- EVENT for all other database products

If you plan to use an existing database, this name must match the name of that database. If you plan to create a new database and the name you specify is already associated with another WebSphere Process Server profile, you must use a different database name.

**Note:** i5/OS This does not apply to i5/OS. All profiles on i5/OS will use the same database name.

**Note:** Note: The Oracle database name (dbName) is actually the Oracle Identifier (SID) and must exist in order to create tables. It can be shared between the common database and the Common Event Infrastructure database. It is recommended that you remove all Oracle database resources before creating a new profile, as the Common Event Infrastructure database creates unique database resources, such as table spaces, which will fail if it is already exists in the Oracle server.

4. Select the **Delay execution of database scripts (must select if using a remote database)** check box if you do not want the Profile Management Tool to create and configure a local database automatically or create tables in an existing one during profile creation or augmentation. A local database will be created if this check box is not selected. If you select this option, you or the database administrator must manually run the scripts that the Profile Management Tool creates and stores in the location specified in the **Database script output directory** field on this panel. For instructions on manually creating and configuring a new Common database or creating tables in an existing one, see “Creating the Common database and tables after profile creation or augmentation” on page 359 or “Creating tables on an existing Common database after profile creation or augmentation” on page 360.

**Important:** Do not use the scripts located in the following directories (where the variable *db\_type* represents the supported database product):

- Linux UNIX *install\_root/dbscripts/CommonDB/db\_type*
- Windows *install\_root\dbscripts\CommonDB\db\_type*

These default scripts have not been updated by the Profile Management Tool.

**Restriction:** The **Delay execution of database scripts (must select if using a remote database)** option is not available for the following configurations:

- If you chose the Derby Embedded or Derby Network Server product.
- In a network deployment environment.

The next step depends on whether you are creating or augmenting a stand-alone server or deployment manager profile.

Type of profile you are creating or augmenting	Next step
Stand-alone server	Proceed to step 5 on page 299.
Deployment manager	Proceed to step 7 on page 300.

5. **For stand-alone server profiles only:** Select the **Use a file store for Messaging Engines (MEs)** check box to use a file store for messaging engines. If you select this check box, the messaging engines are created and configured on a file store (except for the Common Event Infrastructure messaging engine, which uses a Derby Embedded local database even if this option is selected). If you do not select this check box, and do not select the **Use this database for Messaging**

**Engines (MEs)** check box detailed in step 6 on page 300, the messaging engines are created and configured on the default Derby Embedded database. Derby Embedded databases cannot be created on remote workstations. For more information on file stores, see File stores in the WebSphere Application Server Network Deployment, version 6.1 information center.

6. **For stand-alone server profiles only:** Select the **Use this database for Messaging Engines (MEs)** check box to use the Common database for messaging engines. If you do not select this check box, and do not select the **Use a file store for Messaging Engines (MEs)** check box detailed in step 5 on page 299, the messaging engines are created and configured on the default Derby Embedded database. Derby Embedded databases cannot be created on remote workstations. For more information on data stores, see Data stores in the WebSphere Application Server Network Deployment, version 6.1 information center.

**Restriction:** This option is not available if you chose the Derby Embedded product.

7. Click **Next**. The next step depends on the type of profile you are creating or augmenting and on the database product you chose.

Type of profile you are creating or augmenting	Next step
Stand-alone server profile with the default value of <i>Derby Embedded</i> selected.	The Profile summary panel is displayed. Return to step 15 on page 295 in the topic “Configuring stand-alone server profiles using customized values” on page 289.
Stand-alone server profile with any database product other than <i>Derby Embedded</i> selected.  Deployment manager profile with any database product selected.	The Database configuration (Part 2) panel is displayed with fields specific to the database product you selected. Review the topic “Database configuration (Part 2) panel for Common database configuration” on page 301 for information on how to complete this panel. When you have completed entering information on this panel, click <b>Next</b> . The tool checks that a valid database connection exists. If the database connection does not exist, you need to correct the problem either by starting up the database or altering the specified parameters before continuing. The Profile summary panel is displayed. Depending on the topic from which you accessed this one, return to one of the following steps: <ul style="list-style-type: none"> <li>• Step 15 on page 295 in the topic “Configuring stand-alone server profiles using customized values” on page 289</li> <li>• Step 10 on page 316 in the topic “Configuring deployment manager profiles using customized values” on page 312</li> <li>• Step 9 on page 341 in the topic “Configuring deployment manager profiles for a deployment environment” on page 336</li> </ul>


*Database configuration (Part 2) panel for Common database configuration:*

When you select your database product on the Database configuration panel in the Profile Management Tool, a follow-up panel asks you for database-specific information. This panel, which does not appear if you selected Derby Embedded when configuring a stand-alone server profile is called the **Database configuration (Part 2) panel**. It contains slightly different fields and default values, depending on your database product selection.

You must complete this panel even if you chose to postpone creating a new database or adding tables to an existing one by selecting the **Delay execution of database scripts** check box on the **Database configuration (Part 2) panel**. The values you choose on this panel are added to the database configuration scripts that the Profile Management Tool creates and stores in the directory you specified in the **Database script output directory** field on the previous panel.

**Restriction:** You cannot create a new database if you are using DB2 for z/OS V8 or V9, Oracle 9i, Oracle 10g, or 11g. If you select one of these databases and the option **Create a new local database**, the **Next** button is disabled. Make different selections on the Database configuration panel.

Choose the link for your database product from the following list to determine how to complete the Database configuration (Part 2) panel:

- “Derby Network Server” on page 302
- “DB2 Universal Database” on page 303
- “DB2 for z/OS V8 and V9” on page 303
- “DB2 UDB for iSeries (Toolbox)” on page 304
-  “DB2 UDB for iSeries (Native)” on page 304
- “DB2 Universal Runtime Client” on page 305
- “Informix Dynamic Server” on page 306
- “Microsoft SQL Server (Embedded)” on page 306
- “Microsoft SQL Server (DataDirect) and Microsoft SQL Server (Microsoft)” on page 307
- “Oracle 9i” on page 307
- “Oracle 10g or 11g” on page 308

**Important:** If you are creating or augmenting a stand-alone server profile and selected the Derby Embedded database product, no additional database configuration is necessary.

When you have completed the Database configuration (Part 2) panel, click **Next**. The tool checks that a valid database connection exists. If the tool identifies an error, you must correct the problem before continuing by either making sure the database is up and running or altering parameters in order to make a good connection.

The Profile summary panel is displayed. Depending on the topic from which you accessed this one, return to one of the following steps:

- Step 15 on page 295 in the topic “Configuring stand-alone server profiles using customized values” on page 289
- Step 10 on page 316 in the topic “Configuring deployment manager profiles using customized values” on page 312
- Step 9 on page 341 in the topic “Configuring deployment manager profiles for a deployment environment” on page 336



## Derby Network Server

Table 104 on page 302 lists the fields you must complete on the Database configuration (Part 2) panel when you select Derby Network Server as your database product.

**Important:** If you choose Derby Network Server as your database product, after profile creation or augmentation completes, ensure that the server is running on the host and port you specified during profile creation, even if the database host is local.

Table 126. Required Common database configuration fields for Derby Network Server

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Database server host name (for example IP address)	Accept the default value of localhost or enter the correct database server host name.
Server port	Accept the default value of 1527 or enter the correct server port number.

## DB2 Universal Database

Table 105 on page 303 lists the fields you must complete on the Database configuration (Part 2) panel when you select DB2 Universal Database as your database product.

Table 127. Required Common database configuration fields for DB2 Universal Database

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Accept the default value of <i>install_root/universalDriver_wbi/lib</i> on Linux, UNIX or i5/OS platforms, or <i>install_root\universalDriver_wbi\lib</i> on Windows platforms, or browse to the location on your system that contains the following files: <ul style="list-style-type: none"><li>• db2jcc.jar</li><li>• db2jcc_license_cu.jar or db2jcc_license_cisuz.jar</li></ul> An error message is displayed if the files cannot be found at the specified location.
JDBC driver type	Accept the default value of 4 or select the radio button beside the correct JDBC driver type.

Table 127. Required Common database configuration fields for DB2 Universal Database (continued)

Field	Action needed
Database server host name (for example IP address)	Accept the default value of localhost or enter the correct database server host name.
Server port	Accept the default value of 50000 or enter the correct server port number.

## DB2 for z/OS V8 and V9

Table 106 on page 303 lists the fields you must complete on the Database configuration (Part 2) panel when you select DB2 for z/OS V8 and V9 as your database product.

Table 128. Required Common database configuration fields for DB2 for z/OS V8 and V9

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Enter the location on your system that contains the following files: <ul style="list-style-type: none"> <li>• db2jcc.jar</li> <li>• db2jcc_license_cisuz.jar</li> </ul> An error message is displayed if the files cannot be found at the specified location.
Database server host name (for example IP address)	Enter the database server host name.
Server port	Accept the default value of 446 or enter the correct server port number.
Database alias name	Enter the database alias name.
Connection location	Enter the connection location.
Storage group name	Enter the storage group name.

## DB2 UDB for iSeries (Toolbox)

Table 107 on page 304 lists the fields you must complete on the Database configuration (Part 2) panel when you select DB2 UDB for iSeries (Toolbox) as your database product. This selection is also valid for DB2 for i5/OS (Toolbox).

Table 129. Required Common database configuration fields for DB2 UDB for iSeries (Toolbox) or DB2 for i5/OS (Toolbox)

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.

Table 129. Required Common database configuration fields for DB2 UDB for iSeries (Toolbox) or DB2 for i5/OS (Toolbox) (continued)

Field	Action needed
Location (directory) of JDBC driver classpath files	Accept the default value of /QIBM/ProdData/HTTP/Public/jt400/lib on i5/OS platforms, or browse to the location on your system that contains the following file: <ul style="list-style-type: none"> <li>• jt400.jar</li> </ul> An error message is displayed if the file cannot be found at the specified location.
Database server host name (for example IP address)	Enter the database server host name.
Database collection name	Accept the default value of WPRCSDB or enter the correct schema name. To prevent naming conflicts within the specified database, specify a schema name whose first three characters are unique from the names of other schemas residing in the database.

#### DB2 UDB for iSeries (Native)

**Note:** i5/OS **On i5/OS platforms:** This database configuration applies only to i5/OS platforms.

Table 108 on page 305 lists the fields you must complete on the Database configuration (Part 2) panel when you select DB2 UDB for iSeries (Native) as your database product. This selection is also valid for DB2 for i5/OS (Native).

Table 130. Required Common database configuration fields for DB2 UDB for iSeries (Native) or DB2 for i5/OS (Native)

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Accept the default value of /QIBM/ProdData/Java400/ext on i5/OS platforms, or browse to the location on your system that contains the following file: <ul style="list-style-type: none"> <li>• db2_classes.jar</li> </ul> An error message is displayed if the file cannot be found at the specified location.
Database server host name (for example IP address)	Enter the database server host name.
Database collection name	Accept the default value of WPRCSDB or enter the correct schema name. To prevent naming conflicts within the specified database, specify a schema name whose first three characters are unique from the names of other schemas residing in the database.

## DB2 Universal Runtime Client

Table 109 on page 305 lists the fields you must complete on the Database configuration (Part 2) panel when you select DB2 Universal Runtime Client as your database product.

*Table 131. Required Common database configuration fields for DB2 Universal Runtime Client*

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Enter the location on your system that contains the db2java.zip file. An error message is displayed if the file cannot be found at the specified location.
Database server host name (for example IP address)	Enter the database server host name.
Server port	Accept the default value of 50000 or enter the correct server port number.
DB2 node name (must be 8 characters or less)	Enter the DB2 node name.

## Informix Dynamic Server

Table 110 on page 306 lists the fields you must complete on the Database configuration (Part 2) panel when you select Informix Dynamic Server as your database product.

*Table 132. Required Common database configuration fields for Informix Dynamic Server*

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Enter the location on your system that contains the following files: <ul style="list-style-type: none"><li>• ifxjdbc.jar</li><li>• ifxjdbcx.jar</li></ul> An error message is displayed if the files cannot be found at the specified location.
Database server host name (for example IP address)	Accept the default value of localhost or enter the correct database server host name.
Database server name	Enter the database server name.
Server port	Accept the default value of 1526 or enter the correct server port number.

Table 132. Required Common database configuration fields for Informix Dynamic Server (continued)

Field	Action needed
Event service instance name	Enter the correct event service instance name.

### Microsoft SQL Server (Embedded)

Table 111 on page 306 lists the fields you must complete on the Database configuration (Part 2) panel when you select Microsoft SQL Server Embedded as your database product.

**Note:** Microsoft SQL Server (Embedded)

Table 133. Required Common database configuration fields for Microsoft SQL Server Embedded

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Database server host name (for example IP address)	Accept the default value of localhost or enter the correct database server host name.
Database server name	Enter the database server name.
Server port	Accept the default value of 1433 or enter the correct server port number.
Admin user name	Enter the user ID that has privileges to create and drop databases and users or accept the default value of sa. This ID is required when the <b>Delay execution of database scripts</b> option is NOT selected in the previous screen.
Password	Enter the password for the user <b>Admin user name</b> ID.
Confirm password	Confirm the password.

### Microsoft SQL Server (DataDirect) and Microsoft SQL Server (Microsoft)

Table 112 on page 307 lists the fields you must complete on the Database configuration (Part 2) panel when you select Microsoft SQL Server (DataDirect) or Microsoft SQL Server (Microsoft) as your database product.

Table 134. Required Common database configuration fields for Microsoft SQL Server DataDirect and Microsoft SQL Server (Microsoft)

Field	Action needed
User name to authenticate with the database	Enter the user name to authenticate with the database.
Password for database authentication	Enter a password to authenticate with the database.

Table 134. Required Common database configuration fields for Microsoft SQL Server DataDirect and Microsoft SQL Server (Microsoft) (continued)

Field	Action needed
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	<p>Enter the location on your system that contains the following files:</p> <ul style="list-style-type: none"> <li>• sqlserver.jar</li> <li>• base.jar</li> <li>• util.jar</li> </ul> <p>Also, the file spy.jar must be available in the following location relative to the location of the JDBC driver class path files:</p> <ul style="list-style-type: none"> <li>• <b>Linux</b> <b>UNIX</b> ../spy/spy.jar</li> <li>• <b>Windows</b> ..\spy\spy.jar</li> </ul> <p>An error message is displayed if the files cannot be found at the specified location.</p>
Database server host name (for example IP address)	Accept the default value of localhost or enter the correct database server host name.
Database server name	Enter the database server name.
Server port	Accept the default value of 1433 or enter the correct server port number.

## Oracle 9i

Table 113 on page 308 lists the fields you must complete on the Database configuration (Part 2) panel when you select Oracle 9i as your database product.

Table 135. Required Common database configuration fields for Oracle 9i

Field	Action needed
Directory of database server installation	Enter or browse for the database server installation. Required when the <b>Delay execution of database scripts</b> option is selected in the previous screen.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Enter the location on your system that contains the file ojdbc14.jar. An error message is displayed if the files cannot be found at the specified location.
JDBC driver type	Click <b>OCI</b> or <b>Thin</b> .
Database server host name (for example IP address)	Accept the default value of localhost or enter the correct database server host name.
Server port	Accept the default value of 1521 or enter the correct server port number.
Admin user name	Enter the user ID that has privileges to create and drop databases and users. Required when the <b>Delay execution of database scripts</b> option is NOT selected in the previous screen.

Table 135. Required Common database configuration fields for Oracle 9i (continued)

Field	Action needed
Password	Enter the password for the user <b>Admin user name ID</b> .
Confirm password	Confirm the password.

## Oracle 10g or 11g

Table 114 on page 308 lists the fields you must complete on the Database configuration (Part 2) panel when you select Oracle 10g or 11g as your database product.

**Important:** For Oracle 11g you must have a user ID that has SYSDBA privileges before creating any profile.

Table 136. Required Common database configuration fields for Oracle 10g or 11g

Field	Action needed
Directory of database server installation	Enter or browse for the database server installation. Required when the <b>Delay execution of database scripts</b> option is selected in the previous screen.
Password for database authentication	Enter a password to authenticate with the database.
Confirm password	Confirm the password.
Location (directory) of JDBC driver classpath files	Enter the location on your system that contains the file <code>ojdbc14.jar</code> . An error message is displayed if the files cannot be found at the specified location.
JDBC driver type	Click <b>OCI</b> or <b>Thin</b> .
Database server host name (for example IP address)	Accept the default value of <code>localhost</code> or enter the correct database server host name.
Server port	Accept the default value of 1521 or enter the correct server port number.
Admin user name	Enter the user ID that has privileges to create and drop databases and users. Required when the <b>Delay execution of database scripts</b> option is NOT selected in the previous screen.
Password	Enter the password for the user <b>Admin user name ID</b> .
Confirm password	Confirm the password.

## Configuring custom profiles (managed nodes) for a deployment environment

You can create a custom profile (with customized configuration values) to be used in an existing deployment environment pattern. Use the instructions in this topic to learn how to use the Profile Management Tool to create and configure a WebSphere Process Server or WebSphere Enterprise Service Bus profile.

## Before you begin

This topic assumes that you are using the Profile Management Tool to create or augment profiles and are following the procedure in either “Creating profiles using the Profile Management Tool” on page 198 or “Augmenting profiles using the Profile Management Tool” on page 231. As a result, it is assumed that you have started the Profile Management Tool, have chosen to create or augment a custom profile, and have selected the **Deployment environment** profile creation or augmentation option.

## About this task

Select the **Deployment environment** profile creation or augmentation option to set up a fully configured profile for your deployment environment. This option configures and installs all components needed for WebSphere Process Server to work. The following components are configured as part of this option:

- Business Process Choreographer
- Common Event Infrastructure
- Business Rules Manager
- Service Component Architecture

In this type of configuration, you can specify your own values for settings such as ports, the location of the profile, and names for the profile, node, and host. You must specify how to federate the node to an existing deployment manager, which has a deployment environment pattern already defined. You can also specify the clusters to define on that deployment environment, as well as your own values for the Common database configuration.

As a result of following the procedure in either “Augmenting profiles using the Profile Management Tool” on page 231 or “Creating profiles using the Profile Management Tool” on page 198, you are viewing either the Federation panel or the Profile name and location panel. Complete the following steps to configure a new custom profile with customized configuration values for a deployment environment.

## Procedure

1. The panel you see in the Profile Management Tool depends on whether you are creating or augmenting a profile.

Task	First step
Deployment environment profile augmentation	The Federation panel is displayed. Proceed to step 4 on page 355.
Deployment environment profile creation	The Profile name and location panel is displayed. Proceed to step 2.

2. **For Deployment environment profile creation only:** In the Profile name and location panel, perform the following steps:

- a. Specify a unique name and directory path for the profile, or accept the defaults.

Each profile that you create must have a name. When you have more than one profile, you can tell them apart at their highest level by this name.

The directory you specify will contain the files that define the runtime environment, such as commands, configuration files, and log files. The default directory is dependent on the platform:



- `i5/OS` `user_data_root/profiles/profile_name`
- `Linux` `UNIX` `install_root/profiles/profile_name`
- `Windows` `install_root\profiles\profile_name`

where *profile\_name* is the name you specified. An error message is displayed if:

- The *profile\_name* you specify is not unique.
  - The directory you specify is not empty.
  - Your user ID does not have sufficient permissions for the directory.
  - There is insufficient space to create the profile.
- b. You can make the profile you are creating the default profile (so commands work automatically with it) by selecting the **Make this profile the default** check box. This check box appears only if you have an existing profile on your system.

The first profile that you create on a workstation is the default profile.

The default profile is the default target for commands that are issued from the `bin` directory in the product installation root. When only one profile exists on a workstation, every command operates on that profile. If more than one profile exists, certain commands require that you specify the profile to which the command applies. See “Profile commands in a multiprofile environment” on page 567 for more information.

The Profile Management Tool detects ports currently used by other WebSphere products, but not those of other applications that might use specified ports. When federating a custom profile, the **addNode** command uses non-conflicting ports. This means that you can take the default port assignments as you create the profile, and let the **addNode** command specify non-conflicting ports as you federate the node. Port assignments must be unique on a server. Server processes on different servers can use the same port assignments without conflict.

- c. Click **Next**. (If you click **Back** and change the name of the profile, you might have to manually change the name on this panel when it is displayed again.)

The Node and host names panel is displayed.

3. **For Deployment environment profile creation only:** In the Node and host names panel, specify the node and host names for the profile, or accept the defaults and click **Next**. Try to keep the node name as short as possible, but ensure that node names are unique within the deployment environment. See “Naming considerations for profiles, nodes, hosts, and cells” on page 554 for information about reserved terms and other issues you must consider when naming the node and host.

The Federation panel is displayed.

4. In the Federation panel, you must federate the node into the deployment manager now as part of the profile creation or augmentation. The **Federate this node later** check box does not appear on the Federation panel for this type of profile creation or augmentation. Specify the host name or IP address and SOAP port of the deployment manager, and an authentication user ID and password. Then click **Next**.

To find the SOAP port number of the deployment manager, go to the `dmgr_profile_root/logs` directory for the deployment manager associated with this custom profile. In this directory, open the `AboutThisProfile.txt` file and find the value for the entry “Deployment manager SOAP connector port:”.

The Profile Management Tool verifies that the deployment manager exists and can be contacted, and that the authentication user ID and password are valid for that deployment manager. It also validates that there is a valid deployment environment defined on the deployment manager, and retrieves the pattern and database type back from the deployment manager.

**Important:** Do not federate the node if any one of the following is true:

- You plan to use this custom node as a migration target.
- Another profile is being federated. (Node federation must be serialized.)
- The deployment manager is not running or you are not sure if it is running.
- The deployment manager has not yet been augmented into a WebSphere Process Server deployment manager. WebSphere Process Server profiles cannot use a WebSphere Enterprise Service Bus deployment manager, but WebSphere Enterprise Service Bus profiles can use a WebSphere Process Server deployment manager.
- The deployment manager is not at a release level the same or higher than that of the custom profile you are creating or augmenting.
- The deployment manager does not have a JMX administrative port enabled.
- The deployment manager is reconfigured to use the non-default remote method invocation (RMI) as the preferred Java Management Extensions (JMX) connector. (Select **System administration > Deployment manager > Administration services** in the administrative console of the deployment manager to verify the preferred connector type.)

If you attempt to federate a custom node when the deployment manager is not running or is not available for other reasons, a warning panel prevents you from continuing. If this warning panel appears, click **OK** to exit from it, cancel this profile creation or augmentation, and make the necessary changes to your system.

The next step depends on whether you are creating or augmenting a profile.

Task	Next step
Deployment environment profile creation	The Port values assignment panel is displayed. Proceed to step 5.
Deployment environment profile augmentation	The Deployment environment configuration panel is displayed. Proceed to step 6 on page 357.

5. **For Deployment environment profile creation only:** Verify that the ports specified for the profile are unique and click **Next**.

The Profile Management Tool detects ports currently used by other WebSphere products and displays recommended port values that do not conflict with existing ones. If you have applications other than WebSphere ones that use specified ports, verify that the ports do not conflict.

Ports are recognized as being in use if the following conditions are satisfied:

- The ports are assigned to a profile created under an installation performed by the current user.
- The ports are currently in use.

Although the tool validates ports when you access the Port values assignment panel, port conflicts can still occur resulting from selections you make on succeeding Profile Management Tool panels. Ports are not assigned until profile creation completes.

If you suspect a port conflict, you can investigate it after the profile is created. Determine the ports used during profile creation by examining the following file:

- `i5/OS` `profile_root/properties/portdef.props`
- `Linux` `UNIX` `profile_root/properties/portdef.props`
- `Windows` `profile_root\properties\portdef.props`

Included in this file are the keys and values used in setting the ports. If you discover port conflicts, you can reassign ports manually. To reassign ports, see the topic Updating ports in an existing profile in the WebSphere Application Server Network Deployment, version 6.1 information center, and run the `updatePorts.ant` file through the `ws_ant` script.

The Deployment environment configuration panel is displayed.

6. In the Deployment environment configuration panel, select at least one cluster to assign this node to on the deployment environment pattern and click **Next**. The panel offers one to three clusters based on the deployment environment pattern defined previously on the deployment manager:

*Table 137. Clusters offered per deployment environment pattern on existing deployment manager*

Deployment environment pattern on deployment manager	Clusters offered
Remote messaging and remote support	<ul style="list-style-type: none"> <li>• <b>Application deployment target:</b> consists of a cluster to which user applications need to be deployed.</li> <li>• <b>Messaging infrastructure:</b> consists of a cluster where messaging engines are located.</li> <li>• <b>Support infrastructure:</b> consists of a cluster that hosts the Common Event Infrastructure server and other infrastructure services that are used to manage your system.</li> </ul>
Remote messaging	<ul style="list-style-type: none"> <li>• <b>Application deployment target:</b> consists of a cluster to which user applications need to be deployed. With a remote messaging deployment environment pattern, the application deployment target cluster also assumes the functionality of the supporting infrastructure cluster.</li> <li>• <b>Messaging infrastructure:</b> consists of a cluster where bus members are located.</li> </ul>
Single cluster	<ul style="list-style-type: none"> <li>• <b>Application deployment target:</b> consists of a cluster to which user applications need to be deployed. With a single cluster deployment environment pattern, the application deployment target cluster also assumes the functionality of the messaging and the supporting infrastructure clusters.</li> </ul>

See the following topics for more information:


- Deployment environment patterns. A deployment environment pattern specifies the constraints and requirements of the components and resources

involved in a deployment environment. The patterns are designed to meet the needs of most business requirements and are intended to help you create a deployment environment in the most straightforward way.

- Deployment environment functions. To design a robust deployment environment, you need to understand the functionality each cluster can provide in a particular IBM-supplied deployment environment pattern or a custom deployment environment. This knowledge can help you make the correct decisions as to which deployment environment pattern best meets your needs.

The Database configuration panel is displayed.

7. In the Database configuration panel, perform the following steps:
  - a. Review the database product. The database that matches the database used on the deployment manager to which this custom profile will be federated is displayed.

**Note:**  DB2 UDB for iSeries (Native) and DB2 for i5/OS (Native) can be accessed locally on i5/OS platforms. Derby Network Server, DB2 UDB for iSeries (Toolbox), and DB2 for i5/OS (Toolbox) can be accessed both locally and remotely. All other databases can still be used by i5/OS systems, but only as remote databases.

- b. Provide the location (directory) of the JDBC driver class path files for the database. You can accept the default values for Derby Network Server and DB2 Universal Database.
- c. Click **Next**.

The Profile summary panel is displayed.

8. In the Profile summary panel, click **Create** or **Augment** to create or augment the profile or **Back** to change the characteristics of the profile.

When the profile creation or augmentation is complete, the Profile complete panel is displayed with the message **The Profile Management tool created the profile successfully** or **The Profile Management tool augmented the profile successfully**.

9. In the Profile complete panel, select **Launch the First steps console, Create another profile**, or both; click **Finish** to exit. Use the First steps console to access product documentation. Use the **Create another profile** option to restart the Profile Management Tool to create additional profiles.

## Results

You have completed one of the following tasks:

- Created a WebSphere Process Server or WebSphere Enterprise Service Bus profile.
- Augmented a WebSphere Application Server, WebSphere Application Server Network Deployment, or WebSphere Enterprise Service Bus profile into a WebSphere Process Server profile.
- Augmented a WebSphere Application Server or WebSphere Application Server Network Deployment profile into a WebSphere Enterprise Service Bus profile.

## What to do next

Use the deployment manager to customize the node. You might add more custom nodes if not all of the cluster members are assigned.

## Creating the Common database and tables after profile creation or augmentation

If you postponed creating the Common database and its tables by selecting the **Delay execution of database scripts (must select if using a remote database)** check box on the Database configuration panel in the Profile Management Tool, you or your database administrator must create the database and its tables manually. You can do this using scripts that the Profile Management Tool generates during profile creation or augmentation.

### Before you begin

This topic assumes that you created or augmented a stand-alone server or deployment manager profile using the procedure in one of the following topics:

- “Configuring stand-alone server profiles using customized values” on page 289
- “Configuring deployment manager profiles using customized values” on page 312
- “Configuring deployment manager profiles for a deployment environment” on page 336

It also assumes that in the Database configuration panel in the Profile Management Tool, you selected the **Create a new local database** radio button and chose to delay creation of the Common database and its tables by selecting the **Delay execution of database scripts (must select if using a remote database)** check box.

### About this task

Because a WebSphere Process Server installation requires the Common database to function, if you did not allow the Profile Management Tool to create it automatically, you or your database administrator must now create the database and its tables manually by using scripts that the Profile Management Tool generated during the profile creation or augmentation.

### Procedure

1. Go to the directory containing the configCommonDB script on i5/OS platforms, the configCommonDB.sh script on Linux and UNIX platforms, or the configCommonDB.bat script on Windows platforms. You specified its location in the **Database script output directory** field on the Database configuration panel in the Profile Management Tool. By default, this location is:

- **i5/OS** `profile_root/dbscripts/CommonDB/db_type/db_name`
- **Linux** **UNIX** `profile_root/dbscripts/CommonDB/db_type/db_name`
- **Windows** `profile_root\dbscripts\CommonDB\db_type\db_name`

The variable `db_type` represents the supported database product and `db_name` represents the name of the database.

2. Use your standard database definition tools, native commands, and procedures to create the database and required tables by running this script. The script contains only basic statements for creating databases, tables, and indexes.

### What to do next

After database creation completes successfully, before starting the server or deployment manager, be sure the database is running even if it is installed locally. Then start the server or deployment manager from the profile’s First steps console

to ensure there are no errors. You can check the SystemOut.log and SystemErr.log files for errors. These files are found in the following locations:

- *profile\_root/logs/server\_name*, for a stand-alone profile
- *profile\_root/logs/dmgr*, for a deployment manager profile

## Creating tables on an existing Common database after profile creation or augmentation

If you postponed creating required tables for your existing Common database by selecting the **Delay execution of database scripts (must select if using a remote database)** check box on the Database configuration panel in the Profile Management Tool, you or your database administrator must create the tables manually. You can do this using scripts that the Profile Management Tool generates during profile creation or augmentation.

### Before you begin

This topic assumes that you created or augmented a stand-alone server or deployment manager profile using the procedure in one of the following topics:

- “Configuring stand-alone server profiles using customized values” on page 289
- “Configuring deployment manager profiles using customized values” on page 312
- “Configuring deployment manager profiles for a deployment environment” on page 336

It also assumes that in the Database configuration panel in the Profile Management Tool, you selected the **Use an existing database** radio button and chose to delay creation of the tables by selecting the **Delay execution of database scripts (must select if using a remote database)** check box.

### About this task

Because a WebSphere Process Server installation requires the Common database and its tables to function, if you did not allow the Profile Management Tool to create the tables automatically, you or your database administrator must now create the tables manually by using scripts that the Profile Management Tool generated during the profile creation or augmentation.

### Procedure

1. Go to the directory containing the table creation script createDBTables on i5/OS platforms, createDBTables.sh on Linux and UNIX platforms, or createDBTables.bat on Windows platforms. You specified its location in the **Database script output directory** field on the Database configuration panel in the Profile Management Tool. By default, this location is:

- **i5/OS** *profile\_root/dbscripts/CommonDB/db\_type/db\_name*
- **Linux** **UNIX** *profile\_root/dbscripts/CommonDB/db\_type/db\_name*
- **Windows** *profile\_root\dbscripts\CommonDB\db\_type\db\_name*

The variable *db\_type* represents the supported database product, and *db\_name* represents the name of the database.

2. Use your standard database definition tools, native commands, and procedures to create the required tables by running this script. The script contains only basic statements for creating databases, tables, and indexes.

## What to do next

After the tables are created successfully, before starting the server or deployment manager, be sure the database is running even if it is installed locally. Then start the server or deployment manager from the profile's First steps console to ensure there are no errors. You can check the SystemOut.log and SystemErr.log files for errors. These files are found in the following locations:

- *profile\_root/logs/server\_name*, for a stand-alone profile
- *profile\_root/logs/dmgr*, for a deployment manager profile

## Configuring remote database support on i5/OS

WebSphere Process Server can be configured to use DB2 UDB for iSeries or DB2 for i5/OS as a remote database that resides on i5/OS. If you want to run WebSphere Process Server on other platforms including z/OS, then you need to use DB2 UDB for iSeries or DB2 for i5/OS as a remote database for the product repository.

### About this task

Configuration of the database is specific to the creation or augmentation of the stand-alone and deployment manager profiles. Database configuration is performed using the Profile Management Tool during the creation or augmentation of a custom profile, however such a profile must use the same database product already configured for the deployment manager profile.

The ultimate goal of the Profile Management Tool is to run the `manageprofiles` command with arguments that are specified by the user on a series of Profile Management Tool panels. Alternatively, the Profile Management Tool can be bypassed and the `manageprofiles Qshell` command line script can be used to create or augment profiles, with or without a response file which is in the form of a Java property file. The Profile Management Tool is more user friendly because it provides a graphical user interface (GUI).

During the augmentation of a profile, there is a need to create or access a database and its tables in order to complete the augmentation process. A number of components require database connectivity during the augmentation process. Optionally, you might choose to generate database definition scripts only and later have an administrator run them to create the DB2 collection and tables.

The components that can be configured with a remote DB2 UDB for iSeries or DB2 for i5/OS database during the profile creation and augmentation process are:

- Failed Event Management
- Common Event Infrastructure
- Relationships
- Recovery
- Business Rules
- Business Space
- Selector
- Lock Manager
- Application Scheduler
- Service Integration (SI) Bus (Messaging Engines)
- Enterprise Service Bus (ESB) message logger

## What to do next

Now, you can create a stand-alone profile or deployment manager profile to connect to a remote database.

### i5/OS database and collections

Unlike on distributed platforms, there is only one system-wide DB2 database on an i5/OS system or logical partition. DB2 UDB for iSeries or DB2 for i5/OS (depending on which version of the i5/OS operating system you are using) is integrated with the i5/OS operating system and is not a separate product that needs to be installed.

DB2 UDB for iSeries or DB2 for i5/OS is the relational database that is fully integrated with the i5/OS operating system, which makes it easy to use and manage.

The product also provides a variety of functions and features, such as triggers, stored procedures, and dynamic bitmapped indexing, that serve a wide variety of application types. These applications range from traditional host-based applications to client/server solutions to business intelligence applications.

The database hierarchy looks like this:

(Single Database) > Schema name > Table name

Two JDBC drivers are available to access the database:

- Native JDBC driver: Type 2, used when the database is local to the WebSphere Application Server-based server. This driver is local to WebSphere Process Server and cannot be used to access a database on a remote i5/OS workstation.
- Toolbox JDBC driver: Type 4, typically used when the database being accessed is remote from the workstation hosting WebSphere Process Server. The Toolbox driver can be used when the database is local to the server, but the Native driver is recommended because it is optimized for local database access.

The Toolbox JDBC driver files are found in a single, fixed location on i5/OS. On an i5/OS workstation, the Toolbox for Java JDBC driver file, jt400.jar, can be found at a fixed location in the file system:

```
/QIBM/ProdData/Http/Public/jt400/lib/jt400.jar
```

In a heterogeneous environment where WebSphere Process Server is running on a distributed platform, but accessing its Common database on an i5/OS workstation, the JDBC driver of choice is the Toolbox for Java JDBC driver. The driver file for the Toolbox JDBC driver is called jt400.jar and it needs to be available on the workstation that is hosting WebSphere Process Server. You can obtain the driver from the distributed workstation in one of two ways:

- Copy the driver from the i5/OS database workstation to a directory on the distributed workstation.
- Download the driver from the jtopen Web site to a directory on the distributed workstation. The jtopen Web site URL is at: <http://sourceforge.net/projects/jt400>

### Creating a stand-alone profile to connect to a remote database

The Profile Management Tool can create or augment a configuration for one or more WebSphere Process Server stand-alone server profiles configured with a DB2



for i5/OS database on a remote i5/OS server. The remote i5/OS server hosting the DB2 for i5/OS database does not have WebSphere Process Server installed on it.

## Before you begin

If your WebSphere Process Server installation resides on a Linux, UNIX, or Windows server and your database resides on a remote i5/OS server, you must download the IBM Toolbox for Java JDBC driver (jt400.jar) from the SOURCEFORGE.NET Web site at <https://sourceforge.net/projects/jt400> to a local temporary directory.

## Procedure

1. In the Welcome panel for the Profile Management Tool click **Next**.

**Note:** If any WebSphere Application Server profiles are found that can be augmented into WebSphere Process Server profiles, the Existing Profile Detection panel is displayed. Do not augment an existing profile, but instead choose to create a new profile.

2. In the Environment Selection panel, select **WebSphere Process Server** or **WebSphere Enterprise Service Bus**. Click **Next**.
3. In the Profile Type Selection panel, select the option to create a **Stand-alone server profile**. Click **Next**.
4. In the Profile Creation Options panel, you can specify whether to create a Typical profile using default settings, or an Advanced profile. Select **Advanced** profile creation. Click **Next**.
5. In the Optional Application Deployment panel, ensure that the check box for deployment of the administrative console is selected, and accept the default for the deployment of the default and sample applications. Click **Next**.
6. In the Profile Name and Location panel, enter a unique name and unique location for this profile. A default name and location are presented initially. A default directory is presented under `$user_data_root/profiles/profile_name`. If any other profiles exist, you are given the option of making this new profile the default profile. You can also select to create the server with a development template. Click **Next**.
7. In the Node, Host, and Cell Names panel, you must specify a unique node. A default node name is provided, but you can change the node name providing the new name is unique. Click **Next**.
8. In the Administrative Security panel, either clear the check box or provide user ID and password information. Click **Next**.
9. In the Port value assignment panel, default port values are provided. You can specify different port values if necessary. Click **Next**.
10. If this WebSphere Process Server profile creation is on Windows or Linux, you are presented with the Windows or Linux service definition panel and can optionally set up this profile to run as a Windows or Linux service. The server hosting the WebSphere Process Server must have a relational database entry pointing to the remote server, or you must create such an entry if one does not exist. Click **Next**.
11. Optional: In the Web Server Definition panel, you have the option of choosing to create a Web server definition. Click **Next**.

**Note:** i5/OS On i5/OS it is recommended to not create the Web server definition using the Profile Management Tool. Therefore, do not enable this option on the Web Server Definition panel. You will need to use the IBM

HTTP Server for iSeries configuration and administration forms which both creates the Web server definition and an HTTP server instance. It also correctly associates the HTTP server to this Web server definition. For more information, see the topic Configuring an HTTP server instance in the WebSphere Application Server Network Deployment for i5/OS, version 6.1 information center.

12. In the Business Process Choreographer Configuration panel, choose not to configure a sample Business Process Choreographer. (Configuring Business Process Choreographer on this panel will configure a Derby rather than a DB2 for i5/OS database.) Click **Next**.
13. On the Business Space Configuration panel, select the **Configure Business Space** check box to set up Business Space powered by WebSphere, an integrated user experience for application users across the IBM WebSphere Business Process Management portfolio and then click **Next**. Configuring Business Space sets up an integrated GUI for the business users of your application for this profile.

**Important:** Business Space is supported with the following database products: Derby Embedded, Derby Network Server, DB2 Universal, DB2 Universal Runtime Client, DB2 for i5/OS, Oracle 9i, Oracle 10g, and Oracle 11g.

If the database you use for WebSphere Process Server does not match the supported databases for Business Space, a Derby Embedded database is selected for the Business Space configuration. You cannot federate this profile into a deployment environment later, because Derby Embedded is not supported for deployment environments.

14. Select whether to configure a Business Rules Manager for the installation and then click **Next**. Business Rules Manager is a Web application that customizes the business rules templates for your business application needs.
15. In the Database Configuration panel, select the entry for **DB2 UDB for iSeries (Toolbox)** under **Choose a database product**. This causes \*SYSBAS to appear in the **Database name** field.
  - a. Select **Create a new remote database**.
  - b. Select the check box next to **Delay execution of database scripts (must select if using a remote database)** if you want to copy and run the database scripts manually on the remote database server.
  - c. Select **Use this database for Messaging Engines (MEs)**.
  - d. Click **Next**.
16. In the Database Configuration (Part 2) panel, enter a valid User Name and Password to authenticate to the remote i5/OS DB2 database.
  - a. Enter the Location (directory) of the JDBC driver class path files (jt400.jar).
    - If the profile is being created on i5/OS, this directory is:  
/QIBM/ProdData/Http/Public/jt400/lib.

**Note:** The scripts will be run automatically from non-i5/OS platforms hosting the WebSphere Process Server to create the remote Common database.

    - If the profile is not being created on i5/OS, enter the local directory containing this jar file.
  - b. Enter the Database server host name (for example IP address) of the i5/OS server where the remote DB2 for i5/OS database is located.

- c. Enter the Database collection name, WPRCSDB by default. The first three characters of the Schema name must be unique for the database that is being hosted on the remote i5/OS server.
  - d. Click **Next**.
17. The Profile summary panel is displayed. Click **Next**.
  18. The profile creation is complete and deselects the Launch First steps option. Click **Finish**.
  19. Export the DDL if needed for both the Common Event Infrastructure and the Common database to the remote i5/OS system. The DDL, in the form of generated database scripts, are in locations you specified earlier in the Common Event Infrastructure database configuration panels and the Database configuration panels. You can provide the scripts by a number of different methods to the Administrator.
  20. The Administrator must run the CEI scripts to set up the remote DB2 database tables for EVENT if both the local and remote database systems are not i5/OS platforms, or if **Delay execution of database scripts (must select if using a remote database)** was selected. The Administrator must also run the commonDB scripts for WPRCSDB on the remote i5/OS system if **Create a new remote database** was not selected.
  21. If your WebSphere Process Server installation resides on a Linux, UNIX, or Windows server and your database resides on a remote i5/OS server, start the server and use the administrative console to verify that the value of the WebSphere Application Server environment variable OS400\_TOOLBOX\_JDBC\_DRIVER\_PATH to the location of the jt400.jar file you downloaded. Then stop and restart the server.

**Important:** You might receive error messages when you start the server before you set the environment variable. These errors resolve when you stop and restart the server.

## Results

You have created a stand-alone profile to connect to a remote database.

DB2 for i5/OS tables and collections have been generated on a remote i5/OS system for CEI (EVENT), Business Process Choreographer, CommonDB, Service Integration Bus, and WebSphere Enterprise Service Bus Message Logger.

## Creating a deployment manager profile to connect to a remote database

The Profile Management Tool can create a WebSphere Process Server deployment manager profile configured with a DB2 for i5/OS database on a remote i5/OS server. In a similar way, the Profile Management Tool can augment a WebSphere Application Server Network Deployment manager profile into a WebSphere Process Server deployment manager profile configured for a remote database connection. The remote i5/OS server hosting the DB2 for i5/OS database does not have the WebSphere Process Server product installed on it.

## Before you begin

If your WebSphere Process Server installation resides on a Linux, UNIX, or Windows server and your database resides on a remote i5/OS server, you must download the IBM Toolbox for Java JDBC driver (jt400.jar) from the SOURCEFORGE.NET Web site at <https://sourceforge.net/projects/jt400> to a local temporary directory.

## Procedure

1. In the Welcome panel for the Profile Management Tool click **Next**.

**Note:** If any WebSphere Application Server profiles are found that can be augmented into WebSphere Process Server profiles, the Existing Profile Detection panel is displayed. Do not augment an existing profile, but instead choose to create a new profile.

2. In the Environment Selection panel, select the **WebSphere Process Server** option. Click **Next**.
3. In the Profile Type Selection panel, select the option to create a **Deployment Manager profile**. Click **Next**.
4. In the Profile Creation Options panel, you can specify whether to create a Typical profile using default settings, or an Advanced profile. Click **Advanced** profile creation. Click **Next**.
5. In the Optional Application Deployment panel, ensure that the check box for deployment of the administrative console is selected. Click **Next**.
6. In the Name and Location panel, enter a unique name and unique location for this profile. A default name and location are presented initially. A default directory is presented under `$user_data_root/profiles/profile_name`. If any other profiles exist, you are given the option of making this new profile the default profile. You can also select to create the server with a development template. Click **Next**.
7. In the Node, Host, and Cell Names panel, you must specify a unique node and cell name. Default node names and cell names are provided, but you can change the node name providing the new name is unique. Click **Next**.
8. In the Administrative Security panel, do not enable administrative security. Click **Next**.
9. In the Port value assignment panel, default port values are provided. You can specify different port values if necessary. Click **Next**.
10. If this WebSphere Process Server profile creation is on Windows or Linux, you are presented with the Windows or Linux service definition panel and can optionally set up this profile to run as a Windows or Linux service. Click **Next**.
11. Optional: In the Web Server Definition panel, you have the option of choosing to create a Web server definition. Click **Next**.

**Note:** i5/OS On i5/OS it is recommended to not create the Web server definition using the Profile Management Tool. Therefore, do not enable this option on the Web server definition panel. You will need to use the IBM HTTP Server for iSeries configuration and administration forms, which create the Web server definition and an HTTP server instance. They also correctly associate the HTTP server to this Web server definition. For more information, see the topic Configuring an HTTP server instance in the WebSphere Application Server Network Deployment for i5/OS, version 6.1 information center.

12. In the Database Configuration panel, select the entry for **DB2 UDB for iSeries (Toolbox)** under **Choose a database product**. This causes \*SYSBAS to appear in the **Database name** field.
  - a. Select **Create a new remote database**.
  - b. Select the check box next to **Delay execution of database scripts (must select if using a remote database)** if you want to copy and run the database scripts manually on the remote database server .

- c. Select **Use this database for Messaging Engines (MEs)**.
  - d. Click **Next**.
13. In the Database Configuration (Part 2) panel, enter a valid User Name and Password to authenticate to the remote i5/OS DB2 database.
    - a. Enter the Location (directory) of the Toolbox JDBC driver class path files (jt400.jar)
      - If the profile is being created on i5/OS, this directory is:  
/QIBM/ProdData/Http/Public/jt400/lib.

**Note:** The scripts will be run automatically from non-i5/OS platforms hosting the WebSphere Process Server to create the remote Common database.

      - If the profile is not being created on i5/OS, enter the local directory containing this jar file.
    - b. Enter the Database server host name (for example IP address) of the i5/OS server where the remote DB2 for i5/OS database is located.
    - c. Enter the Database collection name, WPRCSDB by default. The first three characters of the collection name must be unique for the database that is being hosted on the remote i5/OS server.
    - d. Click **Next**.
  14. The Profile summary panel displays. Click **Next**.
  15. The Profile creation is complete, and the **Launch first steps** option is unselected. Click **Finish**.
  16. Use the administrative console to configure Business Process Choreographer.

## Results

You have created a deployment manager profile to connect to a remote database. DB2 for i5/OS tables and collections have been generated on a remote i5/OS system for Business Process Choreographer, Common database, Service Integration Bus, and WebSphere Enterprise Service Bus Message Logger.

## What to do next

You can start the deployment manager. In a deployment environment, you must create and configure other databases, create custom profiles and federate them to your deployment manager, create servers, create clusters if you want workload management capabilities, and perform other tasks specific to your planned installation environment. Your planned environment dictates which tasks you must perform and the order in which you perform them.

## Creating Common Event Infrastructure and Common database repositories in DB2 on a remote z/OS server

If you plan to use DB2 on a remote z/OS workstation for the Common Event Infrastructure and Common database repositories, you or the database administrator (DBA) must create relevant databases and correct storage groups on the z/OS workstation.

- To create the Common Event Infrastructure repository, see *Configuring the event database and its subtopics*.
- To create the Common database repository, use standard database definition tools and procedures to edit and run the default scripts provided in the following directories:

- **Linux** **UNIX** **On Linux and UNIX platforms:** *install\_root*/dbscripts/CommonDB/DB2zOSV8/
- **Windows** **On Windows platforms:** *install\_root*\dbscripts\CommonDB\DB2zOSV8\
- **Linux** **UNIX** **On Linux and UNIX platforms:** *install\_root*/dbscripts/CommonDB/DB2zOSV9/
- **Windows** **On Windows platforms:** *install\_root*\dbscripts\CommonDB\DB2zOSV9\

These same scripts are also provided in the *media\_root* or *extraction\_root*/dbscripts directory. For more information on how to edit the scripts, see “Creating the DB2 database for z/OS” on page 60.

## Configuring a DB2 message logger database on a remote z/OS system

The default installation of the runtime product creates a stand-alone application server, and a Derby database for use by the Message Logger mediation primitive. If you want to deploy mediation modules that use this primitive, you might prefer to make use of the reliability of a remote DB2 database on a z/OS system.

### About this task

You can use coreDBUtility to create the WebSphere Process Server message logging database on a remote z/OS system. You can run this utility after profile creation for any profile type. The utility generates scripts that can then be used by a z/OS administrator on the z/OS system.

For a full list of the parameters you can use with coreDBUtility, see “coreDBUtility parameters” on page 370.

The coreDBUtility utility is located in *install\_root*/bin. The commands used in the example procedures are for a profile called default, and a DB2 for z/OS v8 database named ESBDB. The utility also supports DB2 for z/OS v9 databases.

### Procedure

1. Use coreDBUtility to create a database. For example:

```
coreDBUtility createDB -DprofilePath=install_root\profiles\default
-DdbType=DB2UDBOS390_V8_1 -DdbName=ESBDB
```

A script called createDB\_DB2.sql is generated. You can then run this script on the remote z/OS system to create the database.

2. Create the table in the database.
  - You can use coreDBUtility to generate the script for creating the database table. For example, for a table in the database storage group named ESBDBSTO, with a schema called ESBLOG:

```
coreDBUtility createTable -DprofilePath=install_root\profiles\default
-DdbType=DB2UDBOS390_V8_1 -DdbName=ESBDB -DsqlScriptPath.default=install_root
\util\EsbLoggerMediation\DB2UDBOS390_V8_1\Table_esb_DB2UDBOS390_V8_1.ddl
-DdbStorageGroup=ESBDBSTO -DdbSchemaName=ESBLOG -DdbDefineSQL false
```

This command generates a script called Table\_esb\_DB2UDBOS390\_V8\_1.ddl in *install\_root*/profiles/default/databases/ESBDB, which you can run on the remote z/OS system to create the table. To view an example of this script, see “Example of Table\_esb\_DB2UDBOS390\_V8\_1.ddl” on page 369.

- You can also choose to generate and remotely execute the script in one command. For example:

```
coreDBUtility createTable -DprofilePath=install_root\profiles\default
-DdbType=DB2UDBOS390_V8_1 -DdbName=ESBDB -DsqlScriptPath.default=install_root
\util\EsbLoggerMediation\DB2UDBOS390_V8_1\Table_esb_DB2UDBOS390_V8_1.dd1
-DdbStorageGroup=ESBDBSTO -DdbSchemaName=ESBLOG -DdbHostName hostname
-DdbServerPort server_port -DdbJDBCClasspath=JDBC_classpath
-DdbUserId=username -DdbPassword=password
-DdbConnectionLocation=connection_location
```

This runs the script on the remote z/OS system using the connection parameters you set in the command.

3. Create the JDBC provider for the required database type. You can use coreDBUtility to connect to the WebSphere configuration and create the JDBC definitions. For example, for a cell named defaultCell and a node named defaultNode:

```
coreDBUtility createJDBCProvider -DprofilePath=install_root\profiles\default
-DdbType=DB2UDBOS390_V8_1 -DscopeLevel=node -DcellName=defaultCell
-DnodeName=defaultNode -DdbJDBCClasspath=JDBC_classpath
```

4. Create the data source. You can use coreDBUtility to connect to the WebSphere configuration and create the data source to be used. For example:

```
coreDBUtility createDataSource -DjndiName=jdbc/ESBDB
-DprofilePath=install_root\profiles\default -DprofileName=default
-DdbType=DB2UDBOS390_V8_1 -DdbName=ESBDB -DdbHostName hostname
-DdbServerPort server_port -DdbUserId=username -DdbPassword=password
-DdbConnectionLocation=connection_location -DdbStorageGroup=ESBDBSTO
-DscopeLevel=node -DcellName=defaultCell -DnodeName=defaultNode
-DdbJDBCClasspath=JDBC_classpath
```

## Example of Table\_esb\_DB2UDBOS390\_V8\_1.dd1

You can use coreDBUtility to generate a script for creating tables in a remote DB2 message logger database on z/OS. You can see an example of this script here.

```
-- @start_restricted_prolog@
-- Licensed Materials - Property of IBM
-- 5724-I82 5724-L01 5655-N63 5655-R15
-- (C) Copyright IBM Corporation 2006 All Rights Reserved.
-- US Government Users Restricted Rights- Use, duplication or disclosure
-- restricted by GSA ADP Schedule Contract with IBM Corp.
-- @end_restricted_prolog@

-- DB2UDB for z/OS V8.1 schema for Message Logger Mediation

-- ESBDB          DBName
-- ESBDBSTO       StorageGroup
-- ESBLOG         SQLID

-- Create Tablespaces
CREATE TABLESPACE ESPTS  LOCKSIZE ROW CCSID UNICODE BUFFERPOOL BPO
IN ESBDB USING STOGROUP ESBDBSTO;
CREATE LOB TABLESPACE ESBCLOB IN ESBDB USING STOGROUP ESBDBSTO;

-- Create Tables
CREATE TABLE ESBLOG.MSGLOG
(TIMESTAMP TIMESTAMP NOT NULL,
MESSAGEID VARCHAR(36) NOT NULL,
MEDIATIONNAME VARCHAR(256) NOT NULL,
MODULENAME VARCHAR(256),
MESSAGE CLOB(100000K),
VERSION VARCHAR(10),
CONSTRAINT PK_MSGLOG PRIMARY KEY (MESSAGEID, TIMESTAMP, MEDIATIONNAME))
IN ESBDB.ESPTS;

CREATE UNIQUE INDEX ESBLOG.MSGLOG_INDEX_PK
ON ESBLOG.MSGLOG (MESSAGEID, TIMESTAMP, MEDIATIONNAME) USING STOGROUP ESBDBSTO;

-- Create AUX CLOB Tables/Index
CREATE AUX TABLE ESBLOG.MESSAGECLOB IN ESBDB.ESBCLOB STORES ESBLOG.MSGLOG COLUMN MESSAGE;
CREATE INDEX ESBLOG.MESSAGECLOB_IDX ON ESBLOG.MESSAGECLOB USING STOGROUP ESBDBSTO;
```

## coreDBUtility parameters

You can run coreDBUtility after profile creation for any profile type to create a database for use with the Message Logging mediation primitive. There are several parameters which you can specify when using the command, some of which are required. The coreDBUtility includes further usage instructions in the bat/sh file.

The coreDBUtility parameters are the following:

**-DdbConnectionLocation**

The database connection location.

**-DdbDelayConfig**

Can be set to true or false. If set to true, the database configuration is not performed and the user has to use the provided scripts to perform the configuration.

**-DdbHostName**

The host name or IP address for the database server.

**-DdbLocation**

The path of the database installation root.

**-DdbJDBCClasspath**

The directory path, which contains JDBC driver files.

**-DdbName**

The database name or alias name.

**-DdbPassword**

The password to access the database.

**-DdbSchemaName**

The schema name.

**-DdbServerPort**

The JDBC port number for the database server.

**-DdbStorageGroup**

The database storage group.

**-DdbType**

The database type. For example, DB2UDBOS390\_V8\_1 for DB2 for z/OS v8.

**-DdbUserId**

The user ID to access database.

**-DcellName**

The cell name.

**-DnodeName**

The node name.

**-DprofilePath**

The path of the profile.

**-DscopeLevel**

The scope level, valid values are "node", "cell".

**-DsqlScriptPath.default**

The default sql script for creating a table

## Deleting profiles using the manageprofiles command

You can delete a profile from the command line using the manageprofiles command.



## Before you begin

For more information about the `manageprofiles` command, see “`manageprofiles` command” on page 251.

**Security role required for this task:** See “Granting write permission of files and directories to non-root users for profile creation” on page 194.

**i5/OS** You must have operating system permissions to read, write, and run commands in the `user_data_root/profiles` directory.

### Procedure

1. Open a command prompt and run one of the following commands, based on your operating system:

- **i5/OS** On **i5/OS** platforms: `manageprofiles -delete -profileName profile_name`
- **Linux** **UNIX** On **Linux and UNIX** platforms: `manageprofiles.sh -delete -profileName profile_name`
- **Windows** On **Windows** platforms: `manageprofiles.bat -delete -profileName profile_name`

The variable `profile_name` represents the name of the profile that you want to delete.

2. Confirm that the profile deletion has completed by checking the following log file:

- **i5/OS** On **i5/OS** platforms: `user_data_root/profileRegistry/logs/manageprofiles/profile_name_delete.log`
- **Linux** **UNIX** On **Linux and UNIX** platforms: `install_root/logs/manageprofiles/profile_name_delete.log`
- **Windows** On **Windows** platforms: `install_root\logs\manageprofiles\profile_name_delete.log`

---

## Setting up deployment environments

After defining deployment environments there are other tasks you can perform to update or complete the setup.

### Creating deployment environments

After you select a deployment pattern, use the Deployment Environment Configuration wizard to create the deployment environment that is based on the pattern.

#### Before you begin

On the administrative console of the deployment manager navigate to **Servers > Deployment Environments**.

**Required security role for this task:** When security and role-based authorization are enabled, you must log in to the administrative console as an administrator or operator to perform this task.

## About this task

This task creates a deployment environment that is based on a specific pattern and uses the Deployment Environment Configuration wizard.

**Note:** If you make an error while you are working in the wizard, you can go back by clicking **Back**.

### Procedure

1. Launch the Deployment Environment Configuration wizard by clicking **New** on the Deployment Environments page.

The system displays the first page of the Deployment Environment Configuration wizard with **Create a new deployment environment** selected.

2. Give the deployment environment a unique name, select the run-time capability from the list, then click **Next**.

The **Runtime Capability** can be:

- **WESB**, which provides a deployment environment that supports mediations.
- **WPS**, which provides a deployment environment that supports mediations, business processes, human tasks, and business rules.

The default value for **Runtime Capability** matches the capability of the deployment manager.

3. On the Deployment Environment Patterns page select the deployment environment pattern for this deployment environment, then click **Next**.

Match this pattern to the pattern you chose for this environment during the planning phase. If you are unfamiliar with the patterns, see "Deployment environment patterns."

**Note:** If you select the Custom pattern, you are defining a custom deployment environment configuration. For more information, see "Deployment environment patterns."

4. On the Select Nodes page, select the nodes to include in this deployment environment, then click **Next**.

To include a node, select the check box next to the node name. Use **Node Mapping** to map the selected node to another node name.

5. On the Clusters page, assign the number of cluster members on each node for each function of the deployment environment.

The default is to assign one cluster member on each node for each function. You change the number by replacing the number in each column. If you are unfamiliar with functions, see "Deployment environment functions." A 0 (zero) value for a node means that the node does not contribute to that particular function.

6. On the Database page, configure the databases for the deployment environment, then click **Next**.

On this page, define the database information for the components that are included in this deployment environment. Where possible, the wizard supplies default information for the parameters, but change those values to match the values that you defined when you planned the environment.

7. Optional: Define the Business Process Choreographer configuration and then click **Next**.

On this page you specify the values for:

- Context roots

- Security roles
- Authentication aliases
- Human task manager mail session, if desired

**Note:** This page displays only if the value **WPS** is selected for **Runtime Capability**.

- Optional: On the Business Rules Manager page, specify the context root for the Business Rules Manager and click **Next**.

**Note:** This page displays only if the value **WPS** is selected for **Runtime Capability**.

The wizard displays the Summary page.

- Verify that the information on the Summary page is correct and click **Finish and Generate Environment** to save and complete the configuration of the deployment environment. To exit without completing the configuration click, **Finish**.

## Results

When the configuration completes, you can examine the configuration files to view the changes.


## What to do next

Either save the changes to the master configuration or discard them.

### Related concepts

 [Deployment environment functions](#)

To design a robust deployment environment, you need to understand the functionality each cluster can provide in a particular IBM-supplied deployment environment pattern or a custom deployment environment. This knowledge can help you make the correct decisions as to which deployment environment pattern best meets your needs.

 [Database configurations](#)

WebSphere Process Server uses a number of database tables to hold, store and track information. Creating these database tables is part of the process of configuring the WebSphere Process Server. You can create these database tables during profile creation or you can choose to create them separately using scripts.

### Related information

 [Configuring Business Space as part of the Deployment Environment Configuration wizard](#)

 [Configuring Business Space database tables](#)

 [Deployment environment patterns](#)

 [Configuring Business Process Choreographer](#)

## Custom deployment environment layout configuration

This overview describes two major configuration considerations for custom deployment environments: selecting clusters and single servers to use with the

environment and specifying the deployment environment configuration. An understanding of these considerations enables you to plan and implement a deployment environment effectively.

“Selecting Clusters and Single Servers to use with a deployment environment” on page 375 defines the clusters and servers that make up your deployment environment. Unlike the patterned deployment environments, where clusters are created for each function, in a custom deployment environment you add the clusters and servers that you need to perform functions.

“Defining the Deployment Environment Configuration” on page 375 describes the functions you configure for the clusters and servers. These functions are messaging, Common Event Infrastructure, or application support.

Before you complete the deployment environment configuration in the system by generating it, you can return to your configuration and make changes. After you generate the deployment environment configuration in the system, you can look at the current configuration. You can also add more servers and clusters, configure more functions, or you can remove servers and clusters from management by this deployment environment. You cannot undo a function configuration that you have already generated, and you cannot remove a server or cluster from the deployment environment definition that is still required by another server or cluster in your deployment environment.

## **Requirements for all custom deployment environments**

A custom deployment environment layout includes these restrictions:

- After you complete a configuration by generating the deployment environment, the associated controls become checked and disabled. This means you cannot undo the configuration.
- After you generate the deployment environment, if a control is not checked and disabled for a component, you must configure the associated functions in the following order: configure the associated messaging engine, then configure the Common Event Infrastructure (CEI), then the application support (described later in this topic).
- The configurations that exist on a system override the topology layout configuration. Thus, exporting a custom topology reflects the actual configuration of the servers involved in the topology.

The Topology Layout page in the administrative console has four sections that you must configure for a custom topology:

- Select Cluster and Single Servers
- Messaging
- Common Event Infrastructure
- Components

The following sections include other requirements for completing a custom topology layout configuration.

## Selecting Clusters and Single Servers to use with a deployment environment

Use the Select Cluster and Single Servers section of the Topology Layout page to manage the clusters and servers within the deployment environment and define which functions they provide.

The Select Cluster and Single Servers section of the Topology Layout page includes a list of available clusters and servers, which you configure as part of the deployment environment. You assign clusters and servers to collaborative units in the function configuration. Each collaborative unit represents a group of clusters and servers that provides, as a whole, a function in the deployment environment. You can remove clusters or servers from the deployment environment. However, you can remove only clusters or servers that are no longer needed by other clusters or servers in the configuration.

## Defining the Deployment Environment Configuration

Use the Specify the Deployment Environment Configuration section of the Topology Layout page to define which clusters or servers participate in specific functions for the deployment environment.

### Messaging

**Note:** Partitioned messaging engines are not supported.

You use the fields in the Messaging tab to configure the messaging destination for selected targets. Each table represents one collaborative unit, and the Messaging section can include multiple tables. You must select only one target (Cluster/Server) for the option of local configuration for each unit, and all other targets in this unit assume the remote destination. When applications send messages to targets with a remote destination configuration, the system routes the messages to the local target for their unit.

The messaging configuration applies to the Service Component Architecture (SCA), the CEI, and the Business Process Choreographer system buses.

To prevent conflicts with the local destinations in your topology configuration, the following rules apply:

- The SCA system bus messaging engine configuration determines the local and remote destination locations. The SCA application, the CEI and the Business Process Choreographer bus configurations follow the SCA system bus configuration.
- If you locate the messaging engines for other buses on different targets in a unit, then the other targets in that unit assume the remote destination role. If the CEI or Business Process Choreographer buses have different configurations, an information message indicates that the messaging engine for a given bus is not located on the same target as the SCA messaging engine.
- If you try to add a target that already has a remote or local destination configured that conflicts with the current bus settings of a given unit, the system generates an error message.

### Common Event Infrastructure

You configure CEI on the CEI tab, like Messaging. The CEI can have multiple tables, each representing a unit. In each table you select one CEI cluster or server (Cluster/Server column) that acts as the server by selecting the **Server** radio button. All targets that are not configured as a server assume the

destination role. On the corresponding targets the event Infrastructure emitter factory Java Naming and Directory Interface (JNDI) name is configured so that Common Base Events that are emitted on this target are sent to the server in their respective collaborative unit.

### Application support

The Application Support tab lists all of the components that you can configure for a given deployment target. You configure component functions in a related collaborative unit. For example, you configure a Business Process Choreographer event collector in a unit to collect the Common Base Events that are emitted by the Business Process Choreographer container that is configured in the same unit. Each component configuration has requirements and dependencies on other component configurations. Dependencies are represented by cleared and disabled controls. To enable them, you must configure dependent controls first.

**Note:** Dependent controls are configured on either on the Messaging or the CEI tab.

Table 138 describes the relationships between the components.

*Table 138. Deployment environment component relationships*

Component	Purpose	Related Component	Considerations
Service Component Architecture (SCA)	Configures the deployment target for SCA application support.  The SCA system and application bus members are configured locally if the corresponding messaging configuration is local; otherwise, they are configured remotely with the remote destination as specified in the corresponding messaging unit.	Messaging	SCA configuration is not available if you have not configured the deployment target for messaging.

Table 138. Deployment environment component relationships (continued)

Component	Purpose	Related Component	Considerations
<p>Business Process Choreographer container</p>	<p>Configures the deployment target for both business flow and human task support.</p> <p>The configuration follows the SCA configuration for setting up the Business Process Choreographer system bus.</p>	<p>Messaging Service Component Architecture</p> <p>Business Process Choreographer Explorer</p>	<p>Business Process Choreographer configuration is not available if the deployment target has not been configured for messaging or if it has not been configured for Service Component Architecture support.</p> <p>One collaborative unit supports one Business Process Choreographer configuration. Add as many units as you need on the Application Support tab.</p> <p>To manage a container, consider configuring Business Process Choreographer Explorer.</p>

Table 138. Deployment environment component relationships (continued)

Component	Purpose	Related Component	Considerations
Business Process Choreographer Explorer	<p>Configures Business Process Choreographer Explorer on the selected deployment target.</p> <p>Business Process Choreographer Explorer is a Web application that manages the Business Process Choreographer container that is configured in the same collaborative unit.</p> <p>It includes an optional reporting function (Business Process Choreographer Explorer reporting ) which was previously known as the <i>Business Process Choreographer Observer</i>.</p>	Business Process Choreographer container	<p>The Business Process Choreographer Explorer configuration is available after you have selected a Business Process Choreographer container configuration in the same collaborative unit.</p> <p>You must configure the deployment target for Web application support</p> <p>You can configure as many instances of Business Process Choreographer Explorer on a deployment target as you want. Add the deployment target to the collaborative units with a configured container and check the Business Process Explorer configuration control.</p>



Table 138. Deployment environment component relationships (continued)

Component	Purpose	Related Component	Considerations
Business Process Choreographer event collector	<p>Configures the Business Process Choreographer event collector on the selected deployment target.</p> <p>The Business Process Choreographer event collector gathers Common Base Events that are emitted from the Business Process Choreographer container that is configured in the same collaborative unit. Statistical information about the observed container is recorded in a database.</p>	<p>Business Process Choreographer container</p> <p>Common Event Infrastructure</p>	<p>Configure first the Common Event Infrastructure server on the same deployment target that you plan to use for the Business Process Choreographer event collector. The Business Process Choreographer event collector is available only after you configure the Business Process Choreographer container in the same collaborative unit.</p> <p>If you are not sure whether you need to observe a given Business Process Choreographer container, you can configure this function later.</p>
Business Rules Manager	<p>Configures the Business Rules Manager on the selected deployment target.</p> <p>The Business Rules Manager allows you to configure business rules that determine business process behavior.</p>	Service Component Architecture	<p>The Business Rules Manager configuration control is available after you configure SCA support on the same deployment target.</p> <p>You can configure only one Business Rules Manager for a deployment environment.</p> <p>You might need to configure only one Business Rules Manager in your system because one instance can manage the business rules configuration of the entire cell.</p>

## Updating the deployment environment topology

From one administrative console page, you can add nodes to topologies and assign functions to clusters in a deployment environment based on an IBM-supplied pattern. You can also delete nodes from the deployment environment topology.

## Before you begin

- Verify that deployment environments exist on this deployment manager.

Navigate to the administrative console of a deployment manager **Servers** → **Deployment Environments** → *deployment\_environment\_name* → **Additional Properties** → **Deployment Topology**.

**Required security role for this task:** When security and role-based authorization are enabled, you must log in to the administrative console as an administrator or operator to perform this task.

## About this task

As your deployment environment requirements change, you can add nodes to and remove them from existing deployment environments or change the allocation of resources to the functions in the deployment environment.

**Note:** On this page you can configure only deployment environments that are based on IBM-supplied patterns. You cannot access the Deployment Topology page from a custom deployment environment.

## Procedure

1. Choose an objective and perform the actions associated with that objective.

Objective	Actions
<b>Adding a federated node to the end of the deployment environment configuration.</b>	Select a node from the list and click <b>Add Node</b> .
<b>Replacing an empty node in the configuration with a federated node</b>	<ol style="list-style-type: none"><li>1. Select the node from the list.</li><li>2. Select the check box next to the empty row and click <b>Add node</b>.</li></ol>
<b>Adding an empty or new node to the configuration</b>	Type a name in the <b>Node name</b> field and then click <b>Add Node</b> .
<b>Removing a node</b>	Select the check box next to the node you want to remove then click <b>Remove</b> .
<b>Assigning functions to nodes</b>	Type the number of cluster members to configure for each function in the associated column for the function.

2. Save the configuration by clicking **OK** or **Apply**.

If you must configure resources, the system initiates the configuration process. You see a configuration progress dialog and the system prompts you to save the changes to the master configuration.

**Note:** The system does not complete the configuration until you click **Generate Environment**.

## Results

The page updates with your changes and the status of the nodes and roles for this deployment environment.

## Configuring host aliases

Configure the IBM HTTP server or a server of your choice to allow communication between managed nodes and the deployment manager.

### Before you begin

Create and configure a deployment manager and associated nodes.

### About this task

The managed nodes and the deployment manager must be able to communicate with each other, so the host name alias for each node in the deployment target cluster must be visible to the deployment manager. The host name alias consists of the DNS host name and port number. You use this alias as part of a URL to access applications when they are running on the deployment target.

**Note:** This procedure uses two application cluster members that are referred to as `AppCluster_member1` and `AppCluster_member2`. Substitute your server names in the instructions.

### Procedure

1. From the administrative console, navigate to **Servers** → **Application servers** → *AppCluster\_member1*.
2. Click the name.
3. Under the Communications heading, expand **Ports** and note the port value listed for *WC\_defaulthost*. You will need to use it later.
4. Repeat steps 1 through 3, for every cluster member. Repeat this for each additional application cluster member.

When you are finished, you will have a list of the cluster members and the port numbers for their default host.

5. From the administrative console, navigate to **Environment** → **Virtual Hosts** → **default\_host**.
6. Under **Additional Properties**, click **Host aliases**.
7. If an entry for the correct combination of host name and port value for cluster members is not displayed, add the missing entries to the list.
8. If you added new entries to the list, click **Save** and then **Synchronize**.

### What to do next

Verify your installation by installing a test application.

## Configuring authentication aliases for a deployment environment

From one administrative console page, you can review or edit all your authentication aliases.

### Before you begin

- Verify that deployment environments exist on this deployment manager.

Navigate to the administrative console of a deployment manager **Servers** → **Deployment Environments** → *deployment\_environment\_name* → **Related Items** → **Authentication Aliases**.

**Required security role for this task:** When security and role-based authorization are enabled, you must log in to the administrative console as an administrator or operator to perform this task.

## About this task

From this consolidated list of authentication aliases, you can:

- Review all the aliases for a given deployment environment
- Access the authentication configuration page through the *Alias\_name* link

The **Reset** button resets the selected rows to the currently configured values. Click *Alias\_name* to access the authentication configuration page where you make your changes.

## Procedure

1. Select the row you want to change.
2. Do one of the following:

Option	Description
To edit the row	Click <i>Alias_name</i> .
To reset the row	Click <b>Reset</b> .

Editing a row takes you to the authentication configuration page where you make your changes.

3. Click **OK** or **Apply** to save any changes.

## Configuring custom deployment environments

Use the Custom Deployment Topology Detail page to configure your custom deployment environment.

### Before you begin

- Verify that deployment environments exist on this deployment manager.

Navigate to the administrative console of a deployment manager **Servers** → **Deployment Environments** → *deployment\_environment\_name* → **Additional Properties** → **Custom Deployment Topology Detail**.

**Required security role for this task:** When security and role-based authorization are enabled, you must be logged in as an administrator or a configurator to perform this task.

### Restrictions:

- The configurations that exist on a system take precedence over the deployment environment configuration. Thus, exporting a custom deployment environment reflects the actual configuration of the servers involved in the deployment environment.
- You need to configure the messaging units before configuring the component units. If the check box is unavailable, then you have not yet configured messaging support.

## About this task

For a custom deployment environment, you can decide how to configure each function according to your needs. Configure each function to either clusters or single servers. There are three major areas in configuring a custom deployment environment topology:

- Messaging, which supports component internal communication.
- Common Event Infrastructure, which unifies event and monitoring functionality.
- Application Support, which supports business integration service components such as business processes and human tasks.

For more information see “Overview of custom deployment environment layout configuration.”

### Procedure

1. In **Select Clusters and Servers for use with this Deployment Environment**, select a cluster or server from the list.
2. Click **Add**. The cluster or single server will be added to the table below.
3. Repeat steps 1 and 2 until you have selected all the clusters and servers you need for this deployment environment.
4. Select the **Messaging** tab.
  - a. Decide how many independent messaging units you need for your deployment environment and add that number by clicking **Add New Unit**. The system names each unit Messaging Unit  $x$ , where  $x$  is the number of the unit.
  - b. Assign clusters and servers from the table created in step 2 to each unit. Select the cluster or server to add to the unit and then choose the unit from **Add selected to unit**.
  - c. Decide which deployment target in each unit is to host local messaging support and configure the local messaging host by clicking **Local Bus Member** on the row that defines that deployment target in the unit. All other clusters or servers are automatically configured for remote messaging destinations.
5. Click on the **Common Events Infrastructure** tab.
  - a. Decide how many independent Common Events Infrastructure units you need for your deployment environment and add that number by clicking **Add New Unit**. The system names each unit Common Event Infrastructure Unit  $x$ , where  $x$  is the number of the unit.
  - b. Assign clusters and servers from the table created in step 2 to each unit. Select the cluster or server to add to the unit and then choose the unit from **Add selected to unit**.
  - c. Decide which deployment target in each unit is to host the Common Event Infrastructure server and configure the Common Event Infrastructure server host by clicking **Server** on the row that defines that deployment target in the unit. All other clusters or servers are automatically configured for remote Common Event Infrastructure destinations.
6. Click on the **Application Support** tab. This tab shows all the components that can be configured for a given deployment target.

**Restriction:** You must complete the messaging units for each component before you can configure the component in this section. For example, if the check box is unavailable for Service Component Architecture, then the associated messaging units have not been configured. See "Overview of custom deployment environment layout configuration" for additional restrictions.

- a. Decide how many independent Application Support units you need for your deployment environment and add that number by clicking **Add New Unit**.

The number of units you need depends on how many Business Process Choreographer containers you need. If you do not need Business Process Choreographer containers a single unit will be sufficient for Service Component Architecture applications.

The system names each unit Application Support Unit  $x$ , where  $x$  is the number of the unit.

- b. Assign clusters and servers from the table created in step 2 on page 383 to each unit.  
Select the cluster or server to add to the unit and then choose the unit from **Add selected to unit**.
- c. In a unit, select what cluster or server belongs to each component for your deployment environment.
- d. Repeat steps 6b and 6c until you configure all the components in each unit you need for your deployment environment.

## What to do next

After completing or making edits to an existing deployment environment, the Custom Deployment Environment Configuration wizard opens. You can review the information and make any necessary changes.

## Configuring deferred configurations for a deployment environment

If you must defer the creation of your databases and tables, use the Deferred Configuration page. This page provides instructions on how to locate and run scripts for database and table creation.

### Before you begin

- Verify that deployment environments exist on this deployment manager.

Navigate to the administrative console of a deployment manager **Servers** → **Deployment Environments** → *deployment\_environment\_name* → **Additional Properties** → **Deferred Configuration**.

**Required security role for this task:** When security and role-based authorization are enabled, you must log in to the administrative console as an administrator or operator to perform this task.

### About this task

Use this procedure when you must create database tables or schemas separately from configuring a deployment environment.

The Deferred Configuration page shows the configuration steps needed to correctly configure your topology's databases. In most cases this page shows:

- Script location
- Instructions on how to run the scripts

#### Procedure

1. Perform the instructions provided in the Deferred Configuration page.
2. When you finish, click **Configuration Done**.

#### What to do next

A text box shows by whom and when the deferred configuration was performed last. The displayed instructions remain on this page for future reference.

## Configuring deployment environments using the command line

You can configure deployment environments using the wsadmin interface. This capability allows you to configure multiple deployment environments unattended on a deployment manager using a script.

#### Before you begin

You must enter the commands on the deployment manager on which you are configuring deployment environments.

**Required security role for this task:** When security and role-based authorization are enabled, you must log in to the administrative console as an administrator or operator to perform this task.

#### About this task

After you have imported or created deployment environments on a deployment manager, you can configure the deployment environments using the generateDeploymentEnv command.

#### Procedure

1. Enter the wsadmin environment.
2. Enter the generateDeploymentEnv command for each topology you are configuring.

#### Example

The following command configures topologies eastEnvironment and westEnvironment on host myDmgr.

```
wsadmin -connType SOAP -host myDmgr -port 8879
> $AdminTask generateDeploymentEnv -topologyName eastTopology
> $AdminTask generateDeploymentEnv -topologyName westTopology
> $AdminConfig save
```

**Note:** When you are running with administrative security enabled, you will be prompted for a user ID and password after the system processes the wsadmin command.

## What to do next

Save the configured deployment environments. From the command line, you can enter `$AdminConfig save`.

## Configuring a data source for your deployment environment

Configure your business integration data source for the first time using the Database Provider Configuration page.

### Before you begin

- Verify that deployment environments exist on this deployment manager.
- Navigate to the administrative console of a deployment manager **Servers** → **Deployment Environments** → *deployment\_environment\_name* → **Related Items** → **Data Sources**.

**Required security role for this task:** When security and role-based authorization are enabled, you must log in to the administrative console as an administrator or operator to perform this task.

### About this task

Use the Data Sources page to configure the collection of all the data sources that are needed in your deployment environment.

The component that needs the data source determines all required fields based on the **Database Provider** selected, and these fields must be completed. The component fills the rest of the fields with default values. You may either keep the default values or change them to meet your needs. In most cases, the component determines the **Scope** value.

You can configure a business integration data source only once. After you configure the data source and save it, some text boxes will be unavailable and you cannot change the values. All other text boxes on the page can be edited.

### Procedure

1. In the Data Sources page, select check box next to the data source to configure.
2. Click **Edit Provider** to edit additional data source fields that are not shown on this page.

**Note:** Alternatively, you can just click the name of the data source in the **Data Source** column.

3. Enter the information. For a list of supported database types, see “Database specifications.”
4. Click **Apply** or **OK** to save your changes.

## Creating deployment environment definitions using the command line

You can create deployment environment definitions using the `wsadmin` command. You can use the `wsadmin` command to create the same deployment environment as you can create from the administrative console. This capability allows you to run the administrative task to create a new definition with all the default values based on an existing configuration.



## Before you begin

You must be at the deployment manager from which you are creating deployment environment definitions.

**Required security role for this task:** When security and role-based authorization are enabled, you must use a userid and password with administrator or operator authority to perform this task.

## About this task

This task creates a deployment environment definition that is based on a specific pattern and uses the wsadmin command.

### Procedure

1. Open a command window.  
The wsadmin command can be found at either the <WPS>/profiles/<dmgr profile>/bin directory, or the <WPS>/bin directory.
2. At the command prompt, enter the wsadmin command to enter the wsadmin environment.
3. Use the createDeploymentEnvDef command to create the deployment environment definition with a specific name for a particular runtime and pattern.

**Note:** If administrative security is on, you will be prompted for a user ID and password, if you do not supply it in the command.

## Example

This example creates a deployment environment definition for single cluster pattern on a WebSphere Process Server runtime myDepEnv on the host myDmgr with administrative security enabled:

```
wsadmin -connType SOAP -host myDmgr -port 8879 > $AdminTask  
-createDeploymentEnvDef { -topologyName topOne -topologyPattern  
singleCluster -topologyRuntime WPS}
```

**Note:** If you disable administrative security, you do not need to provide a user ID and password.

### Related information

 [Commands and scripts](#)

 [createDeploymentEnvDef command](#)

## Validate the deployment environment definition from the command line

You can validate the deployment environment definition using the wsadmin command.

## Before you begin

The task assumes that the node has been federated to the Deployment Manager.

You must be at the deployment manager to which you are validating the deployment environment definition.

**Required security role for this task:** When security and role-based authorization are enabled, you must use a userid and password with administrator or operator authority to perform this task.

## About this task

This task validates the deployment environment definition and uses the `wsadmin` command.

### Procedure

1. Open a command window.  
The `wsadmin` command can be found at either the `<WPS>/profiles/<dmgr profile>/bin` directory, or the `<WPS>/bin` directory.
2. At the command prompt, enter the `wsadmin` command to enter the `wsadmin` environment.
3. Enter the `validateDeploymentEnvDef` command to validate the deployment environment definition.

**Note:** If administrative security is on, you will be prompted for a user ID and password, if you do not supply it in the command.

## Example

This example validates the deployment environment definition (`myDepEnv`) with administrative security enabled:

```
wsadmin -connType SOAP -host myDmgr -port 8879 -user dmgrAdmin -password -dmgrPass  
> $AdminTask validateDeploymentEnvDef { -topologyName topOne}
```

**Note:** If you disable administrative security, you do not need to provide a user ID and password.

### Related reference

 [validateDeploymentEnvDef command](#)

### Related information

 [Commands and scripts](#)

## Deleting deployment environment definitions using the command line

You can delete a deployment environment definition from a deployment manager using the `wsadmin` command. This will not impact any existing servers/clusters that are configured.

### Before you begin

The admin client must connect to the deployment manager from which you are removing the deployment environment definition.

Verify that deployment environments exist on this deployment manager.

For recover purposes, consider exporting the deployment environment definition.

**Required security role for this task:** When security and role-based authorization are enabled, you must use a userid and password with administrator or operator authority to perform this task.

## About this task

Delete the deployment environment definition from a deployment manager when you no longer need the specific definition.

This task uses `wsadmin` command to delete a deployment environment definition on the deployment manager.

You might want to use the command line to delete deployment environment definitions when you are making a large number of changes to a deployment environment. There is less overhead using the `wsadmin` command than there would be using the administrative console.

### Procedure

1. Open a command window.  
The `wsadmin` command can be found at either the `<WPS>/profiles/<dmgr profile>/bin` directory, or the `<WPS>/bin` directory.
2. At the command prompt, enter the `wsadmin` command to enter the command environment.

**Note:** Make sure `wsadmin` connects to the correct deployment manager, when running in connected mode.

3. Use the `deleteDeploymentEnvDef` command to delete the deployment environment definition from the deployment manager.

**Note:** If administrative security is on, you will be prompted for a user ID and password, if you do not supply it in the command.

### Example

This example deletes a deployment environment definition (**myDepEnv**) with administrative security enabled.

**Note:** If you are running the admin client from the deployment manager bin folder, you do not need to include the `-host` and `-port` parameters in the command.

```
wsadmin -connType SOAP -host myDmgr -port 8879 -user dmgradmin -password dmgrpass  
> $AdminTask deleteDeploymentEnvDef {-topologyName myDepEnv }
```

The `-connType` parameter specifies the type of connection to be used; the default argument is `SOAP`.

**Note:** As the default is `SOAP`, you do not need to give explicitly if `SOAP` is the connection type that is being used.

The `-host` parameter specifies the host used for the `SOAP` or `RMI` connection. The default value for `-host` is the local host.

**Note:** If the node is running on the local host, you don not need to specify `-host`

**Note:** If you disable administrative security, you do not need to provide a user ID and password.

To save this change to the master configuration issue the command:  
\$AdminConfigSave.

#### Related information

 [Commands and scripts](#)

 [deleteDeploymentEnvDef command](#)

## Renaming a deployment environment definition using the command line

You can rename a deployment environment definition using the wsadmin command.

### Before you begin

You must be at the deployment manager from which you are renaming deployment environment definitions.

**Required security role for this task:** When security and role-based authorization are enabled, you must use a userid and password with administrator or operator authority to perform this task.

### About this task

This task renames a deployment environment definition and uses the wsadmin command.

This command will fail if the deployment environment (topology) is already configured.

You would typically perform this task after importing a topology from another deployment environment definition. There is less overhead using the wsadmin command than there would be using the administrative console.

### Procedure

1. Open a command window. .  
The wsadmin command can be found at either the <WPS>/profiles/<dmgr profile>/bin directory, or the <WPS>/bin directory.
2. At the command prompt, enter the wsadmin command to enter the wsadmin environment.
3. Use the renameDeploymentEnvDef command to rename a deployment environment definition.

**Note:** If administrative security is on, you will be prompted for a user ID and password, if you do not supply it in the command.

### Example

This example renames a deployment environment definition (**TheOldDepEnvName**) to the (**TheNewDepEnvName**) with administrative security enabled:

```
wsadmin -connType SOAP -host myDmgr -port 8879 -user dmgrAdmin -password -dmgrPass  
> $AdminTask renameDeploymentEnvDef {-topologyName myDepEnv  
-oldName TheOldDepEnvName -newName TheNewDepEnvName}
```

The `-connType` parameter specifies the type of connection to be used; the default argument is SOAP.

**Note:** As the default is SOAP, you do not need to give explicitly if SOAP is the connection type that is being used.

The `-host` parameter specifies the host used for the SOAP or RMI connection. The default value for `-host` is the local host.

**Note:** If the node is running on the local host, you do not need to specify `-host`.

**Note:** If you disable administrative security, you do not need to provide a user ID and password.

#### Related information



Commands and scripts



renameDeploymentEnvDef command

## Add nodes to a deployment environment definition using the command line

You can add nodes to a deployment environment definition using the `wsadmin` command.

### Before you begin

The task assumes that the node has been federated to the Deployment Manager.

This command to add a node to the deployment environment definition will fail if the topology is already configured.

You must be at the deployment manager to which you are adding nodes.

**Required security role for this task:** When security and role-based authorization are enabled, you must use a userid and password with administrator or operator authority to perform this task.

### About this task

This task adds a federated node to a deployment environment definition and uses the `wsadmin` command.

#### Procedure

1. Open a command window.  
The `wsadmin` command can be found at either the `<WPS>/profiles/<dmgr profile>/bin` directory, or the `<WPS>/bin` directory.
2. At the command prompt, enter the `wsadmin` command to enter the `wsadmin` environment.
3. Enter the `addNodeToDeploymentEnvDef` command to add the node to the deployment environment definition.

**Note:** If administrative security is on, you will be prompted for a user ID and password, if you do not supply it in the command.

## Example

This example adds a node (**MyNode**) to deployment environment definition (**myDepEnv**) with administrative security enabled:

```
wsadmin -connType SOAP -host myDmgr -port 8879 -user dmgrAdmin -password -dmgrPass  
> $AdminTask addNodeToDeploymentEnvDef {-topologyName myDepEnv -nodeRuntime WPS  
-topologyRole Messaging -nodeName MyNode -serverCount 3}
```

**Note:** If you disable administrative security, you do not need to provide a user ID and password.

## Removing nodes from a deployment environment definition using the command line

You can remove nodes from a deployment environment definition using the `wsadmin` command.

### Before you begin

This command to remove a node from the deployment environment will fail if the topology is already configured.

The admin client must connect to the deployment manager from which you are removing the node.

**Required security role for this task:** When security and role-based authorization are enabled, you must use a userid and password with administrator or operator authority to perform this task.

### About this task

This task uses the `wsadmin` command to remove a node from a deployment environment definition.

You might want to use the command line to remove a federated node from a deployment environment when you are making a large number of changes to a deployment environment. There is less overhead using the `wsadmin` command than there would be using the administrative console.

### Procedure

1. Open a command window.

The `wsadmin` command can be found at either the `<WPS>/profiles/<dmgr profile>/bin` directory, or the `<WPS>/bin` directory.

2. At the command prompt, enter the `wsadmin` command to enter the command environment.

**Note:** Make sure `wsadmin` connects to the correct deployment manager, when running in connected mode.

3. Use the `removeNodeFromDeploymentEnvDef` command to remove the node from the deployment environment definition.

**Note:** If administrative security is on, you will be prompted for a user ID and password, if you do not supply it in the command.

## Example

This example removes a node (**MyNode**) from a Messaging cluster (**Messaging**) for the deployment environment definition (**myDepEnv**) with administrative security enabled.

**Note:** If you are running the admin client from the deployment manager bin folder, you do not need to include the `-host` and `-port` parameters in the command.

```
wsadmin -connType SOAP -host myDmgr -port 8879 -user dmgrAdmin -password -dmgrPass  
> $AdminTask removeNodeFromDeploymentEnvDef -topologyName myDepEnv  
-topologyRole Messaging -nodeName MyNode
```

The `-connType` parameter specifies the type of connection to be used; the default argument is SOAP.

**Note:** As the default is SOAP, you do not need to give explicitly if SOAP is the connection type that is being used.

The `-host` parameter specifies the host used for the SOAP or RMI connection. The default value for `-host` is the local host.

**Note:** If the node is running on the local host, you do not need to specify `-host`

**Note:** If you do not specify a value for `topologyRole`, the node is removed from every role (cluster) in the environment definition.

**Note:** If you disable administrative security, you do not need to provide a user ID and password.

To save this change to the master configuration issue the command: `$AdminConfig Save`

### Related information

 [Commands and scripts](#)

 [removeNodeFromDeploymentEnvDef command](#)

## Renaming nodes in a deployment environment definition using the command line

You can rename nodes in a deployment environment definition using the `wsadmin` command.

### Before you begin

The admin client has to connect to the deployment manager from which you are renaming nodes in the deployment environment definition.

**Required security role for this task:** When security and role-based authorization are enabled, you must use a `userid` and `password` with administrator or operator authority to perform this task.

## About this task

This task renames a node in deployment environment definition and uses the `wsadmin` command.

This command will fail if the deployment environment (topology) is already configured.

You would typically perform this task after importing a deployment environment definition. There is less overhead using the `wsadmin` command than there would be using the administrative console.

### Procedure

1. Open a command window.  
The `wsadmin` command can be found at either the `<WPS>/profiles/<dmgr profile>/bin` directory, or the `<WPS>/bin` directory.
2. At the command prompt, enter the `wsadmin` command to enter the command environment.

**Note:** Make sure `wsadmin` connects to the correct deployment manager, when running in connected mode.

3. Use the `renameNodeInDeploymentEnvDef` command to rename a node in the deployment environment definition.

**Note:** If administrative security is on, you will be prompted for a user ID and password, if you do not supply it in the command.

### Example

This example renames a node (**TheOldNodeName**) to the (**TheNewNodeName**) for the deployment environment definition (**myDepEnv**) with administrative security enabled:

```
wsadmin -connType SOAP -host myDmgr -port 8879 -user dmgrAdmin -password -dmgrPass  
> $AdminTask renameNodeInDeploymentEnvDef -topologyName myDepEnv  
-oldName TheOldNodeName -newName TheNewNodeName
```

The `-connType` parameter specifies the type of connection to be used; the default argument is `SOAP`.

**Note:** As the default is `SOAP`, you do not need to give explicitly if `SOAP` is the connection type that is being used.

The `-host` parameter specifies the host used for the `SOAP` or `RMI` connection. The default value for `-host` is the local host.

**Note:** If the node is running on the local host, you do not need to specify `-host`

**Note:** If you disable administrative security, you do not need to provide a user ID and password.

To save this change to the master configuration issue the command: `$AdminConfig Save`.



### Related information

 [Commands and scripts](#)

 [renameNodeInDeploymentEnvDef command](#)

## Modifying deployment environment definition parameters

You can use the AdminConfig object to modify parameters in the deployment environment definition.

### Before you begin

AdminConfig communicates with the configuration service component to make configuration inquiries and changes. You can use it to query existing configuration objects, create configuration objects, modify existing objects, remove configuration objects, and obtain help.

The admin client has to connect to the deployment manager from which you are changing parameters for the deployment environment definition.

**Required security role for this task:** When security and role-based authorization are enabled, you must use a userid and password with administrator or operator authority to perform this task.

### About this task

When you create a deployment environment definition, the admin task selects default parameters based on the common database (CommonDB) selected when you created the Deployment Manager.

### Procedure

1. Use AdminConfig to modify any property in the deployment environment definition.

The following list provides a general method to update configuration objects:

- Identify the configuration type and the corresponding attributes.
- Query an existing configuration object to obtain a configuration ID to use.
- Modify the existing configuration object or create a new one.
- Save the configuration.

2. Save the configuration changes. To save this change to the master configuration issue the command: `$AdminConfig Save`

### Related information

 [Commands and scripts](#)

 [setDeploymentEnvParam command](#)

 [Using the AdminConfig object for scripted administration](#)

## Displaying deployment environment status using the command line

You can display the current status of a deployment environment using the wsadmin command.

## Before you begin

The admin client must connect to the deployment manager for which you are displaying the status.

**Required security role for this task:** When security and role-based authorization are enabled, you must use a userid and password with administrator or operator authority to perform this task.

## About this task

This task displays the current status of a deployment environment and uses the wsadmin command.

### Procedure

1. Open a command window. .  
The wsadmin command can be found at either the <WPS>/profiles/<dmgr profile>/bin directory, or the <WPS>/bin directory
2. At the command prompt, enter the wsadmin command to enter the command environment.

**Note:** Make sure wsadmin connects to the correct deployment manager, when running in connected mode.

3. Use the showDeploymentEnvStatus command to show the current status of the deployment environment.

**Note:** If administrative security is on, you will be prompted for a user ID and password, if you do not supply it in the command.

The following table lists the results that might be returned.

**Note:** Some of the states listed in the table are valid for configured topologies only. The states that are apply to configured topologies only are noted as such.

Table 139. States of a topology instance in order of least to most available

State	Description
Incomplete	The deployment environment is not missing any elements but is incomplete in some way.  Incomplete state may mean the deployment environment is missing a required role, node, comp or dependencies .  The warning message contains additional details.
Complete	This state is also known as <i>Not configured</i> and it means that the configuration is known and complete but has not yet been generated.
Configured	This means the configuration is in synch.
Partially configured	The deployment environment has been generated but deferred configuration has not been completed.
Unknown	The system cannot determine the current state of the deployment environment. A resync operation could be performed on this state.
Stopped	State applies to configured topologies only.All deployment targets in the topology are stopped.
Running	State applies to configured topologies only.The deployment environment is available and all functions are running.

Table 139. States of a topology instance in order of least to most available (continued)

State	Description
Partially started	State applies to configured topologies only.The deployment environment is available but at least one function is partially running.
Starting	State applies to configured topologies only.The deployment environment is starting.
Partially stopped	State applies to configured topologies only.The deployment environment is available but at least one function is stopped or partially stopped.
Stopping	State applies to configured topologies only.The deployment environment is stopping
Unavailable	State applies to configured topologies only.The deployment environment state is unavailable.

## Example

This example displays the status of a deployment environment (**MyDepEnv**) on the host (**myDmgr**) with administrative security enabled.

**Note:** If you are running the admin client from the deployment manager bin folder, you do not need to include the `-host` and `-port` parameters in the command.

```
wsadmin -connType SOAP -host myDmgr -port 8879 -user dmgradmin -password dmgrpass
> $AdminTask showDeploymentEnvStatus {-topologyName myDepEnv}
```

The `-connType` parameter specifies the type of connection to be used; the default argument is SOAP.

**Note:** As the default is SOAP, you do not need to give explicitly if SOAP is the connection type that is being used.

The `-host` parameter specifies the host used for the SOAP or RMI connection. The default value for `-host` is the local host.

**Note:** If the node is running on the local host, you don not need to specify `-host`

**Note:** If you disable administrative security, you do not need to provide a user ID and password.

### Related information



Commands and scripts



showDeploymentEnvStatus command

---

## Configuring SCA support for a server or cluster

Use the Service Component Architecture console page to enable a server or cluster in a network deployment environment to host service applications, their required messaging engines and destinations, or both.

### Before you begin

Before configuring SCA support, determine the following:

- Whether you are using a stand-alone server profile. If so, SCA support is already configured and you cannot use the Service Component Architecture page to remove that support; however, you can use this page to modify some properties for database data sources.
- Where to host the messaging engines and destinations (use either a local or remote bus member).
- Whether you need to configure the SCA system bus only, or whether you also need to configure the SCA application bus. The application bus is configured by default and is required if you plan to deploy SCA applications that use WebSphere Business Integration Adapters.

**Security role required for this task:** You must be logged in as administrator or configurator to perform the following task.

## About this task

Service applications require the use of one or more of the automatically created service integration buses, which must have configured messaging engines for destinations. By default, new servers and clusters in a network deployment configuration are not configured to host SCA applications and their destinations.

To configure SCA support on your server or cluster, perform the following steps.

### Procedure

1. From within the administrative console, click one of the following, depending on your scope:
  - **Servers** → **Application Servers** → *serverName* → **Service Component Architecture**
  - **Servers** → **Clusters** → *clusterName* → **Service Component Architecture**
2. Click **Support the Service Component Architecture components**.
3. In the Bus Member Location panel, specify where you want to host the destinations and messaging engines required by the SCA applications. There are two options:
  - **Local.** Specifies that you plan to host SCA applications, destinations, and messaging engines on the current server or cluster.
  - **Remote.** Specifies that you plan to host SCA applications on the current server or cluster while hosting destinations and messaging engines on a remote server or cluster (also referred to as a *deployment target*)
4. **(Remote bus member only)** If you selected **Remote** in the previous step, specify the remote server or cluster you want to use to host application destinations and messaging engines. Use the drop-down menu to select an existing deployment target (one that is already configured as a member of the SCA system bus), or click **New** to select a new server or cluster from the Browse Deployment Target page.
 

If you select a new server or cluster from the Browse Deployment Target page, the necessary messaging is automatically configured on that target when you complete the SCA configuration documented in this topic.
5. Use the table in the System Bus Member panel to verify or modify the system bus data source configuration.
  - a. Verify any default values in the **Database Instance**, **Schema**, **Create Tables**, **User name Password**, **Server**, and **Provider** fields. See the online help for detailed information about these fields and the values they accept.

- b. If no default values exist in these fields, or if the default values are incorrect, enter the appropriate values for the system bus data source. You can enter values directly in the field or by clicking **Edit** and making edits on the Data Source details page.
- c. Optional: Ensure that the data source can contact and authenticate with the database by clicking **Test Connection**.

**Restriction:** In a WebSphere Process Server for z/OS clustered environment, the data sources needed by the WebSphere Process Server cluster are defined for you using driver type 2 under a DB2 Universal JDBC Driver Provider, at the cluster scope. You cannot test connections for a DB2 Universal JDBC Driver Provider data source with driver type 2 at the cluster level. When you use the **Test Connection** button on a cluster scope data source, the test occurs in the node agent, and you cannot test Type 2 data sources under a DB2 UDB Provider in the node agent. Testing a Type 2 data source under a DB2 UDB Provider on the node agent will result in a `java.sql.SQLException`. The restriction on not being able to test type 2 JDBC data sources under the DB2 Universal JDBC provider at the cluster or node scopes also applies to for WebSphere Process Server for Multiplatforms, however, on WebSphere Process Server for Multiplatforms, you have a choice to not use DB2.

**Note:** On any platform (z/OS or Multiplatform), when you create a WebSphere Process Server stand-alone server profile instead of a network deployment cell, the data sources are defined at the server's scope, so the restriction on testing the connection does not apply.

- 6. Use the table in the Application Bus Member panel to verify or modify the application bus data source configuration.
  - a. Ensure the **Enable the WebSphere Business Integration Adapter components** option is selected.
 

**Note:** If you do not want to use the application bus, clear the **Enable the WebSphere Business Integration Adapter components** option and proceed to Step 7.
  - b. Verify any default values in the **Database Instance**, **Schema**, **Create Tables**, **User name Password**, **Server**, and **Provider** fields. See the online help for detailed information about these fields and the values they accept.
  - c. If no default values exist in these fields, or if the default values are incorrect, enter the appropriate values for the application bus data source. You can enter values directly in the field or by clicking **Edit** and making edits on the Data Source details page.
- 7. Click **OK** to complete the SCA configuration.
- 8. Save your changes. You can also optionally review the changes you have made.

## Considerations for Service Component Architecture support in servers and clusters

Servers and clusters can support Service Component Architecture (SCA) applications, application destinations, or both.

SCA applications (also called service applications) require the use of one or more of the automatically created service integration buses. Each application uses a set of messaging resources, which are called *destinations*. These destinations require configured messaging engines, and they can be hosted on the same server or

cluster as the application or on a remote server or cluster. Messaging engines typically use database data sources; note that a file store can be used in place of a database data source in a stand-alone server profile if that option was selected during profile creation.

By default, new servers and clusters in a network deployment or managed node environment are not configured to host SCA applications and their destinations.

**Note:** A stand-alone server has SCA support automatically configured. You cannot disable this configuration.

To enable this support, use the Service Component Architecture page in the administrative console. For servers, ensure that the application class-loader policy is set to `Multiple`.

Before enabling SCA support for a server or cluster in a network deployment or managed node environment, determine which of the following possible configurations you want to implement:




- **Remote bus member configuration:** The server or cluster hosts SCA applications, but the destinations are hosted on a remote server or cluster. This scenario requires the remote service integration bus members to be configured with the messaging engines needed to host the destination.

While the use of remote messaging requires initial investment in planning for and configuring the service integration bus and its members, that configuration can be reused by multiple members within the application cluster. Messages are distributed to every member. In addition, the initial configuration can be structured to provide failover support.

- **Local bus member configuration:** The server or cluster hosts both SCA applications and application destinations. The required messaging engines are configured using the local bus members on the server or cluster.

Refer to the planning topics to help you decide which configuration is appropriate for your environment.

#### Related information

-  [Configuring class loaders of a server](#)
-  [Learning about service integration buses](#)
-  [Messaging engines](#)

---

## Configuring REST service endpoints

You can configure service endpoints for Representational State Transfer (REST) application programming interfaces (APIs). If you want widgets to be available in Business Space, you must configure the REST service endpoints for those widgets.

### About this task

The deployment of the REST services is performed automatically in a stand-alone server profile. For other types of configurations, the System REST Service Endpoints administrative console page allows you to configure REST service endpoints. This process deploys the REST services to the cluster where they are configured. The REST services are then registered with Business Space so widgets can be bound to them.

### Procedure

1. Click one of the following.
  - For system REST services on a server: **Servers** → **Application servers** → *servername* → **Business Integration** → **System REST Service Endpoints**
  - For system REST services on a cluster: **Servers** → **Clusters** → *clustername* → **Business Integration** → **System REST Service Endpoints**
  - For business process REST services on a server: **Servers** → **Application servers** → *servername* → **Business Integration** → **Business Flow Manager** → **REST Service Endpoint**
  - For business process REST services on a cluster: **Servers** → **Clusters** → *clustername* → **Business Integration** → **Business Flow Manager** → **REST Service Endpoint**
  - For human task REST services on a server: **Servers** → **Application servers** → *servername* → **Business Integration** → **Human Task Manager** → **REST Service Endpoint**
  - For human task REST services on a cluster: **Servers** → **Clusters** → *clustername* → **Business Integration** → **Human Task Manager** → **REST Service Endpoint**
  - As part of the Deployment Environment Configuration wizard: **Servers** → **Deployment Environments** → **New** and complete each preceding configuration page.
2. Configure a full URL path for all REST services by selecting either **https://** or **http://** from the **Protocol** list and then typing the **Host Name or Virtual Host in a Load-Balanced Environment** and the **Port** that a client needs to communicate with the server or cluster.
3. In the table of REST services, if you want to modify the description of the REST service endpoint, type in the **Description** field. The other fields are read-only.
4. Click **OK**.

---

## Configuring Business Process Choreographer

For information on how to configure Business Process Choreographer containers for business processes and human tasks, go to the WebSphere Process Server for Multiplatforms, version 6.2, information center and review the topics under **Installing and configuring WebSphere Process Server > Configuring the software > Configuring Business Process Choreographer**. You can also find this information in the *Business Process Choreographer* PDF.

---

## Configuring Business Space

You can install and configure Business Space powered by WebSphere, a common interface for application users to create, manage and integrate Web interfaces across the IBM WebSphere Business Process Management portfolio.

### Before you begin

You must install the product software. When you install your product, Business Space files are included with the installation, and Business Space is configured with the profiles that you set up.

**Process Server / ESB** For WebSphere Process Server runtime environments that need the Managing Tasks and Workflows widgets, you must configure Business Process Choreographer. For more information, see "Configuring Business Process Choreographer" in the WebSphere Process Server documentation.

## About this task

Business Space is supported with the following database products to match support for the WebSphere product you are using:

- Derby Embedded (for WebSphere Process Server, WebSphere Enterprise Service Bus, and WebSphere Business Monitor).
- Derby Network Server (for WebSphere Process Server, WebSphere Enterprise Service Bus, and WebSphere Business Monitor).
- DB2 Universal (for WebSphere Process Server, WebSphere Enterprise Service Bus, WebSphere Business Monitor, and WebSphere Business Modeler Publishing Server).
- DB2 for i5/OS (for WebSphere Process Server and WebSphere Enterprise Service Bus).
- DB2 for z/OS (for WebSphere Process Server, WebSphere Enterprise Service Bus, WebSphere Business Monitor, and WebSphere Business Modeler Publishing Server).
- Oracle 9i, (for WebSphere Process Server and WebSphere Enterprise Service Bus).
- Oracle 10g, (for WebSphere Process Server, WebSphere Enterprise Service Bus, WebSphere Business Monitor, and WebSphere Business Modeler Publishing Server).
- Oracle 11g, (for WebSphere Process Server, WebSphere Enterprise Service Bus, WebSphere Business Monitor, and WebSphere Business Modeler Publishing Server).

**Process Server / ESB** **Monitor** If you install WebSphere Process Server, WebSphere Enterprise Service Bus, or WebSphere Business Monitor and create a stand-alone server profile with the typical option, Business Space is installed and configured automatically with a Derby Embedded database. If you are using a stand-alone server profile, you can use the Profile Management Tool with the advanced option to configure Business Space to work with your runtime environment. For more information, see "Configuring Business Space using the Profile Management Tool."

**Process Server / ESB** If you are using WebSphere Process Server and WebSphere Enterprise Service Bus, and you are setting up deployment manager and custom profiles, the simplest way to configure Business Space is with the Deployment Environment Configuration wizard. For more information, see "Configuring Business Space using the Deployment Environment Configuration wizard."

For all products, if you are using deployment manager and custom profiles, you can use pages on the administrative console to configure Business Space. For more information, see "Configuring Business Space using the administrative console."

After your original setup work on the Profile Management Tool or the administrative console, you must also configure the database tables for Business Space. For more information, see "Configuring Business Space database tables."

No matter what tool you used to configure Business Space, you must make sure Business Space works with the security for your environment. For more information, see "Setting up security for Business Space."

Other manual steps are required for some products and environments. For more information, see "Enabling Business Space widget REST service endpoints on the



administrative console," "Enabling Business Space widgets manually for remote endpoints," "Enabling Business Space widgets for multiple endpoints," and "Enabling HTML-Dojo forms for running human workflow widgets in Business Space."

## Configuring Business Space using the Profile Management Tool

For stand-alone server profiles, you can configure Business Space powered by WebSphere using the Profile Management Tool.

### About this task

You can use the Profile Management Tool as part of the installer program when installing your product, or you can start the Profile Management Tool later after product installation. In addition, you can use the Profile Management Tool capabilities from the command line by using the `manageprofiles` command parameter `-configureBSpace` after product installation. In all three of these situations, Business Space is installed with the same database product as the database product you designated for the Common database. For WebSphere Process Server, WebSphere Enterprise Service Bus, and WebSphere Business Monitor, if you selected a database that is not supported with Business Space, the Profile Management Tool configures Business Space with the Derby Embedded database.

**Process Server / ESB** The Profile Management Tool is not available with WebSphere Process Server for z/OS and WebSphere Enterprise Service Bus for z/OS. For those products, configure Business Space using the administrative console.

For deployment manager and custom profiles, you must use pages on the administrative console or the Deployment Environment Configuration wizard. See "Configuring Business Space using the administrative console" or "Configuring Business Space using the Deployment Environment Configuration wizard".

For more advanced configuration options on a stand-alone server profile, you must use pages on the administrative console to configure Business Space. For example, if you want to designate a data source that is different than the database you selected for your profile (the WebSphere Business Monitor database, the WebSphere Business Modeler Publishing Server database, or the WebSphere Process Server common database), you must use the administrative console to configure Business Space.

If you have decided to use these more advanced configuration options, which you will set later on the administrative console, make sure to complete the following steps:

- When you create the stand-alone server profile using the Profile Management Tool, use the advanced profile creation option and clear the **Configure Business Space** check box, so you can configure Business Space later using the administrative console.
- See "Configuring Business Space using the administrative console."

### Procedure

1. Start the installer or the Profile Management Tool and select the **Stand-alone server** installation option or the **Stand-alone server profile** option.

2. Do one of the following.
  - Select the **Typical Installation** option or the **Typical** profile creation option if you want to accept a default installation and configuration of Business Space using the Derby Embedded database.
  - Select the **Advanced** option if you want to configure advanced options. On the Business Space Configuration page, select the **Configure Business Space** check box.
3. Complete the profile creation using the Profile Management Tool. Business Space is installed.
4. If the database is remote, you must configure the database tables after running the Profile Management Tool. See "Configuring Business Space database tables."

## What to do next

Before using Business Space, set up security that you need to use with Business Space and the widgets your team is using. For more information, see "Setting up security for Business Space."

## Configuring Business Space using the administrative console

You can install and configure Business Space powered by WebSphere using the administrative console.

### Before you begin

You must install the product software. When you install your product, Business Space files are included with the installation, and Business Space is configured with the profiles that you set up.

**Process Server / ESB** For WebSphere Process Server runtime environments that need the Managing Tasks and Workflows widgets, you must configure Business Process Choreographer. For more information, see "Configuring Business Process Choreographer" in the WebSphere Process Server documentation.

### About this task

If you are using deployment environments or other advanced profile configuration, you must use the administrative console to configure Business Space to work with your runtime environment.

#### Procedure

1. Ensure that the administrative console is running.
2. In the navigation pane click **Servers** → **Application servers** or **Servers** → **Clusters**.
3. Select the name of your server or cluster target.
4. On the Configuration page, under **Business Integration**, click **Business Space Configuration**. The Business Space Configuration page appears. If Business Space has already been configured, you can view this page but cannot edit the fields.
5. Select the **Install Business Space service** check box.
6. In the **Database schema name** box, type the name of the database schema you want to use for Business Space.

7. If no data source is designated in the **Existing Business Space data source** field, go to **Create Business Space data source using:** and select a data source that connects to the database you want to use with Business Space.

Designating a data source under **Create Business Space data source using:** creates a new data source for Business Space with a JNDI name of `jdbc/bpm/BusinessSpace` that is modelled on the data source you selected.

**Note:** If you don't see an existing data source that you want to use, you must cancel the Business Space Configuration page, set up the database and the data source that you want to use, and then restart the Business Space Configuration page to complete the configuration.

After cancelling the Business Space Configuration page, complete the following steps:

- Create the database using the database product software.
  - Use the administrative console to configure the JDBC provider.
  - Use the administrative console to create a data source with the JNDI name of `jdbc/bpm/BusinessSpace` at the server or cluster scope, depending on what you selected in Step 2.
  - Go back to the Business Space Configuration page to select a data source.
8. Click **OK**.
  9. Save the configuration.

## Results

Configuring Business Space sets up a browser-based graphical user interface for the business users of your application that is running with the profile you set up. In Business Space, you and your application users can customize content from products in the WebSphere Business Process Management portfolio.

## What to do next

To enable Business Space for your runtime environment, you must perform the following steps after configuring Business Space using the administrative console Business Space Configuration page.

- Run a script to create tables in the database. For more information, see "Configuring Business Space database tables."
- Update the endpoints for widgets to appear in Business Space. For WebSphere Process Server and Enterprise Service Bus, use the REST Service Endpoints page in the administrative console. For more information, see "Enabling Business Space widget REST service endpoints on the administrative console." For other products, edit the endpoints file. For more information, see "Enabling Business Space widgets manually for remote endpoints."
- Set up security that you need to use with Business Space and the widgets your team is using. For more information, see "Setting up security for Business Space."

## Configuring Business Space as part of the Deployment Environment Configuration wizard

For WebSphere Process Server and WebSphere Enterprise Service Bus runtime environments, Business Space configuration and Representational State Transfer

(REST) service configuration for widgets in Business Space are automatically included in the Deployment Environment Configuration wizard. You can decide which REST services to configure.

## About this task

**Topic scope:** This topic applies to the following products:

- WebSphere Process Server
- WebSphere Enterprise Service Bus

If you are setting up deployment manager and custom profiles, this is the simplest way to configure Business Space.

## Procedure

1. Click **Servers** → **Deployment Environments** → **New**. A series of pages in a wizard guides you through the process of creating your deployment environment.
2. Either define the new deployment environment or import a file that contains deployment environment definitions. You can create a deployment environment based on one of the IBM-supplied patterns or you can create a custom deployment environment.
3. On the Deployment Environment Patterns page, select one of the deployment environment patterns.
4. On the Select Nodes page, designate the nodes to participate in your deployment environment.
5. On the Clusters page, specify the number of cluster members from each node to assign to specific deployment environment functions.
6. On the Database page, configure the data source for Business Space, one of the components listed in the table. You can edit the description, test the connection, and set the database product you want to use for the Provider. You cannot select the **Create tables** check box on this page for Business Space. Database tables must be configured manually for Business Space. The database product list contains all databases supported by each component.
7. On the Security page, configure the authentication aliases WebSphere uses when accessing secure components. The authentication alias user name and password can be changed on this page. These aliases are used to access secure components but do not provide access to data sources.
8. For WebSphere Process Server configuration, supply information required to configure the application deployment target to support the deployment of the Business Process Choreographer components. Specify the context roots, security and human task manager mail session values the wizard uses to configure Business Process Choreographer for this deployment environment.
9. For WebSphere Process Server configuration, configure the business rules manager that will run on the cluster or server.
10. On the System REST Service Endpoints help file page, configure the endpoints for the widgets you want available on Business Space for your runtime environment.
  - Type the port number and the host or virtual host that a client needs to communicate with the server or cluster.

- If you leave the host and port fields empty, the values default to those of an individual cluster member host and its HTTP port. For a load-balanced environment, you must later change the default values to the virtual host name and port of your environment.
  - Set the description for the widgets if needed.
11. On the next page, click **Finish** or **Finish and Generate Environment**.
  12. Run the scripts to configure the database tables for Business Space before starting the deployment environment or the clusters. For more information, see "Configuring Business Space database tables."

## What to do next

Before using Business Space, set up security that you need to use with Business Space and the widgets your team is using. For more information, see "Setting up security for Business Space."

## Configuring Business Space database tables

You can manually install database tables for Business Space powered by WebSphere on a remote database server with scripts that are generated by the installation program. If you are using a deployment environment, or your database is remote, you must install these tables after configuring Business Space.

### Before you begin





Before you complete this task, you must have completed the following tasks:

- Installed the product.
- Configured a profile, and configured Business Space on that profile.
- Stopped the server.

If you are using DB2 for z/OS and the required resources have not already been set up as part of the core product installation, complete the following additional items before you begin this task:

- Create a TEMP database and a TEMP table space to contain the declared temporary tables for processing scrollable cursors.
- Create a dedicated STOGROUP to contain the Business Space data.

### Procedure

1. Log on to the database server as a user with read and write access on the database. For i5/OS, log on with the user ID that is in the authentication alias.
2.     Connect to the database.
3. Locate the script in the profile you most recently configured, and save it to a location on the same system with the database.

By default, the scripts are located in the following directory:

*profile\_root/dbscripts/BusinessSpace/database\_product\_name/database\_name*. The scripts are located in the profile for the server or cluster that you most recently configured. If you used the Deployment Environment Configuration wizard, the scripts are located in the deployment manager profile. When configuring a remote database, copy the scripts from the system where your product is installed to a place on the remote system.

4. **Process Server / ESB** For WebSphere Process Server for z/OS and WebSphere Enterprise Service Bus for z/OS: If you are configuring DB2 for z/OS, you can use the createDB.sh script to configure the Business Space database tables with all other database objects in one database. For more information, see "Creating DB2 database objects using the createDB.sh script" in the WebSphere Process Server for z/OS documentation. Alternatively, you can run the createTable\_BusinessSpace.sql script using a DB2 for z/OS utility such as SPUFI or DSNTEP2. For more information, see "Creating the DB2 database and storage groups using DButility.sh, SPUFI, or DSNTEP2" in the WebSphere Process Server for z/OS and the WebSphere Enterprise Service Bus for z/OS documentation.
5. **i5/OS** **Linux** **UNIX** **Windows** Run one of the following commands in the command line interface for your database software. For i5/OS, run the command from Qshell. Business Space is supported on the DB2, Derby, and Oracle databases listed below to be compatible with the databases you use with your product.
  - **DB2** : db2 -tf createTable\_BusinessSpace.sql
  - **DB2 for i5/OS**: db2 -tvf createTable\_BusinessSpace.sql
  - **DB2 for z/OS**: db2 -tf createTable\_BusinessSpace.sql
  - **Derby**: java -Dij.protocol=jdbc:derby: org.apache.derby.tools.ij createTable\_BusinessSpace.sql
  - **Oracle**: sqlplus user/password@database\_name @createTable\_BusinessSpace.sql
 where:
  - user* is a user with DBA access
  - database\_name* is the Oracle ID, for example, orcl
6. **i5/OS** **Linux** **UNIX** **Windows** For DB2 and DB2 for z/OS, bind the command line interface to the Business Space database using the following commands:
 

```
db2 connect to database_name
db2 bind DB2_installation_directory\bnd\db2cli.lst blocking all
grant public
db2 connect reset
```

 where:
  - database\_name* is the name of the Business Space database
  - DB2\_installation\_directory* is the directory where DB2 is installed
7. Start the server.

### What to do next

- Update the endpoints for widgets that you want to be available in Business Space.
- Set up security for Business Space and the widgets that your team is using.

## Configuring Business Space using the command line

You can set up and configure Business Space powered by WebSphere using the wsadmin command. You can use the wsadmin command to perform the same configuration of Business Space and the that you perform in the administrative console.

## Before you begin

You must install the product software. When you install your product, Business Space files are included with the installation, and Business Space is configured with the profiles that you set up.

**Process Server / ESB** For WebSphere Process Server runtime environments that need the Managing Tasks and Workflows widgets, you must configure Business Process Choreographer. For more information, see "Configuring Business Process Choreographer" in the WebSphere Process Server documentation.

## About this task

You can use the command line to configure Business Space if you want to write scripts instead of using the administrative console to configure Business Space.

If you are not sure whether Business Space is already configured, you can run the `getBusinessSpaceDeployStatus` command to check whether Business Space is configured on a server, node, cluster, or cell. For more information about that command, see "getBusinessSpaceDeployStatus command."

## Procedure

1. Open a command window.  
The `wsadmin` command can be found at either the `profiles/deployment manager/bin` directory, or the `/bin` directory.
2. At the command prompt, type the `wsadmin` command to start the `wsadmin` environment.
3. Use the `installBusinessSpace` command to install the Business Space enterprise archive (EAR) files in your runtime environment.
4. Use the `configureBusinessSpace` command to configure the data source for Business Space and run the scripts that configure the database tables. For more information about the scripts, see "Configuring Business Space database tables."

## Results

Configuring Business Space sets up a browser-based graphical user interface for the business users of your application that is running with the profile you set up. In Business Space, you and your application users can customize content from products in the WebSphere Business Process Management portfolio.

## Example

The following example installs the EAR files and configures the data source for Business Space on a cluster. It designates the schema and the product database to use with Business Space when multiple products are installed. In a situation where both WebSphere Process Server and WebSphere Monitor are installed, this example designates the WebSphere Process Server data source as the data source to use with Business Space.

```
wsadmin>$AdminTask installBusinessSpace {-clusterName myCluster}
wsadmin>$AdminTask configureBusinessSpace {-clusterName myCluster
-schemaName myCluster -productTypeForDatasource WPS}
```

## What to do next

To enable Business Space for your runtime environment, you must perform the following steps after configuring Business Space from the command line.

- Update the endpoints for widgets to appear in Business Space. For WebSphere Process Server and Enterprise Service Bus, use the REST Service Endpoints page in the administrative console. For more information, see "Enabling Business Space widget REST service endpoints on the administrative console." For other products, edit the endpoints file. For more information, see "Enabling Business Space widgets manually for remote endpoints."
- Set up security that you need to use with Business Space and the widgets your team is using. For more information, see "Setting up security for Business Space."

## installBusinessSpace command

Use the `installBusinessSpace` command to set up Business Space powered by WebSphere on your runtime environment.

### Before you begin

The `installBusinessSpace` command is run using the `AdminTask` object of the `wsadmin` scripting client.

Use the following command to list all the Business Space administrative commands.

```
wsadmin>$AdminTask help BusinessSpaceCommands
```

Use the following command to get detailed help on a particular command.

```
wsadmin>$AdminTask help command_name
```

### Syntax

```
$AdminTask installBusinessSpace {-paramName paramValue ...}
```

### Purpose

The `installBusinessSpace` command installs the Business Space enterprise archive (EAR) files in your runtime environment.

#### Command name

```
installBusinessSpace
```

**Target** None.

**Result** Installs the Business Space EAR files in your runtime environment.

### Parameters

**-serverName** *server\_name*

A parameter that specifies the server name for the configuration. For configuring Business Space on a server, you must specify both a **serverName** and a **nodeName**.

**-nodeName** *node\_name*

A parameter that specifies the node name for the configuration. Either a **serverName**, **nodeName**, or **clusterName** is required. For configuring Business Space on a server, you must specify both a **serverName** and a **nodeName**.



**-clusterName** *cluster\_name*

A parameter that specifies the cluster name for the configuration. For configuring Business Space on a cluster, you must specify a **clusterName**.

## Examples

The following example uses `installBusinessSpace` to install Business Space EAR files on a server.

```
wsadmin>$AdminTask installBusinessSpace {-nodeName myNode -serverName myServer}
```

The following example uses `installBusinessSpace` to install Business Space EAR files on a cluster.

```
wsadmin>$AdminTask installBusinessSpace {-clusterName myCluster}
```

## configureBusinessSpace command

Use the `configureBusinessSpace` command to configure the database for Business Space powered by WebSphere.

## Before you begin

The `configureBusinessSpace` command is run using the `AdminTask` object of the `wsadmin` scripting client.

Use the following command to list all the Business Space administrative commands.

```
wsadmin>$AdminTask help BusinessSpaceCommands
```

Use the following command to get detailed help on a particular command.

```
wsadmin>$AdminTask help command_name
```

## Syntax

```
$AdminTask configureBusinessSpace {-paramName paramValue ...}
```

## Purpose

This command configures the data source for Business Space and runs the scripts that configure the database tables.

### Command name

`configureBusinessSpace`

**Target** None.

**Result** Configures the data source for Business Space and runs the scripts that configure the database tables.

## Parameters

**-serverName** *server\_name*

A parameter that specifies the server name for the configuration. For configuring Business Space on a server, you must specify both a **serverName** and a **nodeName**.

**-nodeName** *node\_name*

A parameter that specifies the node name for the configuration. For configuring Business Space on a server, you must specify both a **serverName** and a **nodeName**.

**-clusterName** *cluster\_name*

A parameter that specifies the cluster name for the configuration. For configuring Business Space on a cluster, you must specify a **clusterName**.

**-dbName** *database\_name*

An optional parameter that specifies the database you are using for Business Space. The default value is BSPACE or the product database name, if Business Space is configured on WebSphere Process Server, WebSphere Enterprise Service Bus, WebSphere Business Monitor, or WebSphere Business Modeler Publishing Server.

**-schemaName** *schema\_name*

An optional parameter that specifies the database schema for the Business Space database configuration. The default value is IBMBUSSP.

**-tableSpaceName** *table\_space\_name*

An optional parameter that specifies the table space for the Business Space database configuration. The default value is IBMBMPBS.

**-storageGroup** *storage\_group*

An optional parameter that specifies the storage group on z/OS for Business Space. If you are using z/OS, you must update the database scripts that are generated before running them. For more information about the scripts, see "Configuring Business Space database tables."

**-productTypeForDatasource** *product\_database*

An optional parameter that specifies the data source to use with Business Space if you have multiple products installed, such as WebSphere Process Server, WebSphere Enterprise Service Bus, WebSphere Business Monitor, and WebSphere Business Modeler Publishing Server. Valid values are WPS (to designate WebSphere Process Server or WebSphere Enterprise Service Bus), WPBS (to designate WebSphere Business Modeler Publishing Server), and WBM (to designate WebSphere Business Monitor).

## Examples

The following example uses `configureBusinessSpace` to configure a Business Space data source on a server.

```
wsadmin>$AdminTask configureBusinessSpace {-nodeName myNode -serverName myServer}
```

The following example uses `configureBusinessSpace` to configure a Business Space data source on a cluster.

```
wsadmin>$AdminTask configureBusinessSpace {-clusterName myCluster}
```

The following example uses `configureBusinessSpace` to configure a Business Space data source on a cluster, with a schema name and a product data source designated.

```
wsadmin>$AdminTask configureBusinessSpace {-clusterName  
myCluster -schemaName myCluster -productTypeForDatasource WPS}
```

## getBusinessSpaceDeployStatus command

Use the `getBusinessSpaceDeployStatus` command to check whether Business Space powered by WebSphere is configured on a particular deployment target.

## Before you begin

The `getBusinessSpaceDeployStatus` command is run using the `AdminTask` object of the `wsadmin` scripting client.

Use the following command to list all the Business Space administrative commands.

```
wsadmin>$AdminTask help BusinessSpaceCommands
```

Use the following command to get detailed help on a particular command.

```
wsadmin>$AdminTask help command_name
```

## Syntax

```
$AdminTask getBusinessSpaceDeployStatus {-paramName paramValue ...}
```

## Purpose

This command checks whether Business Space is configured on a server, node, or cluster that you specify. If you don't set any parameters, it checks if Business Space is configured in the cell.

### Command name

getBusinessSpaceDeployStatus

**Target** None.

**Result** Lists whether is Business Space configured on a particular deployment target.

## Parameters

**-serverName** *server\_name*

A parameter that specifies the server name to check for Business Space.

**-nodeName** *node\_name*

A parameter that specifies the node name to check for Business Space.

**-clusterName** *cluster\_name*

A parameter that specifies the cluster name to check for Business Space.

## Examples

The following example uses getBusinessSpaceDeployStatus to check whether Business Space is configured on a server.

```
wsadmin>$AdminTask getBusinessSpaceDeployStatus {-nodeName myNode -serverName myServer}
```

The following example uses getBusinessSpaceDeployStatus to check whether Business Space is configured on a cluster.

```
wsadmin>$AdminTask getBusinessSpaceDeployStatus {-clusterName myCluster}
```

The following example uses getBusinessSpaceDeployStatus to check whether Business Space is configured in a cell.

```
wsadmin>$AdminTask getBusinessSpaceDeployStatus
```

## Enabling Business Space widget REST service endpoints on the administrative console

All widgets required for your product are installed with Business Space powered by WebSphere. The Representational State Transfer (REST) service endpoints for widgets must be deployed and registered with Business Space before your team can use the widgets in Business Space.

## Before you begin

**Topic scope:** This topic applies to the following products:

- WebSphere Process Server
- WebSphere Enterprise Service Bus

Before you complete this task, you must have completed the following tasks:

- Installed the product.
- Configured a profile, and configured Business Space on that profile.
- Configured the database tables (if you are using a remote database or deployment environment).

## About this task

The deployment of the REST services is performed automatically in a stand-alone server profile. For other types of configurations, the System REST Service Endpoints administrative console page allows you to configure service endpoints for REST application programming interfaces (APIs) for all of your product's widgets in Business Space. These REST endpoints are automatically registered with Business Space. Then Business Space automatically associates widgets with these endpoints, and the widgets appear in the palette for use.

If you want to configure multiple instances of the same REST service endpoint, you must manually edit the endpoints file and the widgets metadata file. For more information, see "Enabling Business Space widgets for multiple endpoints."

## Procedure

1. Click one of the following.
  - For system REST services on a server: **Servers** → **Application servers** → *servername* → **Business Integration** → **System REST Service Endpoints**
  - For system REST services on a cluster: **Servers** → **Clusters** → *clustername* → **Business Integration** → **System REST Service Endpoints**
  - For business process REST services on a server: **Servers** → **Application servers** → *servername* → **Business Integration** → **Business Flow Manager** → **REST Service Endpoint**
  - For business process REST services on a cluster: **Servers** → **Clusters** → *clustername* → **Business Integration** → **Business Flow Manager** → **REST Service Endpoint**
  - For human task REST services on a server: **Servers** → **Application servers** → *servername* → **Business Integration** → **Human Task Manager** → **REST Service Endpoint**
  - For human task REST services on a cluster: **Servers** → **Clusters** → *clustername* → **Business Integration** → **Human Task Manager** → **REST Service Endpoint**

The System REST Service Endpoints page appears, displaying all default REST service endpoints that you can configure for Business Space widgets for use with your product or component (Business Flow Manager or Human Task Manager). If a REST service endpoint has already been configured, you see a message displayed.

2. Select a **Protocol** from the list for all REST services that you want to configure so they are available in Business Space. Configure a full URL path by selecting either **https://** or **http://** and then type the **Host Name or Virtual Host in a Load-Balanced Environment** and **Port**. If you are using a server that is secured

with administrative and application security, make sure to select **https://** so Business Space widgets can reach the endpoints and will work properly. If you plan to deploy a secured environment, make sure to enable both the administrative and the application security for the widgets to work correctly. For more information about application security, see "Setting up security for Business Space."

3. In the table of REST services, type a meaningful description for each of the REST services in the **Description** field.
4. Click **OK** to commit the changes to the endpoints files.

### What to do next

- For other service endpoints for widgets included with WebSphere Business Monitor and WebSphere Modeler Publishing Server, you must enable widgets manually in the endpoints files.
- For multiple instances of service endpoints, for example if you have partitioning of work on two clusters, and you want to have widgets showing data from each cluster, you must enable the additional widgets manually for each additional cluster.
- Set up security for Business Space.

## Enabling Business Space widgets manually for remote endpoints

All widgets required for your product are installed with Business Space, but you must register the endpoints needed by the widgets before your team can use them in Business Space. You can register the endpoints for some widgets on the System REST Service Endpoints administrative console page. However, endpoints for WebSphere Business Modeler Publishing Server widgets, WebSphere Business Monitor widgets, and WebSphere Business Services Fabric widgets must be registered manually in the endpoints files.

### Before you begin

**Topic scope:** This topic applies to the following products:

- WebSphere Business Modeler Publishing Server
- WebSphere Business Monitor
- WebSphere Business Services Fabric

Before you complete this task, you must have completed the following tasks:

- Installed the product.
- Configured a profile, and configured Business Space on that profile.
- Configured the database tables (if you are using a remote database or deployment environment).
- For WebSphere Business Modeler Publishing Server, you must first update the Endpoints table in the WebSphere Business Modeler Publishing Server database. Set the `Server_Name` column to the Business Space Internet Protocol and the `Port` column to the Business Space port.

### About this task

You register endpoints for two main reasons: configuring endpoint locations, and making endpoints available to Business Space.

By default, endpoint registration files are configured as relative locations. Relative locations identify a path within a web module that is assumed to be installed where Business Space is installed. The web module is identified by its context root, and is installed by your product. You must configure endpoint locations for the following situations:

- The product, with its widget web module, is installed to a different location than where Business Space is installed. You must change the relative location to an absolute location by adding a protocol, host, and port that identifies the location of the product and its web module.
- An administrator changes the context root of the web module (for example, to avoid a collision with another web module using the same context root). You must change the context root in the endpoint to the new name.
- The Business Space server sits on a clustered environment for high availability, is behind a firewall, or is on Web server with URL rewriting. You must change the endpoint location to the URL that identifies your public access point.

Endpoints are registered during product installation when installing Business Space on a stand-alone server profile. However, if you install Business Space on a separate server, in a highly available environment, or in a deployment environment, you must add the endpoint registration files to the server where Business Space is installed to register the service endpoints for the widget. For widgets that are not included in the System REST Service Endpoints administrative console page to register the endpoints, you must first configure them manually by modifying the endpoint registration files.

Endpoint registration files are bundled with each product and are added during the installation of the product. The following products have widgets with endpoints that must be registered manually by editing the endpoint registration files. You edit one or more of the following files, based on the products you have installed, and the widgets you are using with Business Space:

- WebSphere Business Modeler Publishing Server: `pubserverEndpoints.xml`
- WebSphere Business Monitor: `monitorEndpoints.xml`
- WebSphere Business Monitor with Alphabloc: `monitorABXEndpoints.xml` and `monitorEndpoints.xml`
- WebSphere Business Services Fabric: `fabricEndpoints.xml`

If you also have WebSphere Process Server or WebSphere Enterprise Service Bus installed, and you want to use WebSphere Process Server or WebSphere Enterprise Service Bus widgets in the same Business Space with the other product widgets, check to see where WebSphere Process Server or WebSphere Enterprise Service Bus is installed. If it is installed on a different cell than Business Space, you must edit those specific REST service endpoints files in addition to the endpoints files for your other products. (Otherwise, WebSphere Process Server and WebSphere Enterprise Service Bus endpoints are configured on the System REST Service Endpoints administrative console page.) Edit the following endpoints files manually if WebSphere Process Server or WebSphere Enterprise Service Bus is installed on a different cell than Business Space:

- `wpsEndpoints.xml` (for WebSphere Process Server and WebSphere Enterprise Service Bus widgets)
- `bpcEndpoints.xml` (for business processes and human tasks)
- `wsumEndpoint.xml` (for user membership)
- `hmEndpoints.xml` (for the Health Monitor widget)

- bcmEndpoints.xml (for the WebSphere Process Server Business Calendar Manager widget)
- smEndpoints.xml (for the WebSphere Process Server Security Manager widget)

If you are an administrator, you can register endpoints and enable widgets by performing the following steps.

### Procedure

1. Locate the endpoint registration files in the *install\_root*/BusinessSpace/registryData directory. The file names all end with Endpoints.xml or Endpoint.xml.
2. For each endpoint file that you are configuring, make a backup copy.
3. Configure the endpoints as needed by editing the endpoint registration files. Each endpoint in the endpoint file is designated by a `<tns:Endpoint>` block. Identify the block that you want to change.

**Tip:** If you don't intend to activate some endpoints, you can remove them from the file to prevent confusion.

The location identified by an endpoint is specified in `<tns:url>`. This value is a path in a web module, specified as a full or relative HTTP URL. By default, the URL is relative. Change this to a full URL path, for example, `https://virtualhost.com:virtualport/rest/bpm/htm` or `http://host1:9445/WBPublishingDRAFT/`, where the protocol, host, and port identify how the product web module can be accessed.

**Note:** The secure protocol `https:` is set by default. If you plan to deploy a secured environment, make sure to enable both the administrative and the application security so that the widgets work correctly. For more information about application security, see "Setting up security for Business Space."

To locate the port number for the server, perform the following steps:

- Log in to the administrative console.
- Click **Servers** → **Application Servers**.
- Click the server for which you want to find the port number, and then expand the Ports section.

All applications use the same port as shown in either the `wc_defaulthost` (unsecure host) parameter or the `wc_defaulthost_secure` (secure host) parameter.

**Note:** If you are using an HTTP server to access your web modules for load balancing, use the host name and port settings of the HTTP server.

4. Create the following directory (if it does not already exist): *profile\_root*/BusinessSpace/registryData/ (where *profile\_root* is typically *install\_root*/profiles/*profile\_name* or *install\_root*/pf/*profile\_name*) and copy the endpoint registration file to that directory.
5. Copy the endpoint registration file to the same directory on every node in the cluster where Business Space is deployed.

### Example

The following example endpoint file is for WebSphere Business Monitor.

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- START NON-TRANSLATABLE -->
```

```

<tns:BusinessSpaceRegistry
xmlns:tns="http://com.ibm.bspace/BusinessSpaceRegistry"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://com.ibm.bspace/BusinessSpaceRegistry
BusinessSpaceRegistry.xsd ">

  <tns:Endpoint>
    <tns:id>{com.ibm.wbimonitor}monitorServiceRootId</tns:id>

    <tns:type>{com.ibm.wbimonitor}monitorServiceRootId</tns:type>
    <tns:version>1.0.0.0</tns:version>
    <tns:url>rest/</tns:url>

    <tns:name>Location of backing services for Monitor widgets
  </tns:name>
  <tns:description>Location of backing services for Monitor widgets
  </tns:description>

  </tns:Endpoint>

</tns:BusinessSpaceRegistry>
<!-- END NON-TRANSLATABLE -->

```

Consider the following when modifying the endpoints:

- **<tns:id>**: The ID can be any string but must be unique for all registered endpoints. Ensure that this ID is unique when you are adding additional endpoints. The ID, type, and version should not be changed because registered widgets reference those values.
- **<tns:url>**: If the URL is relative, then it is assumed that the REST service endpoint is co-located with the Business Space server. Update this field with an absolute URL if your endpoint is on a remote system. Ensure that you have https as the transfer protocol if your REST endpoint is secured.
- **<tns:name>**: Type a meaningful name to your endpoint that helps identify your endpoint.
- **<tns:description>**: Type a meaningful description that further details the nature of the data set that this endpoint is working on.

Similarly you can also change registered widgets. You can remove a widget that you don't want users to be able to access.

For example, to remove the Google Gadgets widget, create a widget registration file that contains the action of deleting the widget, called `deleteGoogleGadgetsWidget.xml`:

```

<?xml version="1.0" encoding="UTF-8"?>
<tns:BusinessSpaceRegistry xmlns:tns="http://com.ibm.bspace/
BusinessSpaceRegistry"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://com.ibm.bspace/BusinessSpaceRegistry
BusinessSpaceRegistry.xsd ">
  <tns:Widget action="delete">
    <tns:id>{com.ibm.bspace}googlegadget</tns:id>

```



```
<tns:version>1.0.0.0</tns:version>
</tns:Widget>
</tns:BusinessSpaceRegistry>
```

This file is based on `googleWidgets.xml` file that is in the `install_root/BusinessSpace/registryData` directory. Note that only a minimum of information was copied from `googleWidgets.xml` to the new file, for example, the minimum lines from the widget entry needed to identify the Google Gadget widget (its identifier and version). Because no changes are being made to the widget categories or other widget defined in `googleWidgets.xml`, those entries are not needed in the new file. Note that the `<tns:Widget>` element has an added `action` attribute for deleting this widget from Business Space. This `action` attribute can also be added to `<tns:Category>` to delete a widget category identified by ID, or to `<tns:Endpoint>` to delete an endpoint identified by ID and version.

After creating `deleteGoogleGadgetsWidget.xml`, copy it to `profile_root/BusinessSpace/registryData/` (where `profile_root` is typically `install_root/profiles/profile_name` or `install_root/pf/profile_name`). Create the directory if it does not already exist.

### What to do next

- For multiple instances of service endpoints, for example if you have partitioning of work on two clusters, and you want to have widgets showing data from each cluster, you must enable the additional widgets manually for each additional cluster.
- Set up security for Business Space.

## Enabling Business Space widgets for multiple endpoints

For multiple instances of service endpoints, for example if you have partitioning of work on two clusters, and you want to have widgets showing data from each cluster, you must enable the additional widgets manually for each additional cluster. You must edit two files: the endpoints file, which registers endpoints with Business Space, and the widget metadata file, which contains definitions of widgets.

### Before you begin

**Topic scope:** This topic applies to the following products:

- WebSphere Business Modeler Publishing Server
- WebSphere Business Monitor
- WebSphere Process Server
- WebSphere Business Services Fabric

Before you complete this task, you must have completed the following tasks:

- Installed the product.
- Configured a profile, and configured Business Space on that profile.
- Configured the database tables (if you are using a remote database or deployment environment).
- Configured all endpoints for your widgets.

## About this task

In a deployment environment, you can have partitioning of work. For example, you can have two clusters, one that processes accounting data and one that processes insurance data. However, a service endpoint serves only one cluster. To access both partitions of work from Business Space, you must register two separate widgets, one for each partition of work, so you can access them both from Business Space. For example, you could have an Account Human Task List widget and an Insurance Task List widget in the catalog (both with the same actual human task list code).

If you want to configure multiple instances of the same REST service endpoint, you must manually edit the endpoints file and the widgets metadata file.

Service endpoint registration files are bundled with each product and are added during the installation of the product. The following products have widgets that require manual configuration. You must edit one or more of the following endpoint files, based on the products you have installed, and the widgets you are using with Business Space:

- WebSphere Business Modeler Publishing Server: `pubserverEndpoints.xml`
- WebSphere Business Monitor: `monitorEndpoints.xml`
- WebSphere Business Monitor with Alphablox: `monitorABXEndpoints.xml`
- WebSphere Process Server, if enabling multiple instances of Managing Tasks and Workflows widgets: `bpcEndpoints.xml`
- WebSphere Business Services Fabric: `fabricEndpoints.xml`

Widget metadata files contain the definition of widgets for your product. You must edit one or more of the following widget files, based on the products you have installed, and the widgets you are using with Business Space:

- WebSphere Business Modeler Publishing Server: `pubserverWidgets.xml`
- WebSphere Business Monitor: `monitorWidgets.xml`
- WebSphere Process Server: `wpsWidgets.xml`
- WebSphere Business Services Fabric: `fabricWidgets.xml`

Both the endpoint registration files and the widget metadata files are located in the `registryData` directory for Business Space in the directory you created for your profile.

The directory `install_root/BusinessSpace/registryData/` contains endpoint and widget definition template files for your product. You can copy the definition files that you need to use as a template and add your changes. The files in your profile directory, `profile_root/profiles/profile_name/BusinessSpace/registryData/`, on all the nodes for the cluster where the Business Space server is running, contain the endpoint and widget metadata definitions that are currently registered with the Business Space server.

If you are creating an additional instance of a widget, complete the following steps.

### Procedure

1. Modify the endpoints file to add additional endpoints.
  - Locate the endpoints file or the endpoints template file to add new endpoints. If you are working with the template file, copy the endpoints

template file. Remove all the endpoints that you do not intend to change, and add your additional endpoints in the new file.

- Edit the endpoints file and add an additional endpoint starting with `<tns:Endpoint>`, with a unique ID (`<tns:id>`) and the URL for the new endpoint (`<tns:url>`), but with the same version, and optionally all the locales as the original endpoint. You can change the name and description, for example, "Insurance Task List".
  - Save your changes.
2. Modify the widget metadata file.
    - Locate the widget metadata file or the widget template metadata file to add new widget definitions. If you are working with the template file, copy the widget metadata file. Remove all widget definitions that you do not intend to change, and add your additional widgets in the new file.
    - The new widget metadata should have its own unique id (`<tns:id>`). You can keep all the other definitions, and optionally, the local sections if you need them. Change the name, description, and tooltip to make the new widget available as a distinct widget in Business Space that outlines the nature of the new endpoint. For example, you could name your widget "My team's insurance task list" in `<tns:name>`.
    - Make sure that the endpoint reference (`<tns:refId>`) matches with the endpoint ID (`<tns:id>`) in the endpoints file.
    - Save your changes.
  3. Create following directory: `profile_root/profiles/profile_name/BusinessSpace/registryData/`, and copy both the endpoints file and the widgets file to that directory.
  4. Place the endpoint file and widgets file in the same directory on every node in the cluster where Business Space is deployed. For easier administration, use the same node, if possible. However, the files can be placed on multiple nodes.

## Example

The following endpoint can be copied and modified in `bpcEndpoints.xml`:

```
<tns:Endpoint>
  <tns:id>{com.ibm.bpm}HTM</tns:id>

  <tns:version>6.2.0.0</tns:version>

  <tns:url>rest/bpm/htm</tns:url>

  <tns:name>Location of backing services for HTM widgets</tns:name>
  <tns:description>Location of backing services for HTM widgets
  </tns:description>

</tns:Endpoint>
```

Consider the following information when modifying the endpoints:

- `<tns:id>`: The ID can be any string but must be unique for all registered endpoints. Ensure that this ID is unique when you are adding additional endpoints.
- `<tns:url>`: If the URL is relative, then it is assumed that the REST service endpoint is co-located with the Business Space server. Update this field with an absolute URL if your endpoint is on a remote system. Ensure also that you have https as transfer protocol if your REST endpoint is secured.
- `<tns:name>`: Type a meaningful name to your endpoint that helps identify your endpoint.
- `<tns:description>`: Type a meaningful description that further details the nature of the data set that this endpoint is working on. It could either be based on the cluster that is working on the data set or the nature of the data set, for example, insurance claim human tasks or accounting data human tasks.

The following widget definition can be modified in `wpsWidgets.xml`:

```

<tns:Widget>
  <tns:id>{com.ibm.bspace.widget}teamTaskList</tns:id>

  <tns:version>1.0.0.0</tns:version>
  <tns:name>My Team's Tasks</tns:name>

  <tns:type>{com.ibm.bspace}iWidget</tns:type>
  <tns:description>This widget displays tasks that have been assigned to
people within your team.</tns:description>
  <tns:tooltip>My Team's Tasks</tns:tooltip>

  <tns:categoryId>{com.ibm.bspace}tasks</tns:categoryId>
  <tns:widgetEndpointId>
{com.ibm.bspace.htm}bSpaceTeamTaskListWidgetRootId
</tns:widgetEndpointId>
  <tns:url>iWidget/widgets/ttlist/TeamTaskList_iWidget.xml
</tns:url>
  <tns:helpUrl>bSpace_help/widget_help/help.jsp?page=myteamstasks.html
</tns:helpUrl>
  <tns:iconUrl>com/ibm/bSpace/widgets/ttlist/themes/images/
icon_teamtasks.gif</tns:iconUrl>
  <tns:previewUrl>com/ibm/bSpace/widgets/ttlist/themes/images/
prev_teamtasks.gif</tns:previewUrl>
  <tns:previewThumbnailUrl>com/ibm/bSpace/widgets/ttlist/themes/
images/thumb_teamtasks.gif</tns:previewThumbnailUrl>
  <tns:owner>International Business Machines Corp.</tns:owner>
  <tns:email>TBD</tns:email>
  <tns:serviceEndpointRef required="true">
  <tns:name>serviceUrlRoot</tns:name>
  <tns:refId>{com.ibm.bpm}HTMInsurance</tns:refId>
  <tns:refVersion>6.1.2.0</tns:refVersion>
</tns:serviceEndpointRef>
  <tns:serviceEndpointRef required="false">

  <tns:name>userImageServiceUrlRoot</tns:name>

```

```

        <tns:refId>{com.ibm.bspace.htm}bSpaceUserImageServiceRootId
    </tns:refId>
    <tns:refVersion>1.0.0.0</tns:refVersion>
</tns:serviceEndpointRef>
<tns:serviceEndpointRef required="true">
    <tns:name>monitorServiceRoot</tns:name>
    <tns:refId>{com.ibm.wbimonitor}monitorServiceRootId</tns:refId>
    <tns:refVersion>1.0.0.0</tns:refVersion>
</tns:serviceEndpointRef>
<tns:serviceEndpointRef required="true">
    <tns:name>vmmServiceUrlRoot</tns:name>
    <tns:refId>{com.ibm.bpm}VirtualMemberManager</tns:refId>
<tns:refVersion>6.2.0.0</tns:refVersion>

</tns:serviceEndpointRef>
</tns:Widget>

```

Consider the following information when modifying the widget definition to create multiple widgets with the same base functionality and behavior:

- **<tns:id>**: The ID can be any string and must uniquely identify the widget definition. For each new widget definition that you add, make sure that this ID is unique.
- **<tns:name>**: The name should help the business users choose the right widget. Type a meaningful name.
- **<tns:description>**: The description should help the business users understand the nature of the data and the functionality of the widget that they are selecting.
- **<tns:tooltip>**: This further enhances the ability for the business users to select the right widget; when they move a cursor over it, hover help appears.
- **<tns:refId>**: The service endpoint reference identifier must match the id field in the endpoint definition section. Make sure that the refId is the same as the endpoint id.

## What to do next

Set up security for Business Space.

## Enabling forms for running human workflow widgets in Business Space

If you are working with WebSphere Process Server, and you have installed Business Space on a different server instance than Business Process Choreographer, you must take additional steps to make forms deployed in separate enterprise applications available to the human workflow widgets running in Business Space. This includes HTML-Dojo forms that are generated in WebSphere Integration Developer and IBM Lotus® Forms.

### About this task

**Topic scope:** This topic applies to the following product:

- WebSphere Process Server

Depending on whether both Business Space and WebSphere Process Server are configured on deployment targets in the same WebSphere Network Deployment cell or in different cells, complete one of the following steps:

### Procedure

1. For a setup in a single cell: When deploying an enterprise application that contains a process or a human task and forms, you must map the Web modules that contain the HTML files or Lotus form definitions for the forms to the same deployment target that Business Space is configured on.
2. For a setup in a cross-cell environment: Deploy the Web module containing the HTML files or Lotus form definitions for the forms on the deployment target that hosts Business Space in the remote cell. When deploying the Web module, you must specify the context root as defined for the forms in the Human Task Editor in WebSphere Integration Developer. Start the new application on the Business Space server or cluster.

**Note:** If you are using Business Space version 6.2.0.1, you must use Lotus Forms Viewer 3.5.0 Fix Pack 1 with your forms.

## Enabling images in My Team's Tasks and Team List widgets

If you are setting up Business Space to include My Team's Tasks and Team List widgets, you can modify the endpoints file to use images of team members in those widgets.

### Before you begin

**Topic scope:** This topic applies to the following products:

- WebSphere Business Modeler Publishing Server
- WebSphere Business Monitor
- WebSphere Process Server
- WebSphere Business Services Fabric

### About this task

By default, Business Space is configured with no image server identified for My Team's Tasks and Team List widgets, but if you want your business users to see images of their team members, you can enable image retrieval from an image server by configuring a copy of the `bpcEndpoints.xml` endpoint registration file.

### Procedure

1. Go to the `install_root/BusinessSpace/registryData/` and make a copy of the `bpcEndpoints.xml` file. For example, name it `imageEndpoint.xml`.
2. Remove all endpoint definitions sections except for the image service endpoint section.

The image service endpoint section looks like this:

```
<!--
  <tns:Endpoint>
    <tns:id>{com.ibm.bspace.htm}bpaceUserImageServiceRootId</tns:id>
    <tns:type>{com.ibm.bspace.htm}bpaceUserImageServiceRootId
  </tns:type>
    <tns:version>1.0.0.0</tns:version>
    <tns:url>http://<host>:<port>/<servlet>/</tns:url>
    <tns:description>Location of user image services for HTM widgets
  </tns:description>
  </tns:Endpoint>
-->
```

3. Remove the comments on the image service endpoint section and update the URL to reference the appropriate image server servlet that you will use for user images.

The image service endpoint is a reference to a URL prefix where the widgets can find images by concatenating the following information:

- The resolved image service endpoint string.
- The unique identifier Virtual Member Manager (VMM) attribute for each user.
- The .jpg file extension.

For example, if the endpoint URL is `http://myserver:9080/UserImageWeb/UserImageServlet/` and the unique identifier for a user is `id123456`, the widgets retrieve that user's image at the following link: `http://myserver:9080/UserImageWeb/UserImageServlet/id123456.jpg`.

4. Create the following directory (if it does not already exist): `profile_root/BusinessSpace/registryData/` (where *profile\_root* is typically `install_root/profiles/profile_name` or `install_root/pf/profile_name`) and copy your `imageEndpoint.xml` endpoint registration file to that directory.
5. Copy the endpoint registration file to the same directory on every node in the cluster where Business Space is deployed.

**Note:** For more information about configuring Representational State Transfer (REST) service endpoints, see "Enabling Business Space widget REST service endpoints on the administrative console," "Enabling Business Space widgets manually for remote endpoints," and "Enabling Business Space widgets for multiple endpoints."

## Mapping Business Space URLs for a reverse proxy server

If you have a reverse proxy setup for your HTTP server, when you are configuring the HTTP server to work with Business Space, you must map the URLs for Business Space and the widgets that your team uses.

### Procedure

1. Edit your HTTP server configuration file.
2. Map all of the URLs for Business Space and the widgets that your business users work with in the runtime solution.

URLs for general Business Space framework (all products):

- `/BusinessSpace/*`
- `/BspaceWidgetsCommon/*`

Additional URLs for WebSphere Business Services Fabric widgets:

- `/fabricrest/*`

Additional URLs for WebSphere Business Monitor widgets:

- `/BusinessDashboard/*`
- `/DashboardABX/*`
- `/monitorServerComponent/*`
- `/mobile/*`
- `/rest/bpm/monitorimages/*`
- `/rest/bpm/monitor/*`
- `/rest/bpm/events/*`
- `/AlphabloxServer/*`

- /AlphabloxAdmin/\*
- /AlphabloxTooling/\*
- /BloxBuilder/\*

Additional URLs for WebSphere Enterprise Service Bus widgets:

- /BSpaceWidgetsHM/\*
- /rest/\*

Additional URLs for WebSphere Process Server widgets:

- /BSpaceWidgetsHM/\*
- /SecurityManagerWidgets/\*
- /BSpaceWidgetsBCM/\*
- /rest/\*

## Setting up security for Business Space

After you have installed and configured Business Space powered by WebSphere for your product, you must consider security options for how your team will work with artifacts in Business Space. You may want to set up application security, which also requires administrative security for the application. Also, you should run a Jython script to assign a Superuser role for Business Space.

### Setting application security for Business Space

To turn on security for Business Space you must enable both application security and administrative security.

#### Before you begin

Before you complete this task, you must have completed the following tasks:

- Configured a profile, and configured Business Space on that profile.
- Configured the database tables (if you are using a remote database or deployment environment).
- Configured the REST service endpoints for the widgets you will use in Business Space.
- Checked that your user ID is registered in the user registry for your product.

#### About this task

The Business Space enterprise archive (EAR) file is preconfigured to ensure authentication and authorization of access. Business Space uses one default J2EE role, which is mapped to all authenticated users, which ensures that users are prompted to authenticate when accessing Business Space URLs. Unauthenticated users are redirected to a login page.

Authorization to spaces and page content in Business Space is handled internally to Business Space as part of managing spaces.

To enable authenticated access (J2EE role-based authorization) to Business Space, you must have a user registry configured and application security enabled.

#### Procedure

1. For complete instructions on security, see the security documentation for your product.



2. For the Business Space application, on the Secure administration, applications, and infrastructure administrative console page, select both **Enable administrative security** and **Enable application security**.
3. On the same administrative console page, under **User account repository**, designate either **Federated repositories**, **Local Operating System**, **Standalone LDAP registry**, or **Standalone custom registry**. If you select **Federated repositories** for Business Space, you will have additional capabilities in your widgets and framework, such as enhanced search capabilities. When searching for users to share spaces and pages, the search scope includes e-mail, a user's full name and user ID.

**Note:** You cannot use **Standalone LDAP registry** for your user account repository if you are using Managing Tasks and Workflows widgets or other human task-related widgets.

4. If Business Space is remote from where your product is running, and if the node where Business Space is running and node where your product is running are not in the same cell, you must complete manual steps to make sure that single-sign-on (SSO) is enabled. For example, if you are using more than one product (WebSphere Business Modeler Publishing Server, WebSphere Business Monitor, WebSphere Enterprise Service Bus, or WebSphere Process Server), the servers are on different nodes, and you want them all to be able to work with the Business Space server, you must manually configure SSO. To enable SSO, complete the following steps:
  - a. Under Authentication, click **single sign-on (SSO)** to make sure that the **Enabled** check box is selected.
  - b. Make sure that all the nodes use the same **User account repository** information (see step 3).
  - c. Open the Authentication mechanisms and expiration page on the administrative console: On the administrative console, expand **Security**, select **Secure administration, applications, and infrastructure**. Under Authentication, click **Authentication mechanisms and expiration**.
  - d. Under Cross-cell single sign on, type a password for the key file and a Fully qualified key file name, which is a location and file name where you want to export the key file. The Fully qualified key file name is the absolute path on the system where your server is running.
  - e. Click **Export Keys**. The key file is saved on the system where the server is running.
  - f. If the two nodes are not on the same system, copy the key file physically to the other systems.
  - g. Import the key file on every other node using the same key file: Log on to the administrative console for the other node, and complete steps c-d above (use the same password for the exported key file that you copied over), and click **Import keys**.
  - h. Restart server after importing keys on each system.
5. If you are using HTTPS in the endpoints file, the endpoint location is on a different node than Business Space, and the Secure Sockets Layer (SSL) certificate is self-signed, you must import the SSL certificate.
  - a. Log on to the administrative console for the server that contains Business Space and import the SSL certificate that is used by the remote node where product is running.
    - 1) Under Security, click **SSL certificate and key management**.

- 2) On the SSL certificate and key management page, under Related items, click **Key stores and certificates page**.
  - 3) On the Key stores and certificates page, click **NodeDefaultTrustStore** to modify that TrustStore type.
  - 4) On the NodeDefaultTrustStore page, under Additional Properties, click **Signer certificates**.
  - 5) On the Signer certificates page for the NodeDefaultTrustStore, click the **Retrieve from port** button.
  - 6) On Retrieve from port page, under General Properties, type the host, port, and alias for where your product is running. Click **Retrieve signer information** button and then click **OK**.
  - 7) Restart both servers.
- b. Log on to the administrative console for the product node and import the SSL certificate that is used by the node where Business Space is running.
- 1) Repeat steps i.-v. above.
  - 2) On the Retrieve from port page, under General Properties, type the host and port for where Business Space is running. Click the **Retrieve signer information** button and then click **OK**.
  - 3) Restart both servers.

For more information about SSO and SSL, see the WebSphere Application Server information center.

### What to do next

- After the administrative and application security are turned on, you receive a prompt for a user ID and password when you log on to Business Space. You must use a valid user ID and password from the selected user registry in order to log on. After you turn on administrative security, whenever you return to the administrative console, you must log on with the user ID that has administrative authority.
- If you want to restrict logging in to Business Space to a subset of users and groups, you can change the mapping of the Business Space J2EE role. Click **Applications** → **Enterprise Applications** → *application name*. In the right panel, under Detail Properties, select **Security role to user/group mapping**.
- To set authorization to pages and spaces in Business Space, you can manage this in Business Space when you create pages and spaces.
- To set up security for the data in the widgets based on users and groups, you must modify the mapping of users to the REST services gateway application. Select the REST services gateway application, and in the right panel, under Detail Properties, select **Security role to user/group mapping**. For the RestServicesUser role, you can add users and groups to it to control access to the data in all the REST services widgets.
- If you want to restrict access to data in the widgets based on user group roles, consider changing the users assigned to the administrative group roles. You can view the Roles list to see who is assigned to these roles by opening the administrative console, clicking **Security** → **Secure administration, applications, and infrastructure** → **Administrative Group Roles** and selecting a group.  
You might want to consider changing the users assigned to administrative group roles for widgets such as Business Rules and Business Variables.

For example, for the Health Monitor widget, the following administrative roles all have monitoring permissions, all allow access to the administrative console, and therefore allow users assigned to those roles to access data in Health Monitor:

- Monitor
- Configurator
- Operator
- Administrator
- Adminsecuritymanager
- Deployer
- iscadmins

Users who are mapped to those administrative group roles have access to the data in Health Monitor. Users who are not mapped to those roles cannot access the data in Health Monitor.

- Finally, some widgets have an additional layer of role-based access for their artifacts created by business users. For Solution Management, the Security Manager widget allows you to assign users and groups system roles or module roles that determine the level of access that members have for timetables in the Business Calendar Manager widget. For Reviewing, the Publishing Server Access Control widget manages permissions for users who can review and comment on reviews. For more information, see the online help for your widget.

### Assigning the Business Space superuser role

In Business Space, you can assign users to be superusers. A superuser can view, edit, and delete all spaces and pages and can designate whether spaces can be templates in Business Space. You can run a script that assigns a Business Space superuser role for a user ID, or you can use the wsadmin scripting client to create scripts to enable the Business Space superuser.

### Before you begin

The user ID must be registered in the user registry for your product.

### Procedure

1. Locate the script `install_root/BusinessSpace/scripts/createSuperUser.py` for assigning the superuser role to a user.
2. Open a command prompt, and change directories to the following directory: `profile_root/bin`, where `profile_root` represents the directory for the profile where is Business Space installed.
3. Type the following command: `wsadmin -lang jython -wsadmin_classpath install_root\plugins\com.ibm.bspace.plugin_6.2.0.jar -f install_root\BusinessSpace\scripts\createSuperUser.py user_short_name_in_VMM` where `user_short_name_in_VMM` is the unique identifier for a user in Virtual Member Manager (VMM).

**Note:** When the path contains a space, for example, if `install_root` is `My install dir`, you must enclose the path names in double quotes. For example, type the following command: `wsadmin -lang jython -wsadmin_classpath "\My install dir\plugins\com.ibm.bspace.plugin_6.2.0.jar" -f "\My install dir\BusinessSpace\scripts\createSuperUser.py" user_short_name_in_VMM.`

## What to do next

Two other scripts are provided if you want to query if a user name has the superuser role, or if you want to remove a superuser role. Both are available in the *install\_root/BusinessSpace/scripts/* directory:

- `isSuperUser.py` to query if a user name has a superuser role.
- `removeSuperUserAccess.py` to remove the superuser role from a user

You can create additional scripts based on the three provided. You can replace the MBean call in the script with one of the following methods to work with the superuser role:

```
public boolean assignSuperUserRole(String userId);
public boolean removeSuperUserRole(String userId);
public List getAllSuperUsers();
public boolean isSuperUser(String userId);
public boolean removeAllSuperUsers();
```

See the MBean descriptor file, `BSpaceSecurityAdminMBean.xml`, which is provided in *install\_root/BusinessSpace/scripts*.

To open Business Space, use the following URL: `http://host:port/BusinessSpace`, where *host* is the name of the host where your server is running and *port* is the port number for your server.

---

## Configuring Business Space widgets for WebSphere Portal

If your team uses WebSphere Portal, you can configure Business Space widgets to work in WebSphere Portal.

### Before you begin

**Topic scope:** This topic applies to the following products:

- WebSphere Business Modeler Publishing Server
- WebSphere Enterprise Service Bus
- WebSphere Process Server

Before you complete this task, you must have completed the following tasks:

- Installed and configured WebSphere Portal.
- Installed your product (WebSphere Business Modeler Publishing Server, WebSphere Process Server, or WebSphere Enterprise Service Bus).
- Configured a profile, and configured Business Space on that profile. For more information about configuring Business Space, see the following related tasks: "Configuring Business Space using the Profile Management Tool," "Configuring Business Space using the administrative console," "Configuring Business Space as part of the Deployment Environment Configuration wizard," and "Configuring Business Space using the command line."
- Configured the database tables (if you are using a remote database or a deployment environment). For more information about configuring database tables, see the following related task: "Configuring Business Space database tables."
- Deployed and registered the Representational State Transfer (REST) service endpoints for widgets that your business users require during run time. For

more information about REST service endpoints, see the following related tasks: "Enabling Business Space widget REST service endpoints on the administrative console," "Enabling Business Space widgets manually for remote endpoints," and "Enabling Business Space widgets for multiple endpoints."

- Completed specific configuration steps for your widgets, if required. If your team uses any human workflow widgets, My Team's Tasks widget, or the Team List widget, see the following related tasks: "Enabling HTML-Dojo forms for running human workflow widgets in Business Space," and "Enabling images in My Team's Tasks and Team List widgets."
- Set up application security for Business Space. For more information about application security, see the following related task: "Setting application security for Business Space."

When you set up Business Space widgets to work in WebSphere Portal, consider the following issues:

- You cannot mix other WebSphere Portal portlets and the Business Space widgets wrapped as portlets on the same page. This creates refresh issues.
- All Business Space widgets wrapped as portlets are configured with the **eventbroadcast** property value set to true. If you have created your own widgets for Business Space, the **eventbroadcast** property must be set to true.
- Expect performance differences between Business Space widget operations in the Business Space environment and in WebSphere Portal. A WebSphere Portal configuration likely involves multiple servers, and because there are differences in the communication mechanisms for each environment, widgets in WebSphere Portal might exhibit relatively slower response times. This performance difference applies to the WebSphere Business Modeler Publishing Server, WebSphere Enterprise Service Bus, and WebSphere Process Server widgets, which must be configured with a wrapper, and not to WebSphere Business Monitor widgets, which are integrated in the WebSphere Portal environment without wrappers.
- The Send widget is not supported in WebSphere Portal.

## Configuring SSO and SSL for widgets in WebSphere Portal

The first task for configuring Business Space widgets to work in WebSphere Portal is to set up single sign-on (SSO) with WebSphere Portal and your Business Space server and to make sure the Secure Sockets Layer (SSL) certificates are exchanged between the servers for WebSphere Portal and Business Space.

### Before you begin

**Topic scope:** This topic applies to the following products:

- WebSphere Business Modeler Publishing Server
- WebSphere Enterprise Service Bus
- WebSphere Process Server

### About this task

If WebSphere Portal and your product (WebSphere Business Modeler Publishing Server, WebSphere Process Server, or WebSphere Enterprise Service Bus) reside in separate cells, you must configure single sign-on between the two servers.

Your product offers Representational State Transfer (REST) APIs that can be accessed through the REST gateway. By default, the REST gateway is configured to

accept only HTTPS connections. Because some widgets access these REST APIs, WebSphere Portal requires the SSL certificate imported from your product.

For the servers for both WebSphere Portal and your product, you must use the same user name and password to log on to the administrative console.

### Procedure

1. Set up single sign-on with the WebSphere Portal server.
  - a. Log on to the WebSphere Portal administrative console for the WebSphere\_Portal server.
  - b. Navigate to **Security** → **Secure administration, applications and infrastructure**.
  - c. Click **Authentication Mechanism and Expiration**. In the **Cross-cell single sign-on** section, type a password (this is only for encryption of the key file) and an absolute path for a key file.
  - d. Click **Export keys**. The key file is generated.
2. Set up single sign-on with the Business Space server.
  - a. Log on to the administrative console of your product (WebSphere Business Modeler Publishing Server, WebSphere Process Server, or WebSphere Enterprise Service Bus).
  - b. Navigate to **Security** → **Secure administration, applications and infrastructure**.
  - c. Click **Authentication Mechanism and Expiration**. In the **Cross-cell single sign-on** section, enter the password from step 1.c. and the absolute path to the key file.
  - d. Click **Import keys**.
  - e. Restart the Business Space server.

After single sign-on is configured, you can delete the key file.

3. Set up the Secure Sockets Layer (SSL) certificates so that they are exchanged between the WebSphere Portal and Business Space servers.
  - a. Log on to the administrative console of WebSphere Portal.
  - b. Navigate to **Security** → **SSL certificates and key management**
  - c. Under Related Items, click **SSL configuration** and select **NodeDefaultSSLSettings**.
  - d. Under Related Items, click **Key stores and certificates** and select **NodeDefaultTrustStore**.

If you use z/OS keyrings instead of the NodeDefaultTrustStore, see the related information "Importing a signer certificate from a truststore to a z/OS keyring."
  - e. Under Additional Properties, click **Signer Certificates**.
  - f. Make sure that your product server is running, click **Retrieve from Port**, and enter the correct host name and the HTTPS port of the default\_host (default is 9443) in the two fields. You can select your own alias.
  - g. Click **Retrieve signer information**. WebSphere Portal loads the certificate and displays its information. If the certificate is not loaded, check the connection properties.
  - h. Click **OK** and save the configuration.

## Configuring a wrapper for iWidgets in WebSphere Portal

To use Business Space widgets in WebSphere Portal, you must prepare a wrapper for the Business Space widgets, which are in the iWidget format.

### Before you begin

**Topic scope:** This topic applies to the following products:

- WebSphere Business Modeler Publishing Server
- WebSphere Enterprise Service Bus
- WebSphere Process Server

### Procedure

1. Download the IBM WebSphere Portal Widget Portlet from the following URL: <http://www.ibm.com/software/brandcatalog/portal/portal/details?catalog.label=1WP1001PI> and extract the file to your system. The WebSphere Portal Widget Portlet provides iWidget support for WebSphere Portal so that Business Space widgets can be used in WebSphere Portal.

**Note:** Make sure that you download the most recent version so that the widgets work properly.

2. Copy the widgetportlet.war file to *PortalServer\_root/installableApps*, where *PortalServer\_root* is the installation location for the portal server component of WebSphere Portal.
3. Copy the setupWidgetintegration.xml file to *PortalServer\_root/bin*.
4. Open a command prompt, change directories to *PortalServer\_root/bin*, and run the command based on your platform.
  - **i5/OS** **On i5/OS platforms:** `./xmlaccess -in setupWidgetIntegration.xml -user admin_user_name -password admin_password -url http://host_name:port_number/wps/config`
  - **Linux** **UNIX** **On Linux and UNIX platforms:** `./xmlaccess.sh -in setupWidgetIntegration.xml -user admin_user_name -password admin_password -url http://host_name:port_number/wps/config`
  - **Windows** **On Windows platforms:** `./xmlaccess.bat -in setupWidgetIntegration.xml -user admin_user_name -password admin_password -url http://host_name:port_number/wps/config`
5. Log on to the administrative console for WebSphere Portal and navigate to **Applications** → **Enterprise Applications**.
6. For the **PA\_Widget** application, click **Security role to user/group mapping**, select the **All Authenticated** check box, and click **OK** and **Save**.
7. Edit the proxy-config.xml file so it works with the Business Space widgets. The proxy-config.xml file is located in *wp\_profile\_root/installedApps/node\_name/PA\_Widget.ear/widgetportlet.war/WEB-INF/*, where *wp\_profile\_root* is the profile location for WebSphere Portal and *node\_name* is the name of the WebSphere Portal node.

Make sure the file looks like the following example.

**Note:** If you are configuring Business Space widgets to work with WebSphere Portal for the first time, replace the file with the following content.

```
<?xml version="1.0" encoding="UTF-8"?>
<proxy-rules
```

```

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:proxy="http://www.ibm.com/xmlns/prod/websphere/portal/v6.0.1/
proxy-config">
<proxy:mapping contextpath="/myproxy/*"/>
<proxy:mapping contextpath="/myportalproxy/*"/>

<proxy:policy url="*" acf="none">
<proxy:actions>
<proxy:method>DELETE</proxy:method>
<proxy:method>GET</proxy:method>
<proxy:method>POST</proxy:method>
<proxy:method>PUT</proxy:method>
</proxy:actions>
<proxy:cookies>
<proxy:cookie>LtpaToken</proxy:cookie>
<proxy:cookie>LtpaToken2</proxy:cookie>
</proxy:cookies>
<proxy:headers>
<proxy:header>Cache-Control</proxy:header>
<proxy:header>Pragma</proxy:header>
<proxy:header>User-Agent</proxy:header>
<proxy:header>Accept*</proxy:header>
<proxy:header>Content*</proxy:header>
<proxy:header>X-Method-Override</proxy:header>
</proxy:headers>
</proxy:policy>

<proxy:meta-data>
<proxy:name>forward-http-errors</proxy:name>
<proxy:value>>true</proxy:value>
</proxy:meta-data>
</proxy-rules>

```

8. Restart the **PA\_Widget** application.

## Creating portlets in WebSphere Portal for Business Space widgets

Run the automated deployment script for your widgets. This creates portlets that you need for widgets in WebSphere Portal.

### Before you begin

**Topic scope:** This topic applies to the following products:

- WebSphere Business Modeler Publishing Server
- WebSphere Enterprise Service Bus
- WebSphere Process Server

### About this task

#### Procedure

1. Copy the following automated deployment script and related files from *install\_root/BusinessSpace/portal* on your product server to *install\_root/BusinessSpace/portal* on WebSphere Portal.
  - `configure_iwidget_portlet.ant`



- configureIWidget.jy
- **For Windows platforms:** iwidget.bat
- **For i5/OS, Linux, UNIX, and z/OS platforms:** iwidget.sh
- portal.iwidgets.properties
- PubServerWidgetPortlets.xml
- WPSWidgetPortlets.xml

**Note:** The iwidget script works with two groups of Business Space widgets: widgets that work with WebSphere Business Modeler Publishing Server (which are defined in PubServerWidgetPortlets.xml) and widgets that work with WebSphere Enterprise Service Bus and WebSphere Process Server (which are defined in WPSWidgetPortlets.xml). To configure both groups of widgets, you must run the scripts twice.

2. Edit the portal.iwidgets.properties file to specify the group of widgets and specific information for your environment.
  - a. In the properties file, change the path to the server that you are using with WebSphere Portal.
  - b. To specify which group of widgets to configure, remove the comment character from the line in the properties file for the group of widgets that you want to configure, and add a comment character on the other line. For example:

```
Portal.iWidget.Xml.File=PubServerWidgetPortlets.xml
#
#Portal.iWidget.Xml.File=WPSWidgetPortlets.xml
```

- c. Change the Portal.userid and Portal.password values to the admin user name and password for WebSphere Portal.
  - d. For the Business Space server, change the host name and port number to the appropriate host name and port number, using the full URL format, for example https://9.26.73.163:9447.
  - e. For the WebSphere Portal server, change the host name and port number to the appropriate host name and port number, using the full URL format.
3. Save the portal.iwidgets.properties file.
  4. To create the portlets, run the iwidget script. Run the command, based on your platform:
    - **i5/OS** **On i5/OS platforms:** `iwidget -w install_root -p property_file_location`
    - **Linux** **UNIX** **On Linux and UNIX platforms:** `iwidget.sh -w install_root -p property_file_location`
    - **Windows** **On Windows platforms:** `iwidget.bat -w install_root -p property_file_location`
  5. Optional: If you want to configure the other group of widgets, repeat steps 2-4 for the second set of widgets.

## Configuring Business Space themes and skins in WebSphere Portal

If you want Business Space widgets to work in WebSphere Portal, you must install a new theme in WebSphere Portal, install a new skin in WebSphere Portal, and update the theme to use the default skin. This makes the interface look similar to the interface in Business Space.

## Before you begin

**Topic scope:** This topic applies to the following products:

- WebSphere Business Modeler Publishing Server
- WebSphere Enterprise Service Bus
- WebSphere Process Server

## About this task

A skin adds functions to WebSphere Portal that are specific to Business Space widgets, such as menu items.

### Procedure

1. Log on to WebSphere Portal administrative console, and navigate to **Applications** → **Enterprise Applications**.
2. Select the check box for the **wps** application and click **Update**.
3. Click **Replace, add, or delete multiple files** and browse to `BSpaceThemeSkin.zip`, which is located in `install_root/BusinessSpace/portal`. Click **Next**, **Finish**, and **Save**.
4. In WebSphere Portal, click the **Administration** link at the top of the page, and click **Themes and Skins** on the left side. On the Themes and Skins page, click **Add new skin**.
5. Type `BSpace` for the theme name and directory name, and click **OK**. The skin is now installed.
6. To create the theme for Business Space, return to the Themes and Skins page, and click **Add new theme**.
7. Type `BSpace` for the theme name and directory name.
8. In the list of skins, select **IBM**, **ThinSkin**, **NoSkin** and **BSpace** to add as skins for the theme.
9. Select **BSpace** in the list of skins, click **Set as default**, and click **OK**.

## Setting up a WebSphere Portal page with portlets for your widgets

The final task that allows your business users to use Business Space widgets in WebSphere Portal is creating a page with the portlets for your widgets.

## Before you begin

**Topic scope:** This topic applies to the following products:

- WebSphere Business Modeler Publishing Server
- WebSphere Enterprise Service Bus
- WebSphere Process Server

### Procedure

1. Log on to WebSphere Portal as the administrative user.
2. Click the **Administration** link at the top of the page.
3. Click **Manage pages** on the left side, click **Content Root**, click **Home**, and then click **New Page**.
4. Enter a title and name, select **BSpace** as the theme, and click **OK**. The page is created.

5. To place portlets on the page, click the Edit page layout icon.
6. Optional: To change the portlet positions on a page, select a predefined layout.
7. Add portlets to the page and click **Done**.
8. Click the WebSphere Portal **Home** to begin using your page.

---

## Configuring business rules and selectors

Business rules and selectors provide flexibility in a business process by changing the results of a process based on a criteria. Before installing applications that contain business rules and selector components, you must install the business rules dynamic repository. You can install the business rules dynamic repository for a stand-alone server or for network deployment.

### Configuring the business rule and selector audit log

You can configure the server to use different values than the default values for the log that keeps track of new, changed, and deleted business rules and selectors. Changing the configuration can help you conserve resources on your server.

#### Before you begin

You must be at the administrative console to perform this task.

**Required security role for this task:** When security and role-based authorization are enabled, you must be logged in as a configurator to perform this task.

#### About this task

After you have run your server in production for a while, you may have determined that the default values the server uses for the business rules and selectors audit log need adjustment.

To configure the business rule and selector audit log, perform the following steps.

#### Procedure

1. Navigate to the **Business Rules and Selectors Auditing** page by clicking **Servers > Application servers > *servername* Business Rules > Business Rules and Selectors Auditing**.
2. Do one of the following depending on the type of change you want.

Type of change	Actions
Immediate	<ol style="list-style-type: none"> <li>1. Select the <b>Runtime</b> tab.</li> <li>2. Enter the desired changes.</li> <li>3. <b>Optional:</b> To make the changes permanent, copy them to the repository by selecting <b>Save runtime changes to configuration as well</b>.</li> <li>4. Click <b>OK</b> to make the changes and return to the previous page or <b>Apply</b> to make the changes and remain on this page.</li> </ol>

Type of change	Actions
Delayed	<ol style="list-style-type: none"> <li>1. Select the <b>Configuration</b> tab.</li> <li>2. Enter the desired changes.</li> <li>3. Click <b>OK</b> to make the changes and return to the previous page or <b>Apply</b> to make the changes and remain on this page.</li> <li>4. When you want the changes to take effect, restart the server.</li> </ol>

## Results

The audit log takes the attributes you specified.

**Note:** You may need to modify the configuration for business rules and selector auditing due to the way the server user identity is specified when security is enabled with WebSphere Application Server 6.1. If the default value is used for the server user identity, an automatically generated server identity value is recorded in the audit record for the user when any auditable action involving business rules or selectors is performed when the application containing the business rules or selectors is started after business rule or selector installation. An auditable action occurs when a business rule or selector artifact is changed through application startup after install, management clients, or import or export through the administrative console. The generated value may not match the format of other user IDs used in other audit records, and you may want a more consistent value.

You can specify a server identity by selecting the option to use a "Server identity that is stored in the repository," which will associate a user ID that is in the user repository with the server process. The audit records will use this identity when auditable actions involving business rules or selectors are performed when the application containing the business rules or selectors is started after the business rule or selector artifacts are installed in the repository.

The server identity value has no effect on audit actions involving changes through management clients such as the business rules manager or other administrative actions such as exporting or importing business rule groups. For these actions, the audit record will use the authenticated user.

For more information on changing the server user identity, see the topics under Securing applications and their environment and the WebSphere Application Server WebSphere Application Server Network Deployment Security documentation.

## Configuring business rule and selector auditing using commands

Use commands to configure business rule and selector auditing when you need to change any of the characteristics while a server is running.

### Before you begin

You must run these commands from a command line environment for the server.

**Required security role for this task:** When security and role-based authorization are enabled, you must be logged in as a configurator to perform this task.

## About this task

There may be occasions when you need to change how many servers audit business rules and selectors and cannot restart the servers involved. Using the command line, you can automate configuring the servers in a batch mode. The following tasks show how to use commands to configure one server.

**Important:** These settings are not saved if you restart the server. To save the configuration after entering these commands, you must use the administrative console. Select **Servers > Application servers > *servername* > Business Rules > Business Rules and Selectors Auditing > Runtime** or **Servers > Application servers > *servername* > Selectors > Business Rules and Selector Auditing > Runtime**.

To configure business rule and selector auditing using commands, perform the following steps.

**Note:** The following task configures server `server1`. If the server is not named `server1`, replace `server1` below with the name of the server. All of the steps beginning at step 3 could be placed in a jacl script and run that way.

### Procedure

1. Enter the administrative environment.  
`wsadmin`
2. Decide whether you are configuring audit logging or changing an existing configuration.

Task	Command
Configuring audit logging	<code>set mbean [\$AdminControl] queryNames *:*,name=CustomizationAuditMBean,process=server1]</code>
Changing audit logging configuration	<code>set auditconfig [\$AdminConfig list AuditLog]</code>

3. Enter the appropriate commands.

## Commands to configure or change audit logging

**Important:** When entering commands that change an existing configuration, you must save the changes. The changes do not take effect until you restart the server.

The following are the commands you can enter:

**\$AdminControl invoke \$mbean getSeparateAuditLogEnabled**

Use to determine whether logging is occurring to a separate audit log.

**\$AdminControl invoke \$mbean setSystemOutAuditLogEnabled {boolean}**

Use to enable or disable logging to the `SystemOut.log` file. *Boolean* can either be `true` or `false`.

**\$AdminControl invoke \$mbean getSeparateAuditLogFileName**

Use to determine the file name of the separate audit log.

**\$AdminControl invoke \$mbean setSeparateAuditLogFileName {filename}**  
 Use to set the name of the new log file, for example, MyAudit.log.

**\$AdminControl invoke \$mbean getSeparateAuditLogFileRolloverSize**  
 Use to determine the size of the audit log.

**\$AdminControl invoke \$mbean setSeparateAuditLogFileRolloverSize integer**  
 Use to set the size of the audit log before the system rolls it over into a history file. The size is in megabytes.

**\$AdminControl invoke \$mbean getSeparateAuditLogFileMaxNumberOfBackupFiles**  
 Use to determine the number of audit log history files.

**\$AdminControl invoke setSeparateAuditLogFileMaxNumberOfBackupFiles integer**  
 Use to set the number of audit log history files.

**\$AdminControl invoke \$mbean setSeparateAuditLogEnabled {boolean}**  
 Use to start or stop logging to a separate log file. *Boolean* can either be true or false.

**\$AdminConfig showall \$auditconfig**  
 Use to show the current audit log configuration.

**\$AdminConfig modify \$auditconfig {{separateAuditLogEnabled true}}**  
 Use to enable logging to a separate audit log.

**\$AdminConfig modify \$auditconfig {{systemOutAuditLogEnabled false}}**  
 Use to disable auditing to the system.Out file.

**\$AdminConfig modify \$auditconfig {{customAuditLog {{maxNumberOfBackupFiles 7} {rolloverSize 7}}}}**  
 Use to change the number of audit log history files and the size of the audit log file.

**\$AdminConfig modify \$auditconfig {{customAuditLog {{fileName MyAudit.log}}}}**  
 Use to change the name of the audit log file.

**\$AdminConfig save**  
 Use to save the configuration.

## What to do next

Save these changes by opening the administrative console and selecting **Servers > Application servers > servername > Business Rules > Business Rules and Selectors Auditing > Runtime** or **Servers > Application servers > servername > Selectors > Business Rules and Selector Auditing > Runtime**. Alternatively, enter \$AdminConfig save.

**Note:** You may need to modify the configuration for business rules and selector auditing due to the way the server user identity is specified when security is enabled with WebSphere Application Server 6.1. If the default value is used for the server user identity, an automatically generated server identity value is recorded in the audit record for the user when any auditable action involving business rules or selectors is performed when the application containing the business rules or selectors is started after business rule or selector installation. An auditable action occurs when a business rule or selector artifact is changed through application startup after install, management clients, or import or export through the administrative console. The generated value may not match the format of other user IDs used in other audit records, and you may want a more consistent value.

You can specify a server identity by selecting the option to use a "Server identity that is stored in the repository," which will associate a user ID that is in the user repository with the server process. The audit records will use this identity when auditable actions involving business rules or selectors are performed when the application containing the business rules or selectors is started after the business rule or selector artifacts are installed in the repository.

The server identity value has no effect on audit actions involving changes through management clients such as the business rules manager or other administrative actions such as exporting or importing business rule groups. For these actions, the audit record will use the authenticated user.

For more information on changing the server user identity, see the topics under Securing applications and their environment and the WebSphere Application Server WebSphere Application Server Network Deployment Security documentation.

## **Considerations for installing the business rules manager**

If you are planning to use the business rules manager in a distributed environment, you must understand the concepts of cells, nodes, and clusters and how to set up the business rules manager for best performance during run time.

The application server is organized on the concept of cells, nodes and servers. In a stand-alone server configuration, a cell contains one node, and each node contains one server. System administration applications and user applications all run in the same server. In a stand-alone server configuration, you can install the business rules manager in the same application server, and it can be accessed by the default URL.

In a distributed server configuration, you can configure a cell to contain multiple nodes, and each node can contain multiple application servers. Each cell constitutes a single administrative domain. With this configuration, you can use central administration, workload management, and failover configuration for the entire domain.

For best performance in a distributed server configuration, install the business rules manager on the administrative deployment target, an application server in the cell where business administration services are centrally hosted. This server is typically the same server that hosts the Common Event Infrastructure service.

Within a cell, all servers use and share a single business rules repository. When you access the business rules repository, you can access all dynamic business rule artifact definitions regardless of the exact location where the business application is installed.

Because of this central storage for all business rules in the cell at run time, you can deploy the business rules manager to any application servers in the cell, and the business rules manager gives a consistent view of all business rules within the cell. However, because of high-availability considerations, it is recommended that system administrators deploy the business rules manager into the administrative deployment target, a dedicated application server in the cell where business administration services are centrally hosted. The administrative deployment target server is the same server where the Common Event Infrastructure service and other business administrative applications are installed. With this configuration,

when you require high availability, you can cluster the administrative deployment target server to provide a scalable solution to the application users.

## Installing the business rules manager using the administrative console

You can install the business rules manager as an enterprise application on WebSphere Process Server to manage business rules during run time. For WebSphere Process Server 6.1 and higher, you can install the business rules manager simultaneously when creating a WebSphere Process Server profile by selecting the check box on the Business Rules Manager Configuration page of the Profile Management tool. Alternatively, you can install the business rules manager using three other methods: through the configuration page of the administrative console, by using the JACL command for your operating system, or by using the Admin Tasks command (this method is for WebSphere Process Server 6.1 and higher). For more information, see the individual topics for each installation method.

### Before you begin

**Required security role for this task:**When security and role-based authorization are enabled, you must be logged in as an administrator or a configurator to perform this task.

### About this task

To install the business rules manager using the administrative console, perform the following steps.

#### Procedure

1. Ensure that the administrative console is running.
2. In the navigation pane click **Servers > Application servers** or **Clusters**.
3. Select the name of your server or cluster target.
4. On the Configuration-tabbed page, under **Business Integration**, expand **Business Rules** and click **Business Rules Manager Configuration**.
5. Under **General Properties** select the **Install business rules manager** check box.

**Note:** If the business rules manager has already been installed, the checkbox will be checked but grayed out as it is not possible to uninstall the business rules manager from this page. However, you can uninstall it manually by going to the list of applications and uninstalling it from there.

6. In the **Context root** field either accept the default context root of `/br` or type a custom context root for the business rules manager URL.
7. Click **OK**.
8. Save the configuration.

### What to do next

In the navigation pane click **Applications > Enterprise Applications** and select **Start Business Rules Manager**.

## Installing the business rules manager using the JACL command

You can use a JACL command for Windows, Linux, i5/OS, as an alternative to using the administrative console for installing the business rules manager. Using a



JACL command is possible if you did not already install the business rules manager when you installed WebSphere Process Server and created profiles.

## Before you begin

**Required security role for this task:** When security and role-based authorization are enabled, you must be authenticated with a user ID that has been assigned to the administrator or configurator role to perform this task.

## About this task

To install the business rules manager using the JACL command, perform the following steps.

### Procedure

1. Ensure that WebSphere Process Server is started.
2. Open the shell environment or command prompt for your operating system, and go to the *install\_root/bin* directory (*install\_root\bin* directory for Windows).
3. Run the specific installation command for your operating system, as follows:
  - For Windows, run: `wsadmin.bat -f installBRManager.jacl [-s servername -n nodename | -cl clustername] -ce cellname -r rootname`
  - For Linux, run: `wsadmin.sh -f ./installBRManager.jacl [-s servername -n nodename | -cl clustername] -ce cellname -r rootname`
  - For i5/OS, run: `wsadmin -f ./installBRManager.jacl [-s servername -n nodename | -cl clustername] -ce cellname -r rootname`

To install and map the business rules manager to more than one target, run the following command for your operating system:

- For Windows, run: `wsadmin.bat -f installBRManager.jacl -m "{{target1}{target2} ... {targetn}}" -ce cellname -r rootname`
- For Linux, run: `wsadmin.sh -f installBRManager.jacl -m "{{target1}{target2} ... {targetn}}" -ce cellname -r rootname`
- For i5/OS, run: `wsadmin -f installBRManager.jacl -m "{{target1}{target2} ... {targetn}}" -ce cellname -r rootname`
- For z/OS, run: `wsadmin.sh -f installBRManager.jacl -m "{{target1}{target2} ... {targetn}}" -ce cellname -r rootname`

**Note:** The parameter “-m” (implying “multiple”) allows you to install and map the business rules manager to many targets at the same time. A pair of double quotation marks encloses the targets.

where:

*servername*

The name of the application server.

The pair of arguments “-s *servername*” is required in the Network Deployment configuration if a cluster is not specified. If missing, the default value of *servername* is “server1”.

*nodename*

The name of the installation node.

The pair of arguments “-n *nodename*” is required in the Network Deployment configuration if a cluster is not specified.

*clustername*

The name of the cluster where you want to install the application.

The pair of arguments "-cl clustername" is required in the Network Deployment configuration if a server name and a node name are not specified.

**Note:** You must either specify the node and server or specify the cluster. Do not specify both.

*cellname*

The name of the installation cell.

The pair of arguments "-ce cellname" is optional.

*rootname*

The name of the application root directory.

The pair of arguments "-r rootname" is optional. If missing, the default value of *rootname* is "/br".

**target<sub>i</sub>** The target (where *i* is 1, 2, ..., *n*) to which you want to install and map the business rules manager.

The target can be either (-s *servername* and -n *nodename*) or -cl *clustername*.

**Important:** If WebSphere Process Server is configured in a single-server environment, all of these pairs of arguments are optional. If WebSphere Process Server is configured for a Network Deployment environment, one of the following argument pairs is required:

- either (-s *servername* and -n *nodename*)
- or -cl *clustername*
- or -m "{{target1} {target2} ... {targetn}}"

The other argument pairs are optional.

## Example

**Example:** Suppose that you want to map the business rules manager application to the following targets:

- cluster "BofACluster"
- Web server "RedirectorServer" and node "AIXNode01"
- application server "LinuxServer" and node "LinuxNode02"

on context root "bofa/brm"

You would run the command, as follows:

```
install_root/bin/wsadmin -f installBRManager.jacl -m "{{-cl BofACluster} {-n AIXNode01 -s RedirectorServer} {-s LinuxServer -n LinuxNode02}}" -r bofa/brm
```

## Installing the business rules manager using the AdminTask command

With WebSphere Process Server 6.1 and higher, you can install the business rules manager using the Admin Task command. Similar to using the administrative

console or the JAAS command, use the Admin Task command if you did not install the business rules manager when you installed WebSphere Process Server and created profiles.

## Before you begin

**Required security role for this task:** When security and role-based authorization are enabled, you must be logged in as an administrator or a configurator to perform this task.

## About this task

To install the business rules manager using the admin task command, perform the following steps.

### Procedure

1. Ensure that WebSphere Process Server is started.
2. In a command window, go to the WebSphere Process Server home directory and change to the directory `/bin`.
3. Run the `wsadmin` command to enter the `wsadmin` mode.
4. Enter one of the following commands to install the business rules manager:

```
wsadmin> $AdminTask configBusinessRulesManager {-serverName <serverName>
-nodeName <nodeName> -contextRoot <contextRoot>}
```

Or

```
wsadmin> $AdminTask configBusinessRulesManager {-clusterName
<clusterName> -contextRoot <contextRoot>}
```

where

*serverName*

The name of the application server.

*nodeName*

The name of the installation node.

*clusterName*

The name of the cluster where you want to install the application.

*contextRoot*

The context root used to launch the application. The default value is `/br`.

5. Run `wsadmin> $AdminConfig save` to save the configuration.

**Tip:** You can run `$AdminTask help configBusinessRulesManager` to learn more about its parameters.

## Example

**Example:** To install the business rules manager on server "cvuServer" and node "cvuNode01" with context root "br", you should enter the following command:

```
wsadmin> $AdminTask configBusinessRulesManager {-serverName cvuServer
-nodeName cvuNode01 -contextRoot br}
```

Then to save the configuration, enter:

```
wsadmin> $AdminConfig save
```

## Configuring server security for the business rules manager

If you want to use security with your server, you must configure the server that is using the business rules manager. On a server where security is not enabled, you can use the business rules manager without additional configuration.

### About this task

If you have different roles or user IDs, you must set administrative security when configuring your server. To set security for your server, perform the following steps.

#### Procedure

1. Set administrative security on user IDs by assigning a role to each ID when creating the user IDs. Create each user ID and map each user ID to the role `BusinessRuleUser`.

To set the role, navigate to the business rule manager application (**Applications > Enterprise Applications**), select the business rule manager application, select the Security role to user/group mapping and update the `BusinessRuleUser` role.

In addition to the `BusinessRuleUser` role, two other roles are defined: `NoOne` and `AnyOne`. `NoOne` is used by developers to explicitly set the resources that should not be accessed directly. `AnyOne` is used by Tivoli Access Manager to obtain authorization for a WebSphere Process Server environment.

**Note:** In an ND environment with administrative security turned on, if you plan to run the business rules manager on port 908n, where n is a positive integer, you should make sure that port "944(n+3)" with the host value of "\*" was configured. If there is no such port, manually configure it before you launch the business rules manager.

2. Set the session tracking mechanism to use cookies to track sessions.
3. At a minimum, set an appropriate session timeout value.

## Configuring a Web browser for the business rules manager

The server configures a client automatically while installing the business rules manager, but you must ensure that the Web browser is configured correctly for the business rules manager to work properly.

### About this task

To ensure that the Web browser is configured correctly for the business rules manager, perform the following steps.

#### Procedure

1. Make sure that scripting is enabled in the Web browser.

The business rules manager requires scripting to function.

2. Make sure that cookies are enabled.

When necessary, cookies are used to track the session when you are using the business rules manager. Therefore, enable cookies on your browser when tracking sessions. Contact your system administrator if you enable cookies.

---

## Configuring the relationship service

After installing the product, you need to set the configuration properties for the relationship service.

## Before you begin

**Required security role for this task:** When security and role-based authorization are enabled, you must be logged in as a configurator or an administrator to perform this task. Any WebSphere security role can view this configuration.

## About this task

To set the data source and query block size (relationship instance count) properties for the relationship service, perform the following steps.

### Procedure

1. Ensure that the administrative console is running.
2. In the navigation pane, click **Integration Applications > Relationship Manager**.
3. Click **Relationship Services configuration**.  
The configuration tabbed page displays, showing the name and version (read-only) of the currently installed relationship service.
4. In the **Query block size (relationship instance count)** field, specify the maximum cache that the relationship service should set aside for relationship queries. This setting determines the size of the query results set. By default, 5000 relationship instances are read at once. This field controls the server size memory usage and provides the administrator with a level of control over how much memory resource is consumable by any given query.
5. In the **Data source** field, specify the default data source for the relationship service by entering the Java Naming and Directory Interface (JNDI) name of a data source defined at the cell level. This is where the tables for the relationship service are stored. Each relationship-related schema is created in this data source by default.
6. You then have the following options:
  - Click **OK** to save your changes and return to the previous page.
  - Click **Reset** to clear your changes and restore the currently configured values or most recently saved values.
  - Click **Cancel** to discard any unsaved changes on the page and return to the previous page.

---

## Configuring extended messaging resources

Use the administrative console to configure resources needed by the extended messaging service and the applications that use the service. You can enable the extended messaging service, configure listener port extensions to handle late responses, and add or modify input and output ports for applications that use extended messaging.


*Extended messaging* enables container-managed messaging. It extends the base Java Message Service (JMS) support, the Enterprise Java Bean (EJB) component model, and support for EJB 2.0 message-driven beans to allow use of the existing container-managed persistence and transactional behavior.

Extended messaging uses the bean-managed messaging implementation to provide the JMS interfaces, which ensures that both bean-managed and extended messaging use consistent JMS support. JMS usage is simplified since its support is managed by the extended messaging service.

For a complete description of extended messaging, see the following articles in the WebSphere Business Integration Server Foundation information center:

- Extended messaging: Overview
- Using extended messaging in applications

**Important:** Before using the Extended Messaging Service, note the following limitations:

- The Extended Messaging Service feature was deprecated in WebSphere Process Server 6.0.x and is no longer available for application use as of WebSphere Process Server 6.2, except when managing any 6.0.x nodes that exist in a cell during migration. Replace any existing applications which depend on Extended Messaging services with ones that use standard JMS APIs, or equivalent messaging technologies.
-  The Extended Messaging Service feature is not supported on i5/OS systems.

## Enabling the Extended Messaging Service

Enable the Extended Messaging Service to provide runtime support for container-managed messaging (extended messaging). Use the Extended Messaging Service page to specify whether this service starts automatically when the application server starts or whether it must be started manually.

### About this task

**Important:** The Extended Messaging Service feature was deprecated in WebSphere Process Server 6.0.x and is no longer available for application use as of WebSphere Process Server 6.2, except when managing any 6.0.x nodes that exist in a cell during migration. Replace any existing applications which depend on Extended Messaging services with ones that use standard JMS APIs, or equivalent messaging technologies.

**Required security role for this task:** When security and role-based authorization are enabled, you must log in as an administrator or configurator to perform this task.

To enable the Extended Messaging Service, perform the following steps.

### Procedure

1. Ensure that the administrative console is running.
2. Click **Servers > Application servers > *server\_name* > Extended Messaging Service** to display the Extended Messaging Service page.
3. If you want to enable the Extended Messaging Service to start automatically with server startup, select the **Enable service at server startup** check box. If you want to start the service manually, ensure the check box is cleared.
4. Click **OK**.
5. When prompted, click **Save** on the console task bar to save your changes to the master repository.
6. If you are using the WebSphere MQSeries bindings transport in your configuration, set the value of the MQ\_INSTALL\_ROOT environment variable as follows:
  - a. From within the administrative console, click **Environment → WebSphere Variables**.

- b. Click `MQ_INSTALL_ROOT` to display the configuration page for the environment variable.
  - c. In the **Value** field, delete the default value (`${WAS_INSTALL_ROOT}/lib/WMQ`) and replace it with the explicit installation path (for example, `D:/IBM/WebSphereMQ` on a Windows system).
  - d. Click **OK**.
7. Stop and restart the application server in order for the changes to take effect.

## Configuring listener port extensions to handle late responses

To enable a listener port to handle late responses, configure an extension that specifies how often the port checks for responses and how long it waits for those responses.

### About this task

**Important:** The Extended Messaging Service feature was deprecated in WebSphere Process Server 6.0.x and is no longer available for application use as of WebSphere Process Server 6.2, except when managing any 6.0.x nodes that exist in a cell during migration. Replace any existing applications which depend on Extended Messaging services with ones that use standard JMS APIs, or equivalent messaging technologies.

Late responses occur when the messaging infrastructure delays a response to a message sent by a sender bean, thereby preventing the application from receiving that response. Extended messaging can retrieve these late response messages and pass them to a message-driven bean provided by the application to handle late responses.

**Required security role for this task:** When security and role-based authorization are enabled, you must log in as an administrator or configurator to perform this task.

To create and enable a listener port extension that handles late responses, perform the following steps.

### Procedure

1. Ensure you have a listener port defined and configured, and that you have deployed the sender bean with the **Handle late responses** option enabled.

**Note:** For more information about deploying a sender bean with this option enabled, refer to the WebSphere Business Integration Server Foundation Information Center.

2. From the administrative console, click **Servers > Application servers > *server\_name* > Extended Messaging Service > Listener Port Extensions**.
3. From the Listener Port Extensions page, click **New** to create a new listener port extension.
4. From the New Listener Port Extension page, select the **Enabled** check box to enable the extension and late response handling.
5. In the **Request Interval** field, either accept the default value or specify a new value to indicate how often the listener port checks for late responses.
6. In the **Request Timeout** field, either accept the default value or specify a new value to indicate how long the listener port waits for a late response. The listener port discards any responses received after the specified timeout value.

7. Use the **Listener Ports** drop-down menu to specify the listener port to use for the extension.
8. Click **OK**.
9. When prompted, click **Save** on the console task bar to save your changes to the master repository.
10. Stop and restart the application server in order for the changes to take effect.

## What to do next

After you create a listener port extension, you can modify its configuration as necessary by using the Listener Port Extensions settings page.

## Selecting extended messaging providers

Select the extended messaging provider you want to administer by clicking the appropriate scope on the Extended Messaging Provider page. Each scope (cell, node, and server) that contains applications that use extended messaging has its own extended messaging provider to manage resources. You can create, modify or delete input ports, output ports, or other custom properties for each provider.

### About this task

**Important:** The Extended Messaging Service feature was deprecated in WebSphere Process Server 6.0.x and is no longer available for application use as of WebSphere Process Server 6.2, except when managing any 6.0.x nodes that exist in a cell during migration. Replace any existing applications which depend on Extended Messaging services with ones that use standard JMS APIs, or equivalent messaging technologies.

**Required security role for this task:** When security and role-based authorization are enabled, you must be logged in as administrator, operator, configurator, or monitor to perform this task.

To select the extended messaging provider you want to administer, perform the following steps.

### Procedure

1. From the administrative console, click **Resources > Extended Messaging Provider**.
2. From the Extended Messaging Provider page, select the appropriate scope for the extended messaging provider you want to administer.
  - **Cell:** The most general scope. Extended messaging resources defined at the cell scope are visible from all nodes and servers, unless they have been overridden.
  - **Node:** Extended messaging resources defined at the node scope override any duplicates defined at the cell scope. They are visible to all servers on the same node, unless they have been overridden at a server scope on that node.
  - **Server:** Extended messaging resources defined at the server scope override any duplicate definitions defined at the cell or parent node scope. They are visible only to a specific server.

For detailed information about scopes, see the WebSphere Application Server Information Center.

3. Click **Apply**.



## Results

The administrative console updates the **Scope**, **Name**, and **Description** fields on the bottom of the page to reflect the values for the selected resource provider.

## What to do next

You can now create, modify or delete input ports, output ports, or other custom properties for the selected extended messaging provider.

## Configuring input ports

Use the administrative console to create new or modify existing input ports for each receiver bean that is constructed from a session bean. Input ports define properties for the receiving Java Message Service (JMS) destination, specify how to select and handle messages, and provide details for any required reply destinations.

## About this task

**Important:** The Extended Messaging Service feature was deprecated in WebSphere Process Server 6.0.x and is no longer available for application use as of WebSphere Process Server 6.2, except when managing any 6.0.x nodes that exist in a cell during migration. Replace any existing applications which depend on Extended Messaging services with ones that use standard JMS APIs, or equivalent messaging technologies.

You do not need to create input ports for receiver beans that are constructed from message-driven beans; the necessary details are associated with the deployed message-driven bean and the Message Listener Service.

**Required security role for this task:** When security and role-based authorization are enabled, you must be logged in as administrator or configurator to perform this task.

To add or modify an input port, perform the following steps.

### Procedure

1. From the administrative console, click **Resources > Extended Messaging Provider**.
2. From the Extended Messaging Provider page, select the appropriate scope for the resource provider you want to work with.
3. Click **Apply**.
4. Click **Input Ports** from the Additional Properties table.
5. From the Input Port collection page, do one of the following:
  - If you are creating a new input port, click **New**.
  - If you want to modify an existing input port, click the port name.
6. From the Input Port settings page, specify the appropriate properties for the input port.
7. Click **OK**.
8. When prompted, click **Save** on the console task bar to save your changes to the master repository.
9. Stop and restart the application server in order for the changes to take effect.

## Input port settings:

When you create a new input port or modify an existing input port, you must specify certain properties. Use the information in this topic to determine whether a property is optional or required and what data type it accepts.

**Important:** The Extended Messaging Service feature was deprecated in WebSphere Process Server 6.0.x and is no longer available for application use as of WebSphere Process Server 6.2, except when managing any 6.0.x nodes that exist in a cell during migration. Replace any existing applications which depend on Extended Messaging services with ones that use standard JMS APIs, or equivalent messaging technologies.

An input port has the following configuration properties:

**Scope** The scope at which the extended messaging provider is defined. The value represents the location of the configuration file. The administrative console automatically populates this field. You cannot edit the value.

**Name** The name of the input port, used for administrative purposes. This field requires a string value.

### JNDI Name

The Java Naming and Directory Interface (JNDI) name for the input port. This field requires a string value.

### Description

A description of the input port, used for administrative purposes. This field is optional, and it accepts a string value.

### Category

A category string to use when classifying or grouping the resource. This field is optional, and it accepts a string with a maximum of 30 ASCII characters.

### JMS Connection Factory JNDI Name

The JNDI name for the Java Message Service (JMS) connection factory used by the input port. This field requires a string value (for example, `jms/connFactory1`).

### JMS Destination JNDI Name

The JNDI name for the JMS destination used by the input port. This field requires a string value (for example, `jms/destn1`).

### JMS Acknowledgement Mode

The JMS mode that is used to acknowledge messages. This field is required for message-driven beans that use bean-managed transaction demarcation (in other words, the transaction type is set to Bean).

The following are valid values for this field:

- **Auto Acknowledge:** The session automatically acknowledges a message in either of the following cases:
  - When the session successfully returns from a call to receive a message
  - When the session calls a message listener to process the message and receives a successful response from that listener
- **Dups OK Acknowledge:** The session acknowledges only the delivery of messages. This can result in the delivery of duplicate messages if JMS fails.

The default mode is Auto Acknowledge.

### Destination Type

The JMS resource type. This field requires one of the following values: :

- Queue: The receiver bean receives messages from a queue destination.
- Topic: The receiver bean receives messages from a topic destination.

The default value is Queue.

### Subscription Durability

Specifies whether a JMS topic subscription is durable. This field is required if the JMS destination type is a topic. The following are valid values for this field:

- Durable: A subscriber registers a durable subscription with a unique identity that is retained by JMS. Subsequent subscriber objects with the same identity resume the subscription in the state in which it was left by the previous subscriber. If there is no active subscriber for a durable subscription, JMS retains the subscription's messages until they are received or they expire.
- NonDurable: Nondurable subscriptions last for the lifetime of their subscriber. A client sees the messages published on a topic only while its subscriber is active. If the subscriber is inactive, the client misses the messages published on its topic.

The default value is NonDurable.

### Reply JMS Connection Factory JNDI Name

The JNDI name of the JMS connection factory that is used for replies. This field requires a string value (for example, jms/connFactory1).

### Reply JMS Destination JNDI Name

The JNDI name of the JMS destination that is used for replies. This field requires a string value (for example, jms/destn1).

## Configuring output ports

Use the administrative console to create new or modify existing output ports for sender beans. Output ports specify the properties sender beans need to define the destinations for sent messages. They also specify optional properties when responses are expected. Output ports are associated with sender beans at deployment time.

### About this task

**Important:** The Extended Messaging Service feature was deprecated in WebSphere Process Server 6.0.x and is no longer available for application use as of WebSphere Process Server 6.2, except when managing any 6.0.x nodes that exist in a cell during migration. Replace any existing applications which depend on Extended Messaging services with ones that use standard JMS APIs, or equivalent messaging technologies.

**Required security role for this task:** When security and role-based authorization are enabled, you must be logged in as administrator or configurator to perform this task.

To add or modify an output port, perform the following steps.

### Procedure

1. From the administrative console, click **Resources > Extended Messaging Provider**.

2. From the Extended Messaging Provider page, select the appropriate scope for the extended messaging provider you want to modify.
3. Click **Apply**.
4. Click **Output Ports** from the Additional Properties table.
5. From the Output Port collection page, do one of the following:
  - If you want to add a new output port, click **New**.
  - If you want to modify an existing output port, click the port name.
6. From the Output Port settings page, specify the appropriate properties for the output port.
7. Click **OK**.
8. When prompted, click **Save** on the console task bar to save your changes to the master repository.
9. Stop and restart the application server in order for the changes to take effect.

### Output port settings:

When you create a new output port or modify an existing output port, you must specify certain properties. Use the information in this topic to determine whether a property is optional or required and what data type it accepts.

**Important:** The Extended Messaging Service feature was deprecated in WebSphere Process Server 6.0.x and is no longer available for application use as of WebSphere Process Server 6.2, except when managing any 6.0.x nodes that exist in a cell during migration. Replace any existing applications which depend on Extended Messaging services with ones that use standard JMS APIs, or equivalent messaging technologies.

An output port has the following configuration properties:

**Scope** The extended messaging provider scope; the value represents the location of the configuration file. The administrative console automatically populates this field. You cannot edit the value.

**Name** The name of the output port, used for administrative purposes. This field requires a string value.

#### JNDI Name

The Java Naming and Directory Interface (JNDI) name for the output port. This field requires a string value.

#### Description

A description of the output port, used for administrative purposes. This field is optional, and it accepts a string value.

#### Category

A category string to use when classifying or grouping the resource. This field is optional. It accepts a string value with a maximum of 30 ASCII characters.

#### JMS Connection Factory JNDI Name

The JNDI name for the Java Message Service (JMS) connection factory used by the output port. This field requires a string value (for example, `jms/connFactory1`).

#### JMS Destination JNDI Name

The JNDI name for the JMS destination used by the output port. This field requires a string value (for example, `jms/destn1`).

### **JMS Delivery Mode**

The JMS mode used to deliver messages. You must select one of the following values for this field:

- Persistent: Messages put onto the destination are persistent.
- Nonpersistent: Messages put onto the destination are not persistent.

The default value is Persistent.

### **JMS Priority**

The message priority for the queue destination. This field requires an integer value from 0 to 9. The default value is 4.

### **JMS Time To Live**

The time, in milliseconds, a message remains in the queue. After the specified time elapses, the message expires.

This field requires an integer with a value from 0 to *n*:

- 0: Messages never time out.
- *n*: Messages time out after *n* milliseconds.

The default value is 0.

### **JMS Disable Message I.D.**

Specifies whether the system generates a JMS message ID. This is a required field; select one of the following values:

- Selected: The system does not generate JMS message IDs.
- Cleared: The system generates JMS message IDs automatically.

By default, JMS message IDs are generated.

### **JMS Disabled Message Timestamp**

Specifies whether the system generates a JMS message timestamp. This is a required field; select one of the following values:

- Selected: The system does not add message timestamps to sent messages.
- Cleared: The system automatically adds message timestamps to sent messages.

By default, the system adds message timestamps to sent messages.

### **Response JMS Connection Factory JNDI Name**

The JNDI name of the JMS connection factory that is used for responses handled by the output port. This field requires a string value (for example, `jms/connFactory1`).

### **Response JMS Destination JNDI Name**

The JNDI name of the JMS destination that is used for responses handled by the output port. This field requires a string value (for example, `jms/destn1`).

---

## **Configuring Common Event Infrastructure**

You can configure Common Event Infrastructure resources, or make changes to existing resources, using the server AdminTask object

### **About this task**

Common Event Infrastructure (CEI) can be installed with a default configuration that is fully functional on a stand-alone server configuration. You would do this

only when you create a stand-alone server profile using the Profile Management Tool. In all other cases, you should use the administrative console to configure CEI — such as when you are installing it in a network deployment environment or in a cluster — to ensure that the configuration is appropriate on your system.

You can also use the `wsadmin` command to configure CEI, or you can use the `admin` command to alter an existing CEI configuration. In either case, you would change the configuration of CEI by using the server `AdminTask` object to run administrative commands.

After changing CEI configuration, you must restart the server or cluster.

## Common Event Infrastructure components

Common Event Infrastructure components are installed as a set of applications, services, and resources on the server.

When you configure Common Event Infrastructure, a number of components are created and deployed on your server.

### Common Event Infrastructure service

A service installed into the server, that enables applications and clients to use Common Event Infrastructure. You can view the configuration of the Common Event Infrastructure service in the administrative console, as follows:

- For a server, select **Servers > Application Servers > *server\_name* > Business Integration > Common Event Infrastructure > Common Event Infrastructure Service**.
- For a cluster, select **Servers > Clusters > *cluster\_name* > Business Integration > Common Event Infrastructure > Common Event Infrastructure Service**.

If the check box labeled "Enable the event infrastructure server" is selected, then the service is installed and running or it will start after you restart your server or cluster. If it is cleared, then the service is not installed or will be uninstalled after you restart your server or cluster.

### Event service settings

A set of properties used by the event service that enable event distribution and persistence using the data store. Typically, no configuration is necessary for this resource, but you might need to create additional event service settings if you want to set up multiple event services in the same cell. To view the event service settings, click **Service integration > Event service > Event service settings**.

### Event messaging configuration

The resources that support asynchronous event transmission to the event service using the Java Messaging Service (JMS). The default messaging configuration uses the server embedded messaging. You can optionally configure an external JMS provider for event messaging.

### Event database

The event database is used to persistently store events received by the event service. The Derby database is included as part of the server, but is not recommended for use in production environments. Instead, you can configure an external event database on the following products: DB2, Oracle, SQLServer, and Informix.

### Event filter plug-in

A filter plug-in is used to filter events at the source using XPath event selectors. To configure the filter properties, click **Service Integration > Common Event Infrastructure > Event Emitter Factories > Event Filter Settings**.

### Emitter factory

An emitter factory is an object used by event sources to create emitters; an emitter is used to send events to the event service. The properties of an emitter factory affect the behavior of any emitter that is created using that emitter factory. To view the available emitter factories, click **Service Integration > Common Event Infrastructure > Event Emitter Factories**.

### Event service transmission

An event service transmission is an object defining properties that determine how emitters access the event service synchronously using EJB calls; these properties are used by emitter factories when creating new emitters. You can view or change the available event service transmissions from the emitter factory settings.

### JMS transmission

A JMS transmission is an object that defines properties that determine how emitters access the event service asynchronously using a JMS queue; these properties are used by emitter factories when creating new emitters. You can view or change the available JMS transmissions from the emitter factory settings.

### Event group

An event group is a logical collection of events used to categorize events according to their content. When querying events from the event service or subscribing to event distribution, an event consumer can specify an event group to retrieve only the events in that group. Event groups can also be used to specify which events should be stored in the persistent data store. To view the available event groups in the administrative console, click **Service integration > Common Event Infrastructure > Event service > Event services > *event\_service* > Event groups**.

## Configuring the Common Event Infrastructure using the Administrative Console

Configure Common Event Infrastructure by using the server administrative console.

### About this task

Open the Common Event Infrastructure Server panel of administrative console:

If you are configuring a server, select **Servers > Application servers > *server\_name* > Business Integration > Common Event Infrastructure > Common Event Infrastructure Server**.

If you are configuring a cluster, click **Servers > Clusters > *cluster\_name* > Business Integration > Common Event Infrastructure > Common Event Infrastructure Server**.

### Procedure

1. Enable the deployment of the Common Event Infrastructure enterprise application by selecting the check box labeled **Enable the event infrastructure server**. If the server has already been configured, then you can enable or disable it by selecting or clearing the check box. If the enable check box is

cleared then Common Event Infrastructure has not been configured, or has had a previous configuration disabled but the server has not been restarted. An information message shows you whether this deployment target has Common Event Infrastructure configured. If the server has already been configured, you may change the data source settings for the event database and/or the message store.

**Note:** If you select the check box to enable the Common Event Infrastructure server and the server has not yet been configured, then the parameters shown will be used to configure it unless you change them.

- If this is the first time you have performed the configuration, then the event data source tables are created on the common database. If there is already a Common Event Infrastructure server configuration, then you need to create a new database.
- The messaging service is created under a unique schema under the common database.

When the server/cluster on which Common Event Infrastructure has been configured is restarted, then the new changes take effect.

2. Configure (or change the current settings for an existing configuration of) the event database by using one of the following methods to populate the fields with the appropriate settings.
  - Click **Edit** for a database configuration panel with a more extensive list of options than those listed on the panel.
  - Use the fields on the panel to enter the information, as outlined below:
    - a. **Database Instance** – the name of the database you will use to store events.
    - b. **Create Tables** – select this check box if you want to create the database tables on the event database.

**Note:** If you are configuring Common Event Infrastructure to use a database on another server, then you will not be able to create the tables using this control. Instead, you will have to use the database scripts that will be generated after you complete the rest of this configuration. In this case, you can click **Edit** to show the data source detail panel, which will tell you the location of the database creation scripts.

- c. **Username** and **Password** – for authenticating into the event database.
- d. **Server** – name of the server where the event database is located.
- e. **Provider** – choose a provider for your database from the menu.

**Note:** The **Schema** field is activated only if the database is created using DB2 on an iSeries or z/OS platform. In all other cases, the schema field will be disabled.

**Important:** If the tables already exist on the target database, then the configuration may fail.

3. Select whether the Common Event Infrastructure bus will be **Local** on the server, or **Remote** and reside on another server. If you choose remote, then select the remote location from the menu or click **New** to create a new remote bus.
4. Configure Common Event Infrastructure support for messaging.
  - Click **Edit** for a database configuration panel with a more extensive list of options than those listed on the panel.
  - Use the fields on the panel to enter the information, as outlined below:



- a. **Database Instance** – enter the name of the database you will use to store messages.
  - b. **Schema** – enter a name for the schema, or accept the default name given.
  - c. **Username** and **Password** – for authenticating into the messaging database.
  - d. **Server** – name of the server where the messaging database is located.
  - e. **Provider** – choose a provider for your database from the menu.
5. Create a messaging authentication alias for the Common Event Infrastructure bus.
    - a. Select **Additional Properties > JMS Authentication Alias**.
    - b. Enter the user ID and password you will use for secure communications across the System Integration Bus. You can accept the default configured values of "CEI" for both the user ID and password if security is disabled. If security has been enabled, then user ID and password will be used for the bus authentication. Consequently, you should to change the user ID and password to secure the system.
    - c. Click **OK**.
  6. Click **OK** or **Apply**.
  7. Restart your server or cluster.

## Results

All of the major parts of Common Event Infrastructure will now be configured and running on your server or cluster. These include the event data store, the messaging engine, and the event application. This single panel can be used in place of many commands and steps you would otherwise use to configure Common Event Infrastructure.

## What to do next

After you have restarted your server or cluster, you will be able to store service component events that are emitted from your applications. You can now change the runtime properties of the Common Event Infrastructure server by selecting the **Common Event Infrastructure Destination** panel. You can choose whether to start the Common Event Infrastructure server at startup, and specify the emitter factory JNDI name where the events will be sent.

## Deploying the Common Event Infrastructure application

Before you can use Common Event Infrastructure, you must first deploy the event service and associated resources in the server runtime environment.

### About this task

The Common Event Infrastructure enterprise application includes the runtime components of the event service and the default messaging configuration used for asynchronous event submission.

To deploy the event service:

#### Procedure

From the wsadmin tool, run the **deployEventService** administrative command in batch or interactive mode. The parameters of the **deployEventService** administrative command are as follows:

**nodeName**

The name of the node where the event service should be deployed. This parameter is optional; if you do not specify a node name, the default is the current node. If you specify a node name, then you must also specify the server name using the **serverName** parameter. This parameter is not valid if you are deploying the event service in a cluster.

**serverName**

The name of the server where the event service should be deployed. This parameter is required only if you specify a node; it is not valid if you are deploying the event service in a cluster.

**clusterName**

The name of the cluster where the event service should be deployed. This parameter is optional and must not be specified if you are deploying at the node or server scope.

**enable**

Indicates whether the event service should be started automatically when the server starts. The default value is true.

**Results**

After the administrative command completes, the Common Event Infrastructure event service and default messaging configuration are deployed at the specified scope.

**What to do next**

If WebSphere security is enabled, you must also configure the JMS authentication alias and password using the **setEventServiceJmsAuthAlias** administrative command.

If you are deploying the event service in a cluster, you must also manually configure the event database.

**Related reference**

 [deployEventService command](#)

Use the `deployEventService` command to deploy the event service application onto your server.

 [setEventServiceJmsAuthAlias command](#)

Use the `setEventServiceJmsAuthAlias` command to set or update the JMS authentication alias associated with the event service on your server.

**Deploying Common Event Infrastructure in a cluster**

There are several ways you can deploy Common Event Infrastructure resources in a cluster environment.

**Deploying Common Event Infrastructure in an existing cluster:**

You can deploy the event service application in an existing cluster.

**About this task**

Deploying the event service application in a cluster is essentially the same as deploying the application on a stand-alone server. However, in a cluster environment, no default event database is configured.

To deploy and configure Common Event Infrastructure in a cluster environment:

### Procedure

1. Run the **deployEventService** administrative command as you would for a stand-alone server, but specifying the name of the cluster. Use the `clusterName` parameter to specify the cluster.
2. On the deployment manager system, run the database configuration administrative command. Specify the cluster name using the `clusterName` parameter. This command generates the database configuration script.
3. Copy the generated database configuration script to the database system.
4. Run the database configuration script on the database system to create the event database.
5. On the deployment manager system, run the **enableEventService** command to enable the event service. Use the `clusterName` parameter to specify the name of the cluster.

### Creating a cluster by converting an existing Common Event Infrastructure server:

You can create a new cluster by converting an existing stand-alone server that is already configured with Common Event Infrastructure.

### Before you begin

Before you can convert the existing server, make sure it is fully configured for Common Event Infrastructure. This includes deploying the event service application and configuring the event database.

### About this task

To create the cluster:

### Procedure

1. Follow the typical WebSphere process for converting a stand-alone server into the first member of a new cluster. When the server is converted, the following steps take place:
    - Common Event Infrastructure resources available at the scope of the server are moved to the new cluster scope.
- Default database:** If the existing server is configured with the default Derby database, the database resources are not moved to the cluster scope. Instead, these resources are removed. The default database configuration is not supported in a cluster. In this situation, the event service in the cluster is disabled by default.
- The deployed event service application target list is modified to remove the converted server and add the new cluster.
2. Optional: If the converted server was configured with the default Derby database, you must configure a new event database for the cluster and then enable the event service:
    - a. On the deployment manager system, run the database configuration administrative command. Specify the cluster name using the `clusterName` parameter. This command generates the database configuration script.
    - b. Copy the generated database configuration script to the database system.

- c. Run the database configuration script on the database system to create the event database.
- d. On the deployment manager system, run the **enableEventService** command to enable the event service. Use the `clusterName` parameter to specify the name of the cluster.

### Creating a cluster by using an existing Common Event Infrastructure server as a template:

You can create a new cluster by specifying an existing Common Event Infrastructure server as a template.

#### Before you begin

Before you can create a cluster using this method, you must have an existing server that is fully configured for Common Event Infrastructure. This includes deploying the event service application and configuring the event database.

#### About this task

To create the cluster:

#### Procedure

1. Follow the typical WebSphere process for creating a new cluster, using the existing Common Event Infrastructure server as a template for the first cluster member. When the first member is created, the following steps take place:
  - Common Event Infrastructure resources available at the scope of the existing server are copied to the new cluster scope.  
  
**Default database:** If the existing server is configured with the default Derby database, the database resources are not copied to the cluster scope. The default database configuration is not supported in a cluster. In this situation, the event service in the cluster is disabled by default.
  - The deployed event service application target list is modified to include the new cluster.
2. Optional: If the existing server was configured with the default Derby database, you must configure a new event database for the cluster and then enable the event service:
  - a. On the deployment manager system, run the database configuration administrative command. Specify the cluster name using the `clusterName` parameter. This command generates the database configuration script.
  - b. Copy the generated database configuration script to the database system.
  - c. Run the database configuration script on the database system to create the event database.
  - d. On the deployment manager system, run the **enableEventService** command to enable the event service. Use the `clusterName` parameter to specify the name of the cluster.

## Configuring event messaging

You can modify the messaging configuration used for JMS transmission of events to the event service.

## About this task

You will create the messaging infrastructure for Common Event Infrastructure when you use the administrative console panel to configure Common Event Infrastructure on a server. Generally, the messaging configuration will use the default messaging provider and create a single JMS queue for asynchronous transmission of events to the event service. You can, if necessary, modify this messaging configuration.

## Configuring additional JMS queues

If you are using the default event messaging configuration, you can add additional JMS queues for transmission of events to the event service.

## About this task

To configure an additional JMS queues using the default messaging configuration, you can set up multiple JMS queues that are routed to the service integration bus queue destination. The Common Event Infrastructure service integration bus queue destination depends upon the scope at which the event service is deployed:

Scope	Service integration bus queue destination
Server	<code>node.server.CommonEventInfrastructureQueueDestination</code>
Cluster	<code>cluster.CommonEventInfrastructureQueueDestination</code>

For more information about service integration bus configuration, refer to the documentation.

## Configuring event messaging using an external JMS provider

If you do not want to use the default embedded messaging configuration for event transmission, you can configure asynchronous message transport to use an external Java Messaging Service (JMS) provider.

## Before you begin

Before you can configure event messaging using an external JMS provider, you must first create a JMS queue and connection factory using the appropriate interfaces for your JMS provider. You must also create a listener port or activation specification.

## About this task

To configure event messaging using an external JMS provider:

### Procedure

From the wsadmin tool, run the **deployEventServiceMdb** administrative command in batch or interactive mode. The parameters of the **deployEventServiceMdb** command are as follows:

#### **applicationName**

The application name of the event service message-driven bean to be deployed. This parameter is required.

#### **nodeName**

The name of the node where the event service message-driven bean should be deployed. If you specify a node name, you must also specify a server name.

This is an optional parameter; the default value is the current node. Do not specify this parameter if you are deploying the application in a cluster.

**serverName**

The name of the server where the event service message-driven bean should be deployed. This parameter is required if you are deploying the application at server scope; otherwise it is optional. Do not specify a server name if you are deploying the application in a cluster.

**clusterName**

The name of the cluster where the event service message-driven bean should be deployed. Specify this parameter only if you are deploying the application in a cluster.

**listenerPort**

The name of the listener port that should be used by the event service message-driven bean to publish events. The specified listener port must already exist. You must specify either a listener port or an activation specification, but not both.

**activationSpec**

The JNDI name of the activation specification that should be used by the event service message-driven bean to publish events. The specified activation specification must already exist. You must specify either a listener port or an activation specification, but not both.

**qcfJndiName**

The JNDI name of the JMS queue connection factory to be used by the event service message-driven bean. This parameter is required if you specify an activation specification; otherwise it is optional. If you specify a queue connection factory and a listener port, the queue connection factory must match the one configured for the listener port.

**Results**

The **deployEventServiceMdb** administrative command deploys the message-driven bean for the event service, configured for the specified listener port or activation specification. It also creates an emitter factory and JMS transmission using the external JMS configuration. Applications can use either the default emitter factory (which is configured to use the default messaging configuration) or the new emitter factory (which uses the external JMS provider).

**What to do next**

If you want to set up more than one JMS queue to the event service, you can run this command multiple times, specifying different enterprise application names and JMS queues. Each time you run the script, it deploys an additional message-driven bean and configures new resources to use the specified JMS queue.

**Configuring the JMS authentication alias**

If WebSphere security is enabled and you want to use asynchronous JMS messaging to submit events to the event service, you must configure the JMS authentication alias.

**About this task**

To configure the JMS authentication alias:

**Procedure**

From the wsadmin tool, run the **setEventServiceJmsAuthAlias** administrative command in batch or interactive mode. The parameters of the **setEventServiceJmsAuthAlias** command are as follows:

**userName**

The name of the user to be used for the JMS authentication alias. This parameter is required.

**password**

The password of the user to be used for the JMS authentication alias. This parameter is required.

**nodeName**

The name of the node where you want to update or create the JMS authentication alias. If you specify a node name, you must also specify a server name. Do not specify a node name if you are configuring the authentication alias in a cluster.

**serverName**

The name of the server where you want to update or create the JMS authentication alias. This parameter is required only if you specify a node; it is not valid if you are configuring the authentication alias in a cluster.

**clusterName**

The name of the cluster where you want to update or create the JMS authentication alias. Specify this parameter only if you are configuring the authentication alias in a cluster; if you specify a cluster name, do not specify a node or server name.

**Results**

The JMS authentication alias used by the event service objects is updated at the specified scope; if the authentication does not exist, it is created using the specified values.

## Configuring the event database

You can configure the event data source using commands that are specific for each supported database product.

### About this task

The event database is required to support persistence of events. If you did not use the Common Event Infrastructure configuration panel in the administrative console, you still have the option of creating the event database by using the commands described here.

### Event database limitations

Some limitations apply to configurations of the event database using certain database software.

Refer to the following table to see which limitations might apply to your environment.

Table 140. Event database limitations

Database type	Limitations
Oracle	<ul style="list-style-type: none"> <li>• The Oracle 10g JDBC thin driver imposes some size restrictions for string values if you are using a Unicode character set. This can result in an Oracle ORA-01461 error when events containing large values (such as a long message attribute) are stored in the event database. For more information about this restriction, refer to the Oracle 10g documentation. To avoid this problem, use the Oracle 10g OCI driver or the Oracle 9i thin driver.</li> <li>• Oracle database software treats a blank string as a NULL value. If you specify a blank string as an event attribute value, that string is converted to a NULL when it is stored in an Oracle event database.</li> </ul>
Informix	<ul style="list-style-type: none"> <li>• The JDBC 3.0 driver (or later) is required. Previous versions of the JDBC driver do not provide full support for the required XA transactions.</li> <li>• The database configuration and removal scripts generated by the <b>configEventServiceInformixDB</b> administrative command require the <b>dbaccess</b> command in order to run SQL scripts. This command might be available only on the Informix server. Therefore, if the Informix server is on a different system from the WebSphere server, the database configuration scripts might need to be copied to the Informix server and run locally.</li> </ul>
SQL Server	<ul style="list-style-type: none"> <li>• The SQL Server database must be configured to use mixed authentication mode. Trusted connections are not supported.</li> <li>• The XA stored procedures must be installed. These stored procedures are provided with the JDBC driver from Microsoft Corporation.</li> <li>• The sqljdbc.dll file must be available in a directory specified on the PATH statement. This file is provided with the JDBC driver from Microsoft Corporation.</li> <li>• The Distributed Transaction Coordinator (DTC) service must be started.</li> </ul>

### Configuring a Derby event database

You can configure a Derby event database at the server or cluster scope on a Linux, UNIX, or Windows system.



## About this task

There are two types of Derby databases that you can use for the event database: Derby Embedded and Derby Network. Both types are shipped with WebSphere Application Server, but they have limited functionality that is not suitable for a production environment. You should, therefore, use Derby as the event database only for purposes such as development or testing. For more information on the Derby databases, see the WebSphere Application Server documentation (linked to at the bottom of this page).

Derby Embedded can only be used with a stand-alone server. Consequently, if you ever federate your stand-alone server to a cluster or ND environment, then you will need to completely re-configure your event data source with another database product. It will automatically start when you start the server.

Derby Network can be used in a clustered or ND environment, although it should still be avoided in use with actual production systems. You need to manually start the database to use it with the server.

To configure a Derby event database:

### Procedure

1. Start the wsadmin tool.
2. Use the AdminTask object to run the **configEventServiceDerbyDB** administrative command in batch or interactive mode. The minimum required parameters of the **configEventServerDerbyDB** command are as follows:

#### **createDB**

Indicates whether the administrative command should create and run the database configuration scripts. Specify true or false. If this parameter is set to false, the scripts are created but are not run. You must then run the database configuration scripts to complete the database configuration.

#### **nodeName**

The name of the node that contains the server where the event service data source should be created. If you specify a node name, you must also specify a server name. You must specify one of the following:

- node name and server name
- cluster name

#### **serverName**

The name of the server where the event service data source should be created.

#### **clusterName**

The name of the cluster where the event service data source should be created. If you specify a cluster name, do not specify node and server names.

Other parameters might be required for your environment. For a complete list of parameters and usage information, refer to the help for the **configEventServiceDerbyDB** administrative command.

## Results

The administrative command creates the required data source at the specified scope; if you specified true for the createDB parameter, the command also runs the generated database configuration script to create the database.

The generated database configuration scripts are stored by default in the *profile\_root/databases/event/node/server/dbscripts/derby* directory. (In a Network Deployment environment, these scripts are stored under the deployment manager profile directory.) If you specified a value for the optional `outputScriptDir` parameter, the scripts are stored in that location instead. You can use these scripts to manually configure the event database at any time.

## Configuring a DB2 event database (Linux, UNIX, and Windows systems)

You can configure an external event database using DB2 Universal Database on a Linux, UNIX, or Windows system.

### About this task

To configure a DB2 event database on a Linux, UNIX, or Windows system:

#### Procedure

1. Start the `wsadmin` tool.
2. Use the `AdminTask` object to run the `configEventServiceDB2DB` administrative command in batch or interactive mode. The minimum required parameters of the `configEventServiceDB2DB` command are as follows:

#### `createDB`

Indicates whether the administrative command should create and run the database configuration scripts. Specify `true` or `false`. If this parameter is set to `false`, the scripts are created but are not run. You must then run the database configuration scripts to complete the database configuration.

#### `nodeName`

The name of the node that contains the server where the event service data source should be created. If you specify a node name, you must also specify a server name. You must specify one of the following:

- Node name and server name
- Cluster name

#### `serverName`

The name of the server where the event service data source should be created.

#### `clusterName`

The name of the cluster where the event service data source should be created. If you specify a cluster name, do not specify node and server names.

#### `jdbcClassPath`

The path to the JDBC driver. Specify only the path to the driver file; do not specify the file name.

#### `dbHostName`

The host name of the server where the database is installed.

#### `dbUser`

The DB2 user ID to use when creating the event database. The specified user ID must have sufficient privileges to create and drop databases.

#### `dbPassword`

The DB2 password to use.

Other parameters might be required for your environment. For a complete list of parameters and usage information, refer to the help for the `configEventServiceDB2DB` administrative command.

## Results

The administrative command creates the required data source at the specified scope; if you specified `true` for the `createDB` parameter, the command also runs the generated database configuration script to create the database.

The generated database configuration scripts are stored by default in the `profile_root/databases/event/node/server/dbscripts/db2` directory. (In a Network Deployment environment, these scripts are stored under the deployment manager profile directory.) If you specified a value for the optional `outputScriptDir` parameter, the scripts are stored in that location instead. You can use these scripts to manually configure the event database at any time.

## Configuring a DB2 database on a z/OS system

You can configure an event database on a z/OS system using DB2 database software.

### Before you begin

To configure the DB2 database from a remote client, you must have the DB2<sup>®</sup> Connect<sup>™</sup> product installed with the latest fix packs.

### About this task

To configure the event database:

#### Procedure

- Linux

UNIX

Windows

 If you are configuring the z/OS event database from a Linux, UNIX, or Windows client system, follow these steps to create and catalog the database:
  - On the z/OS system, use the DB2 administration menu to create a new subsystem.
  - Optional: Create the storage group you want to use for the event database. You can also use an existing storage group (for example, `sysdeflt`).
  - Enable the 4K, 8K, and 16K buffer pools you want to use for the event database.
  - Grant the necessary permissions to the user ID you want the data source to use. This user ID must have rights to access the database and storage group you created; it must also have permission to create new tables, table spaces, and indexes for the database.
  - Catalog the remote database. Run the following commands, either in a script or in a DB2 command-line window:

```
catalog tcpip node zosnode remote hostname server IP_port
      system db_subsystem
catalog database db_name as db_name at node zosnode authentication DCS
```

For more information about how to catalog a nodes and databases, refer to the DB2 Connect documentation.
  - Verify that you can establish a connection to the remote subsystem. You can check this by running the following command:

```
db2 connect to subsystem user userid using password
```

g. Bind to the host database. Run the following commands:

```
db2 connect to db_name user userid using password
db2 bind db2_root/bnd/@ddcsmvs.1st blocking all sqlerror continue message
      mvs.msg grant public
db2 connect reset
```

For more information about binding a client to a host database, refer to the DB2 Connect documentation.

2. On the WebSphere system, start the wsadmin tool.
3. Use the AdminTask object to run the **configEventServiceDB2ZOSDB** administrative command in batch or interactive mode. The minimum required parameters of the **configEventServiceDB2ZOSDB** command are as follows:

#### **createDB**

**Linux** **UNIX** **Windows** Indicates whether the administrative command should create and run the database configuration scripts. This parameter applies only if you are running the administrative command from a Linux, UNIX, or Windows client system. Specify true or false.

If this parameter is set to false, or if you are running the command on the z/OS system, the scripts are created but are not run. You must then run the database configuration scripts to complete the database configuration.

#### **nodeName**

The name of the node that contains the server where the event service data source should be created. If you specify a node name, you must also specify a server name. You must specify one of the following:

- Node name and server name
- Cluster name

#### **serverName**

The name of the server where the event service data source should be created.

#### **clusterName**

The name of the cluster where the event service data source should be created. If you specify a cluster name, do not specify node and server names.

#### **jdbcClassPath**

The path to the JDBC driver. Specify only the path to the driver file; do not specify the file name.

#### **dbHostName**

The host name of the server where the database is installed.

#### **dbUser**

The DB2 user ID to use when creating the event database. The specified user ID must have sufficient privileges to create and drop databases.

#### **dbPassword**

The DB2 password to use.

Other parameters might be required for your environment. For a complete list of parameters and usage information, refer to the help for the **configEventServiceDB2ZOSDB** administrative command.

## **Results**

The administrative command creates the required data source at the specified scope; if you are running the command on a Linux, UNIX, or Windows DB2 client

and you specified true for the createDB parameter, the command also runs the generated database configuration script to create the database. On a z/OS system, you must use the SQL Processor Using File Input (SPUFI) facility to run the generated DDL files. The DDL files are stored in the *profile\_root/databases/event/node/server/db2zos/ddl* directory.

The generated database configuration scripts are stored by default in the *profile\_root/databases/event/node/server/dbscripts/db2zos* directory. (In a Network Deployment environment, these scripts are stored under the deployment manager profile directory.) If you specified a value for the optional outputScriptDir parameter, the scripts are stored in that location instead. You can use these scripts to manually configure the event database at any time.

## What to do next

After you have finished configuring the database, you can use the server administrative console to test the database configuration. To do this, navigate to the appropriate JDBC data source and select the **Test Connection** option.

## Configuring a DB2 database on an iSeries system

You can configure an event database on an iSeries system using DB2 database software.

### About this task

If you are using a local iSeries server to configure a remote iSeries server, you must specify a remote database entry on your local server as an alias to the target database. To configure the event database:

#### Procedure

1. Start the wsadmin tool.
2. Use the AdminTask object to run the **configEventServiceDB2iSeriesDB** administrative command in batch or interactive mode. The minimum required parameters of the **configEventServiceDB2iSeriesDB** command are as follows:

#### **createDB**

Indicates whether the administrative command should create and run the database configuration scripts. Specify true or false. If this parameter is set to false, the scripts are created but are not run. You must then run the database configuration scripts to complete the database configuration.

**Limitation:** The administrative command can automatically run the database configuration script only on the iSeries system. If you are running the command on a client system, an error will be returned.

#### **nodeName**

The name of the node that contains the server where the event service data source should be created. If you specify a node name, you must also specify a server name. You must specify one of the following:

- Node name and server name
- Cluster name

#### **serverName**

The name of the server where the event service data source should be created.

**clusterName**

The name of the cluster where the event service data source should be created. If you specify a cluster name, do not specify node and server names.

**toolboxJdbcClassPath**

The path to the IBM Toolbox for Java DB2 JDBC driver. Use this parameter only if you want to use the Toolbox for Java driver instead of the native JDBC driver. Specify only the path to the driver file; do not include the file name.

**nativeJdbcClassPath**

The path to the DB2 for iSeries native JDBC driver. Use this parameter only if you want to use the native JDBC driver instead of the Toolbox for Java driver. Specify only the path to the driver file; do not include the file name.

**dbHostName**

The host name of the server where the database is installed. This parameter is required if you are using the Toolbox for Java JDBC driver.

**dbUser**

The DB2 user ID to use when creating the event database. The specified user ID must have sufficient privileges to create and drop databases.

**dbPassword**

The DB2 password to use.

Other parameters might be required for your environment. For a complete list of parameters and usage information, refer to the help for the **configEventServiceDB2iSeriesDB** administrative command.

**Results**

The administrative command generates scripts to create the required database and data source at the specified scope. These scripts are stored by default in the *profile\_root/databases/event/node/server/dbscripts/db2iseries* directory. If you specified a value for the optional *outputScriptDir* parameter, the scripts are stored in that location instead. You can use these scripts to manually configure the event database at any time.

**What to do next**

If you ran the database configuration administrative command on a client system, you must transfer the generated scripts to the iSeries system and run them to create the required resources.

After you have finished configuring the database, you can use the server administrative console to test the database configuration. To do this, navigate to the appropriate JDBC data source and select the **Test Connection** option.

**Configuring an Informix event database**

You can configure an external event database using IBM Informix Dynamic Server on a Linux, UNIX, or Windows system.

**About this task**

To configure an Informix event database:

**Procedure**

1. Start the wsadmin tool.
2. Use the AdminTask object to run the **configEventServiceInformixDB** administrative command in batch or interactive mode. The minimum required parameters of the **configEventServiceInformixDB** command are as follows:

**createDB**

Indicates whether the administrative command should create and run the database configuration scripts. Specify true or false. If this parameter is set to false, the scripts are created but are not run. You must then run the database configuration scripts to complete the database configuration.

**Privileges:** If you specify true for this parameter, make sure your user ID has sufficient privileges for creating Informix databases, dbspaces, tables, views, indexes, and stored procedures.

**nodeName**

The name of the node that contains the server where the event service data source should be created. If you specify a node name, you must also specify a server name. You must specify one of the following:

- Node name and server name
- Cluster name

**serverName**

The name of the server where the event service data source should be created.

**clusterName**

The name of the cluster where the event service data source should be created. If you specify a cluster name, do not specify node and server names.

**jdbcClassPath**

The path to the JDBC driver. Specify only the path to the driver file; do not specify the file name.

**dbInformixDir**

The directory where the Informix database software is installed. This parameter is required only if you specified true for the createDB parameter.

**dbHostName**

The host name of the system where the database server is installed.

**dbServerName**

The Informix server name (for example, ol\_servername).

**dbUser**

The Informix database schema user ID that will own the event database tables. This must be a user ID with sufficient privileges to create databases and dbspaces. The WebSphere data source uses this user ID to authenticate the Informix database connection.

**dbPassword**

The password of the specified schema user ID.

Other parameters might be required for your environment. For a complete list of parameters and usage information, refer to the help for the **configEventServiceInformixDB** administrative command.

## Results

The administrative command creates the required data source at the specified scope; if you specified `true` for the `createDB` parameter, the command also runs the generated database configuration script to create the database.

The generated database configuration scripts are stored by default in the `profile_root/databases/event/node/server/dbscripts/informix` directory. (In a Network Deployment environment, these scripts are stored under the deployment manager profile directory.) If you specified a value for the optional `outputScriptDir` parameter, the scripts are stored in that location instead. You can use these scripts to manually configure the event database at any time.

**Running the scripts:** The database configuration and removal scripts generated by the `configEventServiceInformixDB` administrative command require the `dbaccess` command in order to run SQL scripts. This command might be available only on the Informix server. Therefore, if the Informix server is on a different system from the server, the database configuration scripts might need to be copied to the Informix server and run locally.

## Configuring an Oracle event database

You can configure an external event database using Oracle Database on a Linux, UNIX, or Windows system.

### Before you begin

Before you configure an Oracle event database, you must first create the database. The Oracle SID must already exist before you run the event database configuration command. The default SID for the event database is `event`.

### About this task

To configure an Oracle event database:

#### Procedure

1. Start the `wsadmin` tool.
2. Use the `AdminTask` object to run the `configEventServiceOracleDB` administrative command in batch or interactive mode. The minimum required parameters of the `configEventServiceOracleDB` command are as follows:

#### `createDB`

Indicates whether the administrative command should create and run the database configuration scripts. Specify `true` or `false`. If this parameter is set to `false`, the scripts are created but are not run. You must then run the database configuration scripts to complete the database configuration.

#### `nodeName`

The name of the node that contains the server where the event service data source should be created. If you specify a node name, you must also specify a server name. You must specify one of the following:

- Node name and server name
- Cluster name

#### `serverName`

The name of the server where the event service data source should be created.



**clusterName**

The name of the cluster where the event service data source should be created. If you specify a cluster name, do not specify node and server names.

**jdbcClassPath**

The path to the JDBC driver. Specify only the path to the driver file; do not specify the file name.

**oracleHome**

The ORACLE\_HOME directory. This parameter is required only if you specified true for the createDB parameter.

**dbPassword**

The password to use for the schema user ID created during the database configuration (the default user ID is ceiuser). This password is used to authenticate the Oracle database connection.

**sysUser**

The Oracle SYSUSER user ID. This user ID must have SYSDBA privileges.

**sysPassword**

The password for the specified SYSUSER user ID.

Other parameters might be required for your environment. For a complete list of parameters and usage information, refer to the help for the **configEventServiceOracleDB** administrative command.

**Results**

The administrative command creates the required data source at the specified scope; if you specified true for the createDB parameter, the command also runs the generated database configuration script to create the database.

The generated database configuration scripts are stored by default in the *profile\_root/databases/event/node/server/dbscripts/oracle* directory. (In a Network Deployment environment, these scripts are stored under the deployment manager profile directory.) If you specified a value for the optional outputScriptDir parameter, the scripts are stored in that location instead. You can use these scripts to manually configure the event database at any time.

**Configuring a SQL Server event database**

You can configure an external event database using Microsoft SQL Server Enterprise on a Windows system.

**About this task**

To configure a SQL Server event database:

**Procedure**

1. On the SQL Server database server system, create the directory used to contain the database files. By default, the files are written to the c:\program files\ibm\event\ceiinst1\sqlserver\_data directory. If you need to specify a different location, you must edit the generated database configuration script to modify the value of the ceiInstancePrefix parameter, and then run the script manually.
2. On the server system, start the wsadmin tool.

3. Use the AdminTask object to run the **configEventServiceSQLServerDB** administrative command in batch or interactive mode. The minimum required parameters of the **configEventServiceSQLServerDB** command are as follows:

**createDB**

Indicates whether the administrative command should create and run the database configuration scripts. Specify true or false. If this parameter is set to false, the scripts are created but are not run. You must then run the database configuration scripts to complete the database configuration.

**nodeName**

The name of the node that contains the server where the event service data source should be created. If you specify a node name, you must also specify a server name. You must specify one of the following:

- Node name and server name
- Cluster name

**serverName**

The name of the server where the event service data source should be created. If you specify a server name, you must also specify a node name.

**clusterName**

The name of the cluster where the event service data source should be created. If you specify a cluster name, do not specify node and server names.

**dbServerName**

The server name of the SQL Server database. This parameter is required only if you specified true for the createDB parameter.

**dbHostName**

The host name of the server where the SQL Server database is running.

**dbPassword**

The password to use for the user ID created to own the event database tables (the default user ID is ceiuser). The WebSphere data source uses this password to authenticate the SQL Server database connection.

**saUser**

A user ID with privileges to create and drop databases and users. This parameter is required only if you specified true for the createDB parameter.

**saPassword**

The password for the specified SA user.

Other parameters might be required for your environment. For a complete list of parameters and usage information, refer to the help for the **configEventServiceSQLServerDB** administrative command.

## Results

The administrative command creates the required data source at the specified scope; if you specified true for the createDB parameter, the command also runs the generated database configuration script to create the database.

The generated database configuration scripts are stored by default in the *profile\_root/databases/event/node/server/dbscripts/dbscripts/sqlserver* directory. (In a Network Deployment environment, these scripts are stored under the deployment manager profile directory.) If you specified a value for the optional outputScriptDir parameter, the scripts are stored in that location instead. You can use these scripts to manually configure the event database at any time.

## Manually running database configuration scripts

You can manually run the scripts generated by the database configuration administrative commands at any time.

### About this task

Database configuration is a two-step process. The database configuration administrative command first generates a database-specific script for your environment; this generated script then configures the event database and data sources. If you specify `true` for the `createDB` parameter when running the administrative command, both steps happen automatically.

However, if you specify `false` for the `createDB` parameter, you must complete the database configuration by manually running the generated script on the target system. You might need to run the script manually in any of the following situations:

- You need to configure the event database on a different system from the one where you ran the administrative command.
- You need to re-create the event database at a later time.
- You need to modify the default options used by the generated script before running it.

### Manually creating a Derby event database:

Use the `cr_event_derby` command to manually generate a database configuration script for a Derby event database

### About this task

To manually run the generated database configuration script for a Derby event database:

#### Procedure

1. On the server system, go to the directory containing the generated script. The default location is the `profile_root/databases/event/node/server/dbscripts/derby` directory; if you specified a value for the `outputScriptDir` parameter of the database configuration administrative command, the scripts are stored in that location instead.
2. Using an ASCII text editor, make any required modifications to the configuration script. The name of the script varies depending upon the operating system in use:
  - **Windows** Windows systems: `cr_event_derby.bat`
  - **Linux** **UNIX** Linux and UNIX systems: `cr_event_derby.sh`
  - **i5/OS** iSeries systems: `cr_event_derby`
3. Optional: If you are configuring the database on an iSeries system, start the Qshell interpreter.
4. Run the database creation script using the following syntax (remember to specify the file extension, if applicable):

```
cr_event_derby -p profile_path [-s server_name] [-c cluster_name]
```

The parameters are as follows:

**-p** *profile\_path*

The path to the WebSphere profile directory. This parameter is required.

**-s** *server\_name*

The name of the server. This parameter is required if you are configuring the database at the server scope.

**-c** *cluster\_name*

The name of the cluster. This parameter is required if you are configuring the database at the cluster scope.

For example, the following command would create the Derby database at the scope of the server1 server, using the profile profile1:

```
cr_event_derby -p c:\WebSphere\appserver\profiles\myprofile -s server1
```

5. Restart the server. For a federated node, you must also stop and restart the node agent using the **stopNode** and **startNode** commands.

### What to do next

After you finish configuring the database, you can use the administrative console to test the database configuration. To do this, navigate to the appropriate JDBC data source and select the **Test Connection** option.

### Manually creating a DB2 event database on a Linux, UNIX, or Windows system:

Use the `cr_event_db2` to manually generate a database configuration script for a DB2 event database on a Linux, UNIX, or Windows server.

### About this task

To manually run the generated database configuration script for a DB2 event database on a Linux, UNIX, or Windows system:

### Procedure

1. On the server system, go to the directory containing the generated script. The default location is the `profile_root/databases/event/node/server/dbscripts/db2` directory; if you specified a value for the `outputScriptDir` parameter of the database configuration administrative command, the scripts are stored in that location instead.
2. Using an ASCII text editor, make any required modifications to the configuration script. The name of the script varies depending upon the operating system in use:
  - **Windows** Windows systems: `cr_event_db2.bat`
  - **Linux** **UNIX** Linux and UNIX systems: `cr_event_db2.sh`
3. Run the database creation script using the following syntax (remember to specify the file extension, if applicable):

```
cr_event_db2 [client|server] db_user [db_password]
```

The parameters are as follows:

#### **client|server**

Indicates whether the database is a client or server. You must specify either **client** or **server**.

*db\_user*

The database user ID. This parameter is required.

*db\_password*

The password for the database user. If you do not specify a password for a client database, you are prompted for it.

For example, the following command would create the DB2 event database for a client database, using the user ID db2admin and the password mypassword:

```
cr_event_db2 client db2admin mypassword
```

4. Restart the server. For a federated node, you must also stop and restart the node agent using the **stopNode** and **startNode** commands.

### What to do next

After you finish configuring the database, you can use the administrative console to test the database configuration. To do this, navigate to the appropriate JDBC data source and select the **Test Connection** option.

### Manually creating a DB2 event database on a z/OS system:

Use the `cr_event_db2zos` to manually generate a database configuration script for a DB2 event database on a z/OS system, using a Linux, UNIX, or Windows client system.

### About this task

To manually run the generated database configuration script for a DB2 event database on a z/OS system, using a Linux, UNIX, or Windows client system:

### Procedure

1. On the server system, go to the directory containing the generated script. The default location is the `profile_root/databases/event/node/server/dbscripts/db2zos`; if you specified a value for the `outputScriptDir` parameter of the database configuration administrative command, the scripts are stored in that location instead.
2. Using an ASCII text editor, make any required modifications to the configuration script. The name of the script varies depending upon the operating system in use:
  - **Windows** Windows systems: `cr_event_db2zos.bat`
  - **Linux** **UNIX** Linux and UNIX systems: `cr_event_db2zos.sh`
3. Run the database creation script using the following syntax (remember to specify the file extension, if applicable):

```
cr_event_db2zos [dbName=db_name] db_user [db_password]
```

The parameters are as follows:

*db\_name*

The database name to use. This parameter is optional; if you do not specify a database name, a name is generated.

*db\_user*

The database user ID to use. This parameter is required.

### *db\_password*

The password for the database user. If you do not specify the password, the DB2 database prompts you for it.

For example, the following command would create a DB2 event database called event, using the user ID db2admin and the password mypassword:

```
cr_event_db2zos dbName=client db2admin mypassword
```

4. Restart the server. For a federated node, you must also stop and restart the node agent using the **stopNode** and **startNode** commands.

### What to do next

After you finish configuring the database, you can use the administrative console to test the database configuration. To do this, navigate to the appropriate JDBC data source and select the **Test Connection** option.

### Manually creating a DB2 event database on an iSeries system:

Use the `cr_event_db2series` command to manually generate a database configuration script for a DB2 event database on an iSeries system

### About this task

To manually run the generated database configuration script for a DB2 event database on an iSeries system:

### Procedure

1. On the server system, go to the directory containing the generated script. The default location is the `profile_root/databases/event/node/server/dbscripts/db2series` directory; if you specified a value for the `outputScriptDir` parameter of the database configuration administrative command, the scripts are stored in that location instead.
2. Using an ASCII text editor, make any required modifications to the `cr_event_db2series` script.
3. Start the Qshell interpreter.
4. Run the database creation script using the following syntax:

```
cr_event_db2series db_user db_password
```

The parameters are as follows:

#### *db\_user*

The database user ID. This parameter is required.

#### *db\_password*

The password for the database user. This parameter is required.

For example, the following command would create the DB2 event database using the user ID db2admin and the password mypassword:

```
cr_event_db2series db2admin mypassword
```

5. Restart the server. For a federated node, you must also stop and restart the node agent using the **stopNode** and **startNode** commands.

### What to do next

After you finish configuring the database, you can use the administrative console to test the database configuration. To do this, navigate to the appropriate JDBC data source and select the **Test Connection** option.

## Manually creating an Informix event database:

You can manually run the scripts generated by the database configuration administrative commands at any time.

### About this task

To manually run the generated database configuration scripts for an Informix event database:

#### Procedure

1. On the server system, go to the directory containing the generated script. The default location is the *profile\_root/databases/event/node/server/dbscripts/informix* directory; if you specified a value for the `outputScriptDir` parameter of the database configuration administrative command, the scripts are stored in that location instead.
2. Using an ASCII text editor, make any required modifications to the configuration script. The name of the script varies depending upon the operating system in use:
  - **Windows** Windows systems: `cr_event_informix.bat`
  - **Linux** **UNIX** Linux and UNIX systems: `cr_event_informix.sh`
3. Run the database creation script, with no parameters.
4. Restart the server. For a federated node, you must also stop and restart the node agent using the `stopNode` and `startNode` commands.

### What to do next

After you finish configuring the database, you can use the administrative console to test the database configuration. To do this, navigate to the appropriate JDBC data source and select the **Test Connection** option.

## Manually creating an Oracle event database:

Use the `cr_event_oracle` command to manually generate a database configuration script for an Oracle event database.

### About this task

To manually run the generated database configuration script for an Oracle event database:

#### Procedure

1. On the server system, go to the directory containing the generated script. The default location is the *profile\_root/databases/event/node/server/dbscripts/oracle* directory; if you specified a value for the `outputScriptDir` parameter of the database configuration administrative command, the scripts are stored in that location instead.
2. Using an ASCII text editor, make any required modifications to the configuration script. The name of the script varies depending upon the operating system in use:
  - **Windows** Windows systems: `cr_event_oracle.bat`
  - **Linux** **UNIX** Linux and UNIX systems: `cr_event_oracle.sh`

3. Run the database creation script using the following syntax (remember to specify the file extension, if applicable):

```
cr_event_oracle password sys_user
sys_password [sid=sid]
[oracleHome=oracle_home]
```

The parameters are as follows:

*password*

The password for the schema user ID. This parameter is required.

*sys\_user*

The user ID that has SYSDBA privileges in the Oracle database (typically the sys user). This parameter is required.

*sys\_password*

The password for the specified sys user ID. If this user ID does not use a password, type none.

**sid=sid**

The Oracle system identifier (SID). This parameter is optional.

**oracleHome=oracle\_home**

The Oracle home directory. This parameter is optional; if you do not specify a value, a generated path is used.

For example, the following command would create the Oracle event database using the schema user ID auser and the sys user ID sys:

```
cr_event_oracle auser sys syspassword sid=event oracleHome=c:\oracle
```

4. Restart the server. For a federated node, you must also stop and restart the node agent using the **stopNode** and **startNode** commands.

### What to do next

After you finish configuring the database, you can use the administrative console to test the database configuration. To do this, navigate to the appropriate JDBC data source and select the **Test Connection** option.

### Manually creating a SQL Server event database:

Use the `cr_event_mssql` command to manually generate a database configuration script for a SQL Server event database.

### About this task

To manually run the generated database configuration script for a SQL Server event database:

### Procedure

1. On the server system, go to the directory containing the generated script. The default location is `theprofile_root/databases/event/node/server/dbscripts/sqlserver` directory; if you specified a value for the `outputScriptDir` parameter of the database configuration administrative command, the scripts are stored in that location instead.
2. Using an ASCII text editor, make any required modifications to the `cr_event_mssql.bat` script.
3. Run the database creation script using the following syntax:



```
cr_event_mssql user_id password [server=server] sauser=sa_user
sapassword=sa_password
```

The parameters are as follows:

*user\_id*

The SQL Server login user ID that will own the created tables. This user ID must be created in SQL Server so that a JDBC connection can be made to the database. (The JDBC drivers do not support trusted connections.)

*password*

The password for the new login user ID that is created.

**server=server**

The name of the server that contains the SQL Server database. This parameter is optional; the default value is the local host.

**sauser=sa\_user**

The sa user ID. This user ID must have sufficient privileges to create databases and user logins.

**sapassword=sa\_password**

The sa password, if using mixed authentication mode. If the sa user ID does not have a password set, specify sapassword= with no value. Omit this parameter if you are using a trusted connection.

For example, the following command would create the SQL Server event database using the login user ID `userid`:

```
cr_event_mssql userid apassword server=myserver sauser=sa sapassword=sapassword
```

4. Restart the server. For a federated node, you must also stop and restart the node agent using the **stopNode** and **startNode** commands.

### What to do next

After you finish configuring the database, you can use the administrative console to test the database configuration. To do this, navigate to the appropriate JDBC data source and select the **Test Connection** option.

### Upgrading the event database from a previous version

If you have migrated from a previous version of Common Event Infrastructure and you are using event persistence, you might need to upgrade an existing event database.

### About this task

Upgrading the event database is required if you are migrating from Common Event Infrastructure version 5.1 or earlier.

The database upgrade process upgrades the schema and metadata of the existing event database to the current version while preserving existing event data.

The database upgrade script upgrades the schema and metadata of the existing event database to the current version.

**Unsupported versions:** If your event database uses a version of database software that is no longer supported by Common Event Infrastructure 6.0, you must first migrate the database to a supported version using the appropriate procedure for the database software. You can then follow the event database upgrade process to upgrade the database.

## Upgrading the event database from Cloudscape to Derby:

If you have an existing Cloudscape® event database, you must upgrade it to use the Derby database.

### About this task

To upgrade a Cloudscape event database to Derby:

### Procedure

1. Go to the *profile\_root/bin* directory.
2. Run the Derby migration script for your operating system:

- Windows systems:  
eventMigrateDerby *db\_dir* [generateDDLonly]
- Linux and UNIX systems:  
eventMigrateDerby.sh *db\_dir* [generateDDLonly]

The parameters are as follows:

*db\_dir*

Specifies the path to the directory containing the existing Cloudscape event database. This parameter is required.

### generateDDLonly

Specifies whether you want to generate the DDL script for upgrading the database without running it. Specify this parameter if you want to manually upgrade the database at a later time. This parameter is optional; the default behavior is to generate and run the DDL script.

### Results

The Derby migration script creates a backup copy of the existing Cloudscape event database in the *db\_dir.bak* directory and then creates two DDL scripts in the database directory:

- event\_newDDL.sql
- eventcatalog\_newDDL.sql

If you did not specify the generateDDLonly parameter, the migration script automatically runs these DDL scripts to complete the upgrade to Derby.

### Example

The following example upgrades an existing Cloudscape event database in the *c:\databases\cloudscapeEventDB* directory on a Windows system:

```
eventMigrateDerby c:\databases\cloudscapeEventDB
```

### Upgrading a DB2 event database from a previous version:

If you have an existing DB2 event database from Version 5.1 of Common Event Infrastructure on a Linux, UNIX, or Windows system, you must upgrade it to the current version.

## About this task

To upgrade a DB2 event database on a Linux or UNIX system:

### Procedure

1. Make a backup copy of the existing event database.
2. Go to the *profile\_root/bin* directory.
3. Run the DB2 upgrade script for your operating system:

- **Windows** Windows systems:

```
eventUpgradeDB2 runUpgrade=[true|false] dbUser=user  
[dbName=name] [dbPassword=pw]  
[dbNode=node] [scriptDir=dir]
```

- **Linux** **UNIX** Linux and UNIX systems:

```
eventUpgradeDB2.sh runUpgrade=[true|false] dbUser=user  
[dbName=name] [dbPassword=pw]  
[dbNode=node] [scriptDir=dir]
```

The typical required parameters are as follows:

#### runUpgrade

Indicates whether you want the upgrade script to automatically run the generated DDL scripts to complete the database upgrade. This parameter is required. Specify *false* if you want to manually perform the database upgrade at a later time or on a different system.

#### dbUser

Specifies the DB2 user ID to use. This parameter is required.

#### dbName

Specifies the DB2 database name. The default name for the event database is *event*. This parameter is required if you specified *runUpgrade=true*.

#### dbPassword

Specifies the password for the specified DB2 user ID. This parameter is optional; if you do not specify a password, DB2 prompts you to type it.

#### dbNode

Specifies the database node name. This parameter is required if you are running the upgrade script from a DB2 client system.

#### scriptDir

Specifies the directory you want to contain the generated DDL scripts. This parameter is optional; if you do not specify a directory, the scripts are stored in the *.\eventDBUpgrade\db2* directory.

To see a complete list of parameters and usage information, run the **eventUpgradeDB2** script with no parameters.

## Results

The upgrade script generates the required DDL scripts for upgrading the event database. If you specified *runUpgrade=true*, the DDL scripts are automatically run, completing the upgrade.

## Example

The following example upgrades an existing DB2 database on a Windows system:

```
eventUpgradeDB2 runUpgrade=true dbUser=db2inst1 dbName=event
```

## What to do next

If you specified `runUpgrade=false`, you must manually run the DDL scripts on the database system to complete the database upgrade.

## Upgrading a DB2 for z/OS event database from a previous version:

If you have an existing DB2 event database from Version 5.1 of Common Event Infrastructure on a z/OS system, you must upgrade it to the current version.

## About this task

To upgrade a DB2 event database on a z/OS system:

### Procedure

1. Make a backup copy of the existing event database.
2. Go to the `profile_root/bin` directory.
3. Run the DB2 for z/OS upgrade script for your client operating system:

- **Windows** Windows systems:

```
eventUpgradeDB2ZOS runUpgrade=[true|false] dbUser=user  
[dbName=name] [dbPassword=pw]  
[scriptDir=dir] storageGroup=group  
bufferPool14K=4kbufpool bufferPool18k=8kbufpool  
bufferPool16K=16kbufpool
```

- **Linux** **UNIX** Linux and UNIX systems:

```
eventUpgradeDB2ZOS.sh runUpgrade=[true|false] dbUser=user  
[dbName=name] [dbPassword=pw]  
[scriptDir=dir] storageGroup=group  
bufferPool14K=4kbufpool bufferPool18k=8kbufpool  
bufferPool16K=16kbufpool
```

The typical required parameters are as follows:

### runUpgrade

Indicates whether you want the upgrade script to automatically run the generated DDL scripts to complete the database upgrade. This parameter is required. Specify `false` if you want to manually upgrade the database at a later time or on a different system.

**z/OS systems:** This parameter is ignored on a native z/OS system. Automatically running the generated DDL scripts is supported only on a client system.

### dbUser

Specifies the DB2 user ID to use. This parameter is required.

### dbName

Specifies the DB2 database name. The default name for the event database is `event`. This parameter is required if you specified `runUpgrade=true`.

### dbPassword

Specifies the password for the specified DB2 user ID. This parameter is optional; if you do not specify a password, DB2 prompts you to type it.

### scriptDir

Specifies the directory you want to contain the generated DDL scripts. This parameter is optional; if you do not specify a directory, the scripts are stored in the `.\eventDBUpgrade\db2zos` directory.

**storageGroup**

Specifies the name of the storage group. This parameter is required.

**bufferPool4K**

Specifies the name of the 4K buffer pool. This parameter is required.

**bufferPool8K**

Specifies the name of the 8K buffer pool. This parameter is required.

**bufferPool16K**

Specifies the name of the 16K buffer pool. This parameter is required.

To see a complete list of parameters and usage information, run the **eventUpgradeDB2ZOS** script with no parameters.

**Results**

The upgrade script generates the required DDL scripts for upgrading the event database. If you specified `runUpgrade=true` on a client system, the DDL scripts are automatically run, completing the upgrade.

**Example**

The following example upgrades a DB2 for z/OS event database from a Windows client system:

```
eventUpgradeDB2ZOS runUpgrade=true dbUser=db2inst1 dbName=event
  storageGroup=sysdef1t bufferPool4K=BP9 bufferPool8K=BP8K9 bufferPool16K=BP16K9
```

**What to do next**

If you specified `runUpgrade=false`, or if you ran the upgrade script on the z/OS system, you must manually run the generated DDL scripts on the z/OS system using the SQL Processor Using File Input (SPUFI) facility. This step completes the database upgrade.

**Upgrading an Oracle event database from Version 5:**

If you have an existing Oracle event database from Version 5.1 of Common Event Infrastructure, you must upgrade it to the current version.

**About this task**

To upgrade an Oracle event database:

**Procedure**

1. Make a backup copy of the existing event database.
2. Go to the *profile\_root/bin* directory.
3. Run the Oracle upgrade script for your operating system:

- Windows systems:

```
eventUpgradeOracle runUpgrade=[true|false] schemaUser=schemauser
  [oracleHome=dir] [dbName=name]
  [dbUser=sysuser] [dbPassword=pw]
  [scriptDir=dir]
```

- Linux and UNIX systems:

```
eventUpgradeOracle.sh runUpgrade=[true|false] schemaUser=schemauser
  [oracleHome=dir] [dbName=name]
  [dbUser=sysuser] [dbPassword=pw]
  [scriptDir=dir]
```

The typical required parameters are as follows:

**runUpgrade**

Indicates whether you want the upgrade script to automatically run the generated DDL scripts to complete the database upgrade. This parameter is required. Specify `false` if you want to manually upgrade the database at a later time or on a different system.

**schemaUser**

Specifies the Oracle user ID that owns the database tables. This parameter is required.

**oracleHome**

Specifies the Oracle home directory. This parameter is required if you specified `runUpgrade=true`.

**dbName**

Specifies the Oracle database name. The default name for the event database is `event`. This parameter is required if you specified `runUpgrade=true`.

**dbUser**

Specifies the Oracle sys user ID. This parameter is required if you specified `runUpgrade=true`.

**dbPassword**

Specifies the password for the sys user ID. Do not specify this parameter if the sys user ID has no password.

**scriptDir**

Specifies the directory you want to contain the generated DDL scripts. This parameter is optional; if you do not specify a directory, the scripts are stored in the `.\eventDBUpgrade\oracle` directory.

To see a complete list of parameters and usage information, run the **eventUpgradeOracle** script with no parameters.

**Results**

The upgrade script generates the required DDL scripts for upgrading the event database. If you specified `runUpgrade=true`, the DDL scripts are automatically run, completing the upgrade.

**Example**

The following example upgrades an existing Oracle database on a Windows system:

```
eventUpgradeOracle runUpgrade=true schemaUser=cei
  dbName=event dbUser=sys
```

**What to do next**

If you specified `runUpgrade=false`, you must manually run the DDL scripts on the database system to complete the database upgrade.

## Cross-cell Common Event Infrastructure configuration for WebSphere Business Monitor

You must configure connectivity between a remote server producing Common Event Infrastructure (CEI) events and the WebSphere Business Monitor server.

## About this task

Refer to the topic [Configuring a remote CEI server to use WebSphere Business Monitor](#) in the IBM WebSphere Business Monitor Information Center for details on how to configure the CEI across cells in a multi-server environment.

### Related information

 [IBM WebSphere Business Monitor Information Center](#)

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## Configuring WebSphere Business Integration Adapters

You must perform installation and configuration procedures in order for the WebSphere Business Integration Adapter to work with WebSphere Process Server.

### Procedure

1. Install the adapter.
  - a. Follow the procedures outlined at [Installing WebSphere Business Integration Adapters products](#), which describe how to install WebSphere Business Integration Adapters.
  - b. Follow any additional required procedures that are specific to your particular adapter by going to the WebSphere Business Integration Adapters documentation and expanding the navigation under **Adapters** to reveal your specific adapter, where you will find any additional installation tasks.
2. Configure your adapter by going to the WebSphere Business Integration Adapters documentation, expanding the navigation under **Adapters** to reveal your specific adapter, and following that adapter's configuration instructions. The configuration procedure will generate the required artifacts.
3. Install the application EAR file by following the instructions for [Installing a module on a production server](#).

## Setting up administration of a WebSphere Business Integration Adapter

You must perform several administrative functions before you can manage a WebSphere Business Integration Adapter.

### Before you begin

- You must be familiar with the procedures outlined in [Installing WebSphere Business Integration Adapters products](#).
- You must have installed the application EAR file to create the artifacts required for the WebSphere Business Integration Adapter before you perform this task.

## About this task

In order to have administrative control over a WebSphere Business Integration Adapter, perform the following administrative functions.

### Procedure

1. Create a Queue Connection Factory.

From the top level of the administrative console, follow these steps:

  - a. Expand **Resources**.
  - b. Expand **JMS**.
  - c. Select **Queue connection factories**.

- d. Select the scope level that matches the scope level of the Administration Input/Output Queues.
  - e. Click **New** to create a new JMS queue connection factory.
  - f. Choose the JMS resource provider. Select **Default messaging provider**, and click **OK**.
  - g. Accept all the default values with the following exceptions:
    - Name: QueueCF
    - JNDI Name: jms/QueueCF
    - BusName: *Your bus name*
  - h. Complete the creation of your new JMS queue connection factory by clicking **OK**.  
A message window appears at the top of the JMS queue connection factory panel.
  - i. Apply the changes that you have made at the local configuration level to the master configuration by clicking **Save** in the message window.
2. Create a WebSphere Business Integration Adapter resource.  
From the top level of the administrative console, follow these steps:
    - a. Expand **Resources**.
    - b. Open the WebSphere Business Integration Adapters panel.  
Select **WebSphere Business Integration Adapters**.
    - c. Create a new WebSphere Business Integration Adapter by clicking **New**.
    - d. Accept all the default values with the following exceptions:
      - Name: EISConnector
      - Queue connection factory JNDI name: jms/QueueCF
      - Administration input queue JNDI name: *connectorName/AdminInQueue*
      - Administration output queue JNDI name: *connectorName/AdminOutQueue*
    - e. Complete the creation of the WebSphere Business Integration Adapter by clicking **OK**.  
A message window appears at the top of the WebSphere Business Integration Adapters panel.
    - f. Apply the changes that you have made at the local configuration level to the master configuration by clicking **Save** in the message window.
  3. Enable the WebSphere Business Integration Adapter Service.  
From the top level of the administrative console, follow these steps:
    - a. Expand **Servers**.
    - b. Select **Application Servers**.
    - c. From the list of servers, select a server where the WebSphere Business Integration Adapter Service is to be enabled.  
Click the name of the server that hosts the resources of interest.
    - d. Select **WebSphere Business Integration Adapter Service**.  
Under the **Business Integration** subheading on the Configuration tab, select **WebSphere Business Integration Adapter Service**.
    - e. Ensure that the **Enable service at server startup** check box is selected.
    - f. Click **OK**.  
A message window appears at the top of the WebSphere Business Integration Adapters panel.



- g. Repeat steps 3c on page 490 to 3f on page 490 for each server on which the WebSphere Business Integration Adapter Service is to be enabled.
- h. Apply the changes that you have made at the local configuration level to the master configuration by clicking **Save** in the message window.

**Note:** When you enable or disable a WebSphere Business Integration Adapter service, you must restart the server in order for the changes to take effect.



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## Chapter 9. Verifying your deployment environment

Before moving your production applications to the new environment, you must test to make sure that all of the components operate correctly.

### Before you begin

Complete the implementation of your deployment environment as described in “Implementing a deployment environment.”

1. Install the software
2. Configure a node to host a deployment manager
3. Configure nodes
4. Federate nodes to the deployment manager
5. Cluster nodes together to provide function for the deployment environment

### About this task

How you verify the deployment environment depends on whether the environment you implemented is an IBM-supplied deployment environment or a custom deployment environment. You can manage IBM-supplied deployment environments from a single panel in the administrative console. You must create and manage custom deployment environments manually in the administrative console.

### Procedure

1. Identify the type of deployment environment you are verifying.  
You should already have this information based on your original plans.
2. Start the deployment environment.

Type of deployment environment	How to start
IBM-Supplied pattern	Start from <b>System administration &gt; Deployment environments &gt; Deployment environment configuration</b> as described in “Starting and stopping deployment environments.”
Custom	Start from <b>Servers &gt; Clusters</b> as described in “Verifying a custom deployment environment starts.” <b>Note:</b> You must start all the servers and clusters defined in the deployment environment.

3. Install the test application.
4. Configure the test application for routing.
5. Start the test application.
6. Run the test application and verify those results.

### What to do next

Install your production applications.

---

## Verifying the application deployment target cluster starts

To verify that the application deployment target cluster can start, you must start all three clusters in your deployment environment. This is an example for a three cluster deployment environment.

### Before you begin

You need to create and configure the clusters for the messaging engines, Common Event Infrastructure (CEI) event server application and the application deployment target.

### About this task

To verify that the application deployment cluster can start, you will start each cluster in turn.

#### Notes:

- This description assumes that you configured three clusters in the topology named **MECluster**, **SupportCluster**, and **AppCluster**. Substitute the actual cluster names and repeat the appropriate steps for any additional clusters in your deployment environment.
- The first time you start servers will take longer than subsequent starts because the system is creating the database tables and schemas.

#### Procedure

1. From the administrative console on the deployment manager, expand **Servers**, then select **Clusters**.
2. Start the clusters.
  - a. Select the check box beside **MECluster**.
  - b. Select **Start**, and wait for the **MECluster** to start as shown by a green arrow.
  - c. Select the check box beside **SupportCluster**.
  - d. Select **Start**, and wait for the **SupportCluster** to start as shown by another green arrow.
  - e. Select the check box beside **AppCluster**.
  - f. Select **Start**, and wait for the **AppCluster** to start as shown by another green arrow.
3. Click the messaging buses.
  - a. Wait until all the clusters start.
  - b. Click **Service Integration** → **Buses**
  - c. Verify the messaging engine is running for each bus.
    - 1) Select the bus name.
    - 2) Click **Local Topology** to display the bus topology.
    - 3) Expand the bus until you see the status of the messaging engines.
4. Check the cluster members' **SystemOut.log** and **SystemErr.log** files located in the profile directory's logs subdirectory on the node that hosts the cluster member. Make sure that they have no errors, and look for the line **Server AppCluster\_member1 is open for e-business** or **Server AppCluster\_member2 is open for e-business** indicating that the cluster started successfully. Correct any errors you find before continuing.

## What to do next

After correcting any errors, you configure the host aliases.

**Note:** After correcting configuration errors, you must stop the cluster and restart it for the configuration changes to take effect.

**Troubleshooting tip:** When examining the log you may see a message that states that a messaging engine failed to start because it could not find a certain bus. Restarting the clusters eliminates this message.

---

## Installing the test application

Install the test application to begin the process of verifying your deployment environment.

### Before you begin

- You need to create and install your completed deployment environment.
- Log in to the deployment manager administrative console.

### About this task

We will use the application provided for you with WebSphere Process Server called BPCIVTApp (Business Process Choreographer Installation Verification Test) to verify that you installed and configured your WebSphere Process Server environment correctly. First you must install the application.

For more information about installing this application, see “Verifying that Business Process Choreographer works”. For more information about installing applications from the administrative console, see “Installing application files with the console.”

**Note:** If you have not enabled business processes and human tasks, you cannot use BPCIVTApp to test your deployment environment. In this case, you must install and run a Service Component Architecture application that uses business rules and selectors to exercise your deployment environment. Change the process to test the deployment environment to fit your application.

### Procedure

1. From the administrative console, select **Applications > Install New Application**.
2. Make sure that **Local file system** is selected, and then browse for the file `bpcivt.ear`. It will be in the `install_root/installableApps` directory.
3. Select the file `bpcivt.ear`, then select **Open**.
4. These steps assume you will use the default configurations. Select **Next** on the subsequent panels until you reach the Summary page. During these steps you will be selecting various options and mapping the module to the servers as described in other topics. For testing purposes, map this module to the application deployment target cluster.

**Note:** You will not have to map the module to the application target cluster on a stand-alone server.

5. Select **Finish**.
6. Select **Save**, then **Synchronize**.

## What to do next

### Configuring the test application for routing

Use this procedure to configure your test application for routing.

#### Before you begin

You need to install your test application.

#### About this task

You first configure the application and then generate the plug-in configuration files.

**Note:** The description assumes a cluster named *AppCluster* and a Web server named *Webserver1*. If your test application uses human tasks or business processes, make sure you have already configured Business Process Choreographer on your application cluster.

#### Procedure

1. Configure the application (or applications) that you will run to identify the Web server and the deployment target to the application, as follows.
  - a. From the administrative console, select **Applications > Enterprise Applications**.
  - b. Select the name of the application.
  - c. From under **Additional Properties**, select **Map modules to servers**.
  - d. From the choices listed under Clusters and servers, select *Webserver1* (the Web server you configured previously) and *AppCluster* (the application deployment target).
  - e. Select **Apply**, then select **OK**.
  - f. Repeat steps 1d through 1e until you have configured all Web servers and deployment targets for your deployment environment.
  - g. Select **Save**, then **Synchronize**.
2. Generate the plug-in configuration file.
  - a. From the administrative console, select **Servers > Web servers**.
  - b. Select the check box next to the name *Webserver1*.
  - c. Select **Generate plug-in**. A plug-in configuration file is created, as indicated by the message in the top of the window.
  - d. Repeat steps 2b and 2c as many times as needed for your deployment environment.

## What to do next

Stop and restart the deployment manager and node agent. Next start the test application.

### Starting the test application

Use this procedure to start your test application to test your implementation.

#### Before you begin

You need to install and configure the test application for routing.

## About this task

You start your test application from the administrative console.

### Procedure

1. From the administrative console, select **Applications > Enterprise Applications**.
2. Select the check box next to the application name and select **Start**. Wait until a green arrow appears, indicating that the application has started successfully.

## What to do next

After you start the test application, run this application.

**Note:** If the application does not start correctly, refer to the log files to find error messages indicating the problem.

## Running the test application

Use this procedure to run your test application to determine if your deployment environment is operating correctly.

### Before you begin

You need to start your test application.

## About this task

Successful execution of this application shows that your deployment environment is operating correctly. Follow the same procedure on the other member of the application deployment target cluster to make sure that it also functions correctly.

### Procedure

1. In a browser window, enter a URL in the following form: `http://hostname:portnumber/testapp` where *hostname* is the fully qualified DNS name or IP address of the system hosting the cluster member on which you installed the application, and *portnumber* is the port number associated with default host for that cluster member and *testapp* is the name of your test application.
2. Examine the logging messages on the screen.

If your test application contains human tasks, you should see logging messages being written to the screen starting with Looking up the HumanTaskManager API EJB. . . . The application will proceed to create a task, claim it, check input and output data, complete the task, and delete it. The word Passed appears near the end of the log messages to indicate that the application ran successfully.

Make sure that you see all messages you have embedded in your application to indicate success.

## What to do next

Install and start other test applications.

---

## Installing and accessing other applications

Install and access applications from the administrative console or Business Process Choreographer Explorer to further test your deployment environment.

## Before you begin

You must have successfully installed and configured a deployment environment.

## About this task

You can install and start other applications similarly to the way you installed your test application. To access these applications you will use the administrative console or Business Process Choreographer Explorer.

### Procedure

1. Locate your application.  
In the administrative console click **Applications** → **Install New Application** and locate the application to install.
2. Install the application.
3. Start the application.
4. Access the application.  
Enter a URL for the application in a browser window. For example, `http://hostname:portnumber/myapp` where *hostname* is the fully qualified DNS name (or IP address) of the system corresponding to the cluster member on which you've installed the application, and *portnumber* is the port number associated with `default_host` for that cluster member.  
From Business Process Choreographer Explorer:
  - a. Enter a URL in the following form in a browser window:  
`http://hostname:portnumber/bpc` where *hostname* is the fully qualified DNS name (or IP address) of the system corresponding to the cluster member, on which you've installed the application, and *portnumber* is the port number associated with `default_host` for that cluster member.  
A page will appear labeled **My Tasks**, but with no tasks listed.
  - b. Select **My Process Templates**. You should see templates listed corresponding to any applications that you installed.
  - c. Use the interface controls on the page to start a task, work on it, complete it, and so on. For more information on running Business Process Choreographer tasks, see "Administering business processes and human tasks."
5. If desired, you can check the `SystemOut.log` file for the cluster member to view a record of the application and check for errors.



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## Chapter 10. Installing fix packs and refresh packs with the Update Installer

You can use the IBM Update Installer for WebSphere Software to install interim fixes, fix packs, and refresh packs collectively known as maintenance packages. The Update Installer for WebSphere Software is also known as the update installer program, the UpdateInstaller program, and the Update Installation Wizard.

### Before you begin

Use the correct authorizations to successfully install product updates.

When administrative security is enabled on WebSphere Application Server Network Deployment or WebSphere Process Server, you must supply the administrative user ID and password before you can update the files.

Use the Update Installer program from the same installer ID that installed the product that you are updating. Otherwise, the file ownership mismatches might require correction by the root user.

**Attention:** Fix packs that include updates to the Software Development Kit (SDK) might overwrite unrestricted policy files. Back up unrestricted policy files before you apply a fix pack and reapply these files after the fix pack is applied.

**i5/OS** **On i5/OS platforms:** Use the Update Installer program from a user profile with \*ALLOBJ special authority.

### Important:

- The user account that originally installed the product you want to update should be used to install the Update Installer, and the same user account should be used to start the Update Installer program to update the product.
  - When a different user account uses the location where the Update Installer files are located, that user account must have reading and running access to that location. It must also have writing access to the logs directory and its subdirectory. For information about the location of the Update Installer files, see “Installing the Update Installer for WebSphere Software” on page 504.
  - When a different user account is used to update the target WebSphere Application Server product location, that user account must have full access (reading, writing, and running) to the target location where a maintenance package is to be applied.
- **AIX** **On AIX platforms:** If a non-root user starts the Update Installer program, that user account must be able to run the slibclean command; otherwise, a root user must run the slibclean command whenever the Update Installer program is used.
- Make sure that no processes from any users are locking any files in the target location where a maintenance package is to be installed.

The Update Installer is an InstallShield MultiPlatform wizard that runs with either a graphical user interface or in silent mode with or without a response file. When you omit the response file in silent mode, the wizard installs the last maintenance package that you downloaded to the default maintenance directory. For more

information about the example response file that is installed with the Update Installer, see the `install.txt` topic in the WebSphere Application Server Network Deployment documentation.

**Restriction:** i5/OS **On i5/OS platforms:** The Update Installer on i5/OS runs only with the `install.txt` response file.

**Important:** The maintenance package updates the profiles. Before updating an existing installation, back up your configuration files. Use the `backupConfig` command to back up the configuration of each profile that the maintenance package can update. See [Backing up and restoring administrative configurations](#) for more information about running this command.

For refresh packs you might also need to update the various WebSphere Process Server database schemas. If you want to uninstall your refresh pack, then you need to restore your database to the previous level, so you need to backup your database as well. For detailed installing or uninstalling instructions, please refer to the instructions provided with your fix pack or refresh pack.

## About this task

*Updating* is modifying a file or data set with current information. When WebSphere Process Server is updated with a refresh pack, interim fix, or a fix pack, its out-of-date files are replaced with newer versions. Updating is different from *migrating*, which is installing a completely new version of the product to replace an earlier version of the product. For more information about migrating, see [Migrating](#).

**Important:** Instructions you receive with your interim fix, fix pack or refresh pack override the instructions in this topic, which are provided for your general reference only. Always follow the specific installation instructions you receive with your interim fix, fix pack or refresh pack.

Check the list of WebSphere Process Server recommended fixes to confirm that your software is at the latest maintenance level. From the [Recommended Fixes](#) web page, make sure to read the `readme` file, also called the installation instructions, for the fix pack or refresh pack that you are installing.

**Important:** Do not start multiple copies of the update installer at one time. Concurrent instances of the update installer program are not supported. Performing more than one update at the same time can produce unpredictable results, which might include a failed or faulty installation.

**Note:** Throughout this topic, certain directory paths are shown only in Linux and UNIX format for simplicity. The equivalent Windows paths are identical except for the direction of the slashes.

The following procedure describes how to install a maintenance package. For a description of how to roll back a maintenance package, see [Uninstalling maintenance packages](#).

To install an interim fix, a fix pack, or a refresh pack, perform the following steps.

### Procedure

1. Make sure that the most recent version of the Update Installer for WebSphere Software is installed on your system. In order to install an interim fix, a fix

pack, or a refresh pack, you must have the Update Installer for WebSphere Software installed. You can download it from the WebSphere Process Server product support Web site or from the product DVD using the launchpad. For more information about installing for the first time, see “Installing the Update Installer for WebSphere Software” on page 504. For more information about installing a newer version of the update installer, see Updating the Update Installer for WebSphere Software in the WebSphere Application Server Network Deployment documentation.

**Note:** **Vista** **Using the Update Installer for WebSphere Software on the Microsoft Windows Vista operating system:** To use the Update Installer for WebSphere Software on the Microsoft Windows Vista operating system, you must have Version 6.1.0.9 or later of the Update Installer installed on your system. Earlier versions of the Update Installer are not supported on the Windows Vista operating system.

2. Download the most current version of the interim fix, fix pack, or refresh pack from the WebSphere Process Server recommended fixes Web site into the update installer maintenance directory. The maintenance directory is located in one of the following locations, depending on the operating system that you are using:
  - **AIX** **On AIX platforms:** /usr/IBM/WebSphere/UpdateInstaller
  - **i5/OS** **On i5/OS platforms:** /QIBM/ProdData/WebSphere/UpdateInstaller/V61/UPDI
  - **HP-UX** **Linux** **Solaris** **On HP-UX, Linux and Solaris platforms:** /opt/IBM/WebSphere/UpdateInstaller
  - **Windows** **On Windows platforms:** C:\Program Files\IBM\WebSphere\UpdateInstaller
3. **Windows** **On Windows platforms:** Use the Windows Services panel to stop all services for WebSphere Process Server processes.
4. Stop all WebSphere Process Server-related Java processes that are running on the system where you are using the update installer program.

For example, Java processes can include:

- All Java Virtual Machines (JVMs)
- WebSphere Process Server processes, including:
  - Server processes
  - The node agent process on a node when the node is federated into a deployment manager cell
  - The dmgr process for the deployment manager server
  - **i5/OS** **On i5/OS platforms:** The above processes can be stopped by ending the subsystem where the WebSphere Process Server is running. This subsystem will either be QWAS61 (default) or QWBI61 (custom) and can be ended with the ENDSBS command.
- IBM HTTP Server processes
- Web services processes that use a plugin you are installing
- First steps consoles
- Installation verification test (IVT) processes
- The Profile Management Tool
- Other InstallShield MultiPlatform (ISMP) installation programs
- InstallShield MultiPlatform uninstallation programs

- IBM WebSphere Integration Developer Java processes
  - The IBM Agent Controller
  - The Derby Network Server database server (if you are updating a deployment manager profile that is configured to use Derby Network Server).
5. Change directories to the update installer directory. The update installer directory is located in one of the following locations, depending on the operating system that you are using:
    - **AIX** On AIX platforms: /usr/IBM/WebSphere/UpdateInstaller
    - **i5/OS** On i5/OS platforms: /QIBM/ProdData/WebSphere/UpdateInstaller/V61/UPDI
    - **HP-UX** **Linux** **Solaris** On HP-UX, Linux and Solaris platforms: /opt/IBM/WebSphere/UpdateInstaller
    - **Windows** On Windows platforms: C:\Program Files\IBM\WebSphere\UpdateInstaller
  6. Use the update command to install the interim fix, fix pack, or refresh pack. Install the maintenance package on the deployment manager node before installing the maintenance package on each server node that you intend to update.
    - To install the maintenance package using the graphical user interface, type one of the following commands:
      - **Linux** **UNIX** On Linux and UNIX platforms: ./update.sh to initialize the maintenance package field with the name of the package that has the most recent date stamp and time stamp.
      - **Windows** On Windows platforms: update.bat to initialize the maintenance package field with the name of the package that has the most recent date stamp and time stamp.
      - **Vista** On Vista and Windows 2008 platforms: update.exe to initialize the maintenance package field with the name of the package that has the most recent date stamp and time stamp.
      - **Linux** **UNIX** On Linux and UNIX platforms: ./update.sh -options "responsefiles/file\_name" to override all graphical interface values with values that you specified in the options response file. For more information about the example response file that is installed with the update installer, see the install.txt topic in the WebSphere Application Server Network Deployment documentation.
      - **Windows** On Windows platforms: update.bat -options "responsefiles/file\_name" to override all graphical interface values with values that you specified in the options response file. For more information about the example response file that is installed with the update installer, see the install.txt topic in the WebSphere Application Server Network Deployment documentation.
      - **Vista** On Vista and Windows 2008 platforms: update.exe -options "responsefiles/file\_name" to override all graphical interface values with values that you specified in the options response file. For more information about the example response file that is installed with the update installer, see the install.txt topic in the WebSphere Application Server Network Deployment documentation.

For more information about options to use with the update command, see the update command topic in the WebSphere Application Server Network Deployment documentation.

**Note:** **Vista** **Running the Update Installer for WebSphere Software on Microsoft Windows Vista and Windows 2008 operating systems:** If a non-Administrator applies maintenance using the Update Installer, that user must do so with Windows User Account Control (UAC) in the same state that it was in when WebSphere Process Server was originally installed.

- a. If UAC was enabled during installation of WebSphere Process Server, apply maintenance with UAC enabled.
- b. If UAC was disabled during installation of WebSphere Process Server, apply maintenance with UAC disabled.

If a non-Administrator applies maintenance to WebSphere Process Server with a UAC setting that is different from that used in the initial installation, then the registry is adversely affected. This might result in unreliable listings of the installation locations in the destination panels of the Update Installer, or an existing installation location might not show up in the dropdown menu.

When the Windows Vista or Windows 2008 operating system is asked to run a program that requires elevated (Administrator) privileges, it first tells the user whether or not the publisher of the program is recognized. For certain WebSphere Process Server programs, for example, an operating-system dialog might appear that states "An unidentified program wants access to your computer." Examine the program details; and if it is the WebSphere Process Server program that you intend to run, click **Allow** to proceed.

- To install the maintenance package as a background process, using the silent mode, type one of the following commands:
  - **Linux** **UNIX** **On Linux and UNIX platforms:** `./update.sh -silent -options "responsefiles/file_name"` to install without a graphical user interface, using the values that you specified in the options response file. For more information, see `install.txt` topic in the WebSphere Application Server Network Deployment documentation.
  - **Windows** **On Windows platforms:** `update.bat -silent -options "responsefiles/file_name"` to install without a graphical user interface, using the values that you specified in the options response file. For more information, see `install.txt` topic in the WebSphere Application Server Network Deployment documentation.
  - **Vista** **On Vista and Windows 2008 platforms:** `update.exe -silent -options "responsefiles/file_name"` to install without a graphical user interface, using the values that you specified in the options response file. For more information, see `install.txt` topic in the WebSphere Application Server Network Deployment documentation.
  - **i5/OS** **On i5/OS platforms:** `update -options responsefiles/file_name`

**Important:** When using the update command on the i5/OS platform, do not include the `-silent` option in the command line. The option is included in the response file itself.

For more information about the update command, see the update command topic in the WebSphere Application Server Network Deployment documentation.

The Update installer creates a backup files in the *install\_root/properties/version/nif/backup* directory.

**Note:** When you install a maintenance package that contains service for a profile that a non-root user owns, you own any new files that the maintenance package creates. You can change the ownership of the new files so that a non-root user can successfully start the product. For more information, see Installing maintenance packages as an installer and changing the ownership of profile-related files in the WebSphere Application Server Network Deployment documentation.

## What to do next

After installing an maintenance package, continue to use your WebSphere software.

**Important:** For information about known problems, see Update command - known problems and workarounds in the WebSphere Application Server Network Deployment documentation.

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## Installing the Update Installer for WebSphere Software

From the WebSphere Process Server launchpad, you can install the Update Installer for WebSphere Software, which is used to install interim fixes, fix packs and refresh packs for WebSphere Process Server.

### Before you begin

Before installing the Update Installer for WebSphere Software, review the following requirements:

- All of the product hardware and software prerequisites must have been met. For more information, see WebSphere Process Server system requirements.
- You must have a version of WebSphere Process Server correctly installed before you install the update installer.
- Only one copy of the update installer should be installed on your system at any one time for use with all WebSphere products.
- The user account that was used to originally install the WebSphere Process Server product should be used to install the update installer, and the same user account should be used to run the update installer program to update a product.
  - When a different user account uses the location of the installed update installer, that user account must have security access to read and run applications at that location, and write access to the logs directory subdirectories.
  - When a different user account is used to update the target WebSphere Process Server product location, that user account must have full access (read, write, and run) to the target location where a maintenance package is to be applied.
- **AIX On AIX platforms:** If a non-root user starts the update installer program, that user account must have security permissions to run the `slibclean` command; otherwise, a root user must run the `slibclean` command whenever the update installer program is used.

- Processes from other users cannot lock files in the target location where the update installer will be installed.
- Make sure you are installing the most recent version of the Update Installer for WebSphere Software. If you do not have the most recent version, download the latest version of the Update Installer for WebSphere Software as a compressed file or a TAR file from the following IBM Web site: Update Installer for WebSphere Software. For more information, see Updating the Update Installer for WebSphere Software in the WebSphere Application Server Network Deployment, version 7.0 documentation.
- **Vista** **On Microsoft Windows Vista and Windows 2008 operating systems:** If a non-Administrator applies maintenance using the Update Installer, that user must do so with Windows User Account Control (UAC) in the same state that it was in when WebSphere Application Server was originally installed.
  - If UAC was enabled during installation of WebSphere Process Server, apply maintenance with UAC enabled.
  - If UAC was disabled during installation of WebSphere Application Server, apply maintenance with UAC disabled.

If a non-Administrator applies maintenance to WebSphere Process Server with a UAC setting that is different from that used in the initial installation, then the registry is adversely affected. This might result in unreliable listings of the installation locations in the destination panels of the Update Installer, or an existing installation location might not show up in the dropdown menu.

When the Windows Vista or Windows 2008 operating systems are asked to run a program that requires elevated (Administrator) privileges, it first tells the user whether or not the publisher of the program is recognized. For certain WebSphere Process Server programs, for example, an operating-system dialog might appear that states "An unidentified program wants access to your computer." Examine the program details; and if it is the WebSphere Process Server program that you intend to run, click **Allow** to proceed.

To install the Update Installer for WebSphere Software, perform the following steps.

### Procedure

1. Before installing a newer version of the update installer, you must first remove the existing update installer. For more information, see Uninstalling the Update Installer for WebSphere Software in the WebSphere Application Server Network Deployment, version 7.0 documentation.
2. Start the installation wizard for the Update Installer for WebSphere Software in one of the following ways.
  - From the launchpad:
    - a. Start the WebSphere Process Server launchpad. For more information about how to start the launchpad, see "Starting the launchpad" on page 69.
    - b. Click **IBM Update Installer for WebSphere Software installation** in the list of options displayed on the left of the launchpad window. The IBM Update Installer for WebSphere Software installation panel opens.
    - c. On the IBM Update Installer for WebSphere Software installation panel of the launchpad, click **Launch the installation wizard for IBM Update Installer**.
  - From the command line:
    - a. Log on to the system.

- b. **Linux** **UNIX** On **Linux and UNIX platforms:** Mount the CD-ROM drive if necessary. See Mounting CD-ROMs on Linux and UNIX operating systems for details.
  - c. Insert the product DVD labeled *WebSphere Process Server V6.2 DVD* into the CD-ROM drive.
  - d. Navigate to the UpdateInstaller directory.
  - e. Type the `install` or `install -silent` command from the UpdateInstaller directory.
3. Follow the directions in the installation wizard.

## Results

The Update Installer for WebSphere Software is installed in the following root directories, depending on the platform you are using:

- **AIX** On **AIX platforms:** `/usr/IBM/WebSphere/UpdateInstaller`
- **i5/OS** On **i5/OS platforms:** `/QIBM/ProdData/WebSphere/UpdateInstaller/V61/UPDI`
- **HP-UX** **Linux** **Solaris** On **HP-UX, Linux and Solaris platforms:** `/opt/IBM/WebSphere/UpdateInstaller`
- **Windows** On **Windows platforms:** `C:\Program Files\IBM\WebSphere\UpdateInstaller`

## What to do next

After you have installed the update installer, you can use it to install interim fixes, fix packs, and refresh packs. For more information, see [Installing fix packs and refresh packs with the update installer](#).

---

## Uninstalling maintenance packages

You can use the Update Installer for WebSphere Software to uninstall interim fixes, fix packs, and refresh packs. The Update Installer for WebSphere Software is also known as the update installer program, the `updateInstaller` program, and the Update Installation Wizard.

### Before you begin

Use the correct authorizations to successfully install product updates.

The Update Installer is an InstallShield MultiPlatform wizard that runs with either a graphical user interface or in silent mode with a response file: `uninstall.txt`.

**Note:** **i5/OS** On **i5/OS platforms:** The Update Installer on i5/OS runs only with the response file.

**Important:** For information about known problems, the topic `Update` command - known problems and workarounds in the *WebSphere Application Server Network Deployment, version 6.1, documentation*.



**Important:** Throughout this topic, certain directory paths are shown only in Linux and UNIX format for simplicity. The equivalent path for i5/OS is identical to Linux and UNIX. The equivalent Windows paths are identical except for the direction of the slashes.

The following descriptions contain reference information about uninstalling interim fixes, fix packs, and refresh packs on WebSphere Process Server:

**Overview of the uninstallation procedure**

To uninstall a maintenance package:

1. Make sure that you have the backup file that was created when you used the update installer to install the maintenance package: it should be located in the *install\_root/properties/version/nif/backup* directory. IBM does not support user modifications to backup files.
2. Use the update installer program to remove the maintenance package as described in this topic.

**Viewing the fix level of the node**

You can use the `versionInfo` command in the *install\_root/bin* directory to display the exact fix and version level of the product. However, do not use the `versionInfo` command while installing or uninstalling a maintenance package.

**Do not launch multiple copies of the Update Installer at one time:** Concurrent launches of the update installer program are not supported. Performing more than one update at the same time can produce unpredictable results, which might include a failed or faulty installation.

**Required information**

The graphical interface requires the following information that you must supply:

*Table 141. Information required when uninstalling a maintenance package*

Field	Valid values	Description
File path of the installation root directory of the WebSphere product and the Update Installer	Identify the installation root directory for IBM WebSphere Process Server.	The Update Installer application defaults to the last-visited product location.
File name of the maintenance package to uninstall.	Select a maintenance package to uninstall from the <i>install_root/properties/version/update/backup</i> directory.	The default maintenance package is the package with the latest date stamp and time stamp in the <i>install_root/properties/version/update/backup</i> directory.

**Required security role for this task:** Use the correct authorizations to successfully uninstall product updates. Use the update installer program as the root user on a Linux or UNIX platform, or as the Administrator on a Windows platform.

To remove an interim fix, a fix pack, or a refresh pack, perform the following steps.

**Procedure**

1. Log on to the operating system.

**Linux** **UNIX** **On Linux and UNIX platforms:** In addition, verify that the `umask` setting is `0022`.

To verify the `umask` setting, type the following command: `umask`.

To set the `umask` setting to `0022`, type the following command: `umask 0022`

2. Change directories to the update installer directory. The update installer directory is located in one of the following locations, depending on the operating system that you are using:
  - **AIX** **On AIX platforms:** /usr/IBM/WebSphere/UpdateInstaller
  - **i5/OS** **On i5/OS platforms:** /QIBM/ProdData/WebSphere/UpdateInstaller/V61/UPDI
  - **HP-UX** **Linux** **Solaris** **On HP-UX, Linux and Solaris platforms:** /opt/IBM/WebSphere/UpdateInstaller
  - **Windows** **On Windows platforms:** C:\Program Files\IBM\WebSphere\UpdateInstaller
3. **Windows** **On Windows platforms:** Use the Windows Services panel to stop all services for WebSphere Process Server and WebSphere Application Server processes.
4. Stop all Java processes that use the IBM Software Developer Kit (SDK) or IBM Developer Kit for Java (JDK and used on i5/OS platforms).  
Before uninstalling interim fixes, fix packs, and refresh packs on a machine, stop all Java processes on the machine that use the IBM SDK, Java Technology Edition.

WebSphere Process Server processes include:

- Server processes
- The node agent process on a node when the node is federated into a deployment manager cell
- The dmgr process for the deployment manager server

**Note:** **i5/OS** Use the ENDSBS (End Subsystem) command for either the QWAS61 or QWBI61 subsystems to stop application server processes. See Shutting down the WebSphere Application Server subsystem.

Stop all Java processes, if necessary. If you uninstall a maintenance package while a WebSphere Process Server-related Java process runs, IBM does not guarantee that the product can continue to run successfully, or without error.

5. Use the update installer to uninstall the maintenance package.
  - To uninstall the maintenance package using the graphical user interface, type one of the following commands:
    - **Windows** **On Windows platforms:** update.bat -W  
update.type="uninstall" to uninstall the maintenance package with the most recent date stamp and time stamp using the graphical user interface.
    - **Vista** **On Vista and Windows 2008 platforms:** update.exe -W  
update.type="uninstall" to uninstall the maintenance package with the most recent date stamp and time stamp using the graphical user interface.
    - **Linux** **UNIX** **On Linux and UNIX platforms:** ./update.sh -W  
update.type="uninstall" to uninstall the maintenance package with the most recent date stamp and time stamp using the graphical user interface.
    - **Windows** **On Windows platforms:** update.bat -options  
"responsefiles/file\_name" to override all graphical interface values with values that you specified in the options response file. For more information about the example response file that is installed with the update installer, see the uninstall.txt topic in the WebSphere Application Server Network Deployment, version 6.1 documentation.

- **Vista** **On Vista and Windows 2008 platforms:** `update.exe -options "responsefiles/file_name"` to override all graphical interface values with values that you specified in the options response file. For more information about the example response file that is installed with the update installer, see the `uninstall.txt` topic in the WebSphere Application Server Network Deployment, version 6.1 documentation.
- **i5/OS** **On i5/OS platforms:** `./update -options "responsefiles/file_name"` to uninstall without a graphical user interface, using the values that you specified in the options response file. For more information, see the `uninstall.txt` topic in the WebSphere Application Server Network Deployment, version 6.1 documentation.
- **Linux** **UNIX** **On Linux and UNIX platforms:** `./update.sh -options "responsefiles/file_name"` to override all graphical interface values with values that you specified in the options response file. For more information about the example response file that is installed with the update installer, see the `uninstall.txt` topic in the WebSphere Application Server Network Deployment, version 6.1 documentation.
- To uninstall the maintenance package as a background process, using the silent mode, type one of the following commands:
  - **Windows** **On Windows platforms:** `update.bat -silent -options "responsefiles/file_name"` to uninstall without a graphical user interface, using the values that you specified in the options response file. For more information, see the `uninstall.txt` topic in the WebSphere Application Server Network Deployment, version 6.1 documentation.
  - **Vista** **On Vista and Windows 2008 platforms:** `update.exe -silent -options "responsefiles/file_name"` to uninstall without a graphical user interface, using the values that you specified in the options response file. For more information, see the `uninstall.txt` topic in the WebSphere Application Server Network Deployment, version 6.1 documentation.
  - **Linux** **UNIX** **On Linux and UNIX platforms:** `./update.sh -silent -options "responsefiles/file_name"` to uninstall without a graphical user interface, using the values that you specified in the options response file. For more information, see the `uninstall.txt` topic in the WebSphere Application Server Network Deployment, version 6.1 documentation.

**Note:** Uninstall the interim fix on each server node in a cell before uninstalling the maintenance package from the deployment manager node.

To view tables that show all of the options available when using the update command to uninstall maintenance packages, see the update command topic in the WebSphere Application Server Network Deployment, version 6.1 documentation.

6. If you uninstall a fix pack, the Update Installer does not uninstall fix pack updates from profiles. The reason for not removing this maintenance is that you might have configured the profile after installing the maintenance. To restore an original profile, use the `restoreConfig` command to restore your backup. See Backing up and restoring administrative configurations for more information about running this command. For detailed installing or uninstalling instructions, please refer to the instructions provided with your fix pack or refresh pack.

## **Results**

The interim fix, fix pack or refresh pack is removed, and the previous version of WebSphere Process Server software remains on your system.

## **What to do next**

After uninstalling maintenance packages, you can continue to use the WebSphere software.

---

## Chapter 11. Installing fix packs and refresh packs with customized installation packages

This feature allows you to upgrade to a newer maintenance level using a customized installation package (CIP).

### Before you begin

To install interim fixes, fix packs, and refresh packs, collectively known as maintenance packages, you must have an existing WebSphere Process Server installation. The existing product installation level must be a lower level than the maintenance package that you want to install.

You can obtain a WebSphere Process Server CIP in two ways, from the disks in the product package or by downloading installation images from the Passport Advantage® site, if you are licensed to do so.

**Note:** For detailed installing instructions, please refer to the instructions provided with your fix pack or refresh pack.

**Attention:** Fix packs that include updates to the Software Development Kit (SDK) might overwrite unrestricted policy files. Back up unrestricted policy files before you apply a fix pack and reapply these files after the fix pack is applied.

To install a maintenance package using a CIP, perform the following steps.

### Procedure

1. Determine the maintenance level of the existing WebSphere Process Server installation. The installed product must be at a lower maintenance level than the maintenance upgrade you will apply. You can check the existing version using the versionInfo script. See “Product version and history information” on page 565 for more details.
2. Follow the procedure in the “Installing WebSphere Process Server interactively” on page 79 topic.
3. After completing the installation, you can use the versionInfo script to verify that the installation is at the updated maintenance level.



---

## Chapter 12. Uninstalling the software

Learn about the different ways of uninstalling IBM WebSphere Process Server.

The uninstaller program removes all profiles by default, including all of the configuration data and applications in each profile. The exception is i5/OS, which does not remove all profiles by default. Before you start the uninstallation procedure, back up the config folder, the installableApps folder, and the installedApps folder of each profile, if necessary, or use the `-OPT removeProfilesOnUninstall="false"` parameter on the uninstall command. See Using command line tools for a description of managing configuration files. Back up all applications that are not stored in another location. To uninstall, select the link to the uninstallation procedure you require from the subtopics below.

Also covered is how to remove the different components from a WebSphere Process Server installation. These components are uninstalled during an uninstallation of WebSphere Process Server. See the topics under Removing the Business Process Choreographer configuration and Removing the Common Event Infrastructure configuration for more information.

To uninstall related products, such as the Web server plug-ins for WebSphere Application Server, IBM HTTP Server, and the Application Client for WebSphere Application Server, see the following topics in the WebSphere Application Server Network Deployment and IBM HTTP Server information centers:

- Uninstalling the Web server plug-ins for WebSphere Application Server.
- Uninstalling IBM HTTP Server.
- Uninstalling Application Client for WebSphere Application Server feature pack.

---

### Uninstalling the product using the GUI or silently

Learn how to uninstall WebSphere Process Server and the underlying copy of WebSphere Application Server Network Deployment with Feature Pack for Web Services using either the uninstallation wizard graphical user interface (GUI) or silently using a command-line invocation.

#### Before you begin

Before uninstalling WebSphere Process Server using this procedure, do the following:

- Determine if you want to uninstall WebSphere Process Server interactively or silently. Steps that you must perform for each procedure will be identified in the overall procedure in this topic.

**Restriction:** i5/OS You can only uninstall WebSphere Process Server on i5/OS silently.

- Determine if you want to uninstall the underlying WebSphere Application Server Network Deployment with Feature Pack for Web Services product when you are uninstalling WebSphere Process Server. If you uninstall this product, the uninstaller program also removes all profiles by default, including all of the configuration data and applications in each profile. You can choose not to delete the profiles.

**Note:** i5/0S WebSphere Application Server Network Deployment with Feature Pack for Web Services is uninstalled by default. You must change this option in the uninstall command if you don't want to uninstall this product.

- Back up the config folder, the installableApps folder, and the installedApps folder of each profile, if necessary. Back up all applications that are not stored in another location.
- Remove the event messaging enterprise application, the event database, and the configuration for the Common Event Infrastructure application, in that order.
  - The instructions for removing the event messaging enterprise application are found in Removing event messaging from the Common Event Infrastructure server.
  - Those for removing the event database, in Removing the event database.
  - And those for removing the configuration for the Common Event Infrastructure application, in Removing the Common Event Infrastructure application.
- If you configured Business Process Choreographer, you must delete all external resources manually after uninstalling WebSphere Process Server. For instructions on how to do this, see Removing the Business Process Choreographer configuration.
- Ensure that you are uninstalling the product using the same user ID that was used when the product was installed.

**Restriction:** You cannot perform partial, custom, or incremental uninstallations.

## About this task

The uninstallation program is created during product installation. It is customized for each product installation, with specific disk locations and routines for removing installed features.

To uninstall WebSphere Process Server, perform the following steps.

### Procedure

1. Log on using the same user ID that was used when the product was installed.
2. If you are uninstalling the underlying WebSphere Application Server Network Deployment with Feature Pack for Web Services, run the uninstallation program for the Web server plug-ins for WebSphere Application Server.

If your system includes a Web server configured to run with the underlying WebSphere Application Server product, you must uninstall the plug-ins to remove the configuration from the Web server. See the uninstallation procedure for the plug-ins in the following topic in the WebSphere Application Server Network Deployment information center: Uninstalling the Web server plug-ins for WebSphere Application Server.
3. Stop all deployment managers, node agents and server processes. For instructions on how to stop these processes, see “Stopping servers and nodes” on page 34.
4. Optional: Back up configuration files and log files to refer to them later, if necessary.

The uninstallation program does not remove log files in the *install\_root* directory. If you elect to uninstall the underlying WebSphere Application Server Network Deployment with Feature Pack for Web Services, it does remove all profiles and all of the data in all profiles by default.



Back up the config folder and the logs folder of each profile to refer to later, if necessary. You cannot reuse profiles so there is no need to back up an entire profile.

If you want to uninstall with the interactive GUI interface, go to step 5. If you want to uninstall silently, go to step 6 on page 516.

**Restriction:** `i5/OS` You cannot uninstall a WebSphere Process Server for i5/OS installation with the GUI. This uninstallation must be performed silently.

5. **If uninstalling interactively using the uninstallation wizard only:** Do the following:

a. Issue the uninstall command from a command line using one of the following commands, depending on platform:

- `Linux` `UNIX` `install_root/uninstall.wbi/uninstall`
- `Windows` `install_root\uninstall.wbi\uninstall.exe`

The uninstallation wizard starts and the Welcome panel is displayed.

b. In the Welcome panel, select whether to uninstall any underlying products when uninstalling WebSphere Process Server.

- If you want to uninstall the underlying product, select one of the following check boxes, depending on which product is installed:
  - **Uninstall the underlying IBM WebSphere Application Server Network Deployment with Feature Pack for Web Services, Version 6.1**
  - **Uninstall the underlying IBM Feature Pack for Web Services, Version 6.1** (This selection is displayed if a product in addition to WebSphere Process Server and Feature Pack for Web Services is installed on top of WebSphere Application Server Network Deployment. In this case, you cannot uninstall WebSphere Application Server Network Deployment; you can only uninstall the Feature Pack for Web Services.)
- If you do *not* want to uninstall the underlying product, clear the check box.

Click **Next**.

c. The panel that is displayed depends on whether you chose to uninstall the underlying product and on which product that is.

- If you chose to uninstall IBM WebSphere Application Server Network Deployment with Feature Pack for Web Services underlying WebSphere Process Server, the Profile deletion confirmation panel lets you choose whether to remove all profiles associated with the installation you are uninstalling. Check the check box to delete all profiles; clear the check box to keep any that have not been augmented by WebSphere Process Server. Any profiles augmented by WebSphere Process Server will be rendered unusable by the uninstallation process and will be deleted by the uninstallation process even if you have cleared the check box. By default, all profiles are deleted.
- If you chose to uninstall an installation of IBM Feature Pack for Web Services (meaning you cannot uninstall the underlying WebSphere Application Server Network Deployment), a warning panel identifies any profiles that have been augmented with WebSphere Process Server profile templates and that will be deleted by the uninstallation process. Any

profiles augmented by WebSphere Process Server will be rendered unusable by the uninstallation process and will be deleted by the uninstallation process.

- If you chose *not* to uninstall the underlying product, a warning panel identifies any profiles that have been augmented with WebSphere Process Server profile templates and that will be deleted by the uninstallation process. Any profiles augmented by WebSphere Process Server will be rendered unusable by the uninstallation process and will be deleted by the uninstallation process even if you elected not to uninstall the underlying product.

Click **Next**. The uninstaller checks if any servers associated with the installation are still running.

- d. The panel that is displayed depends on whether you chose to uninstall the underlying product and on whether any servers associated with the installation are running.

- If no servers are running, the uninstaller displays a confirmation panel that lists a summary of the components that you are uninstalling. Click **Next** to begin the uninstallation.
- If servers are running and you chose to uninstall IBM WebSphere Application Server Network Deployment with Feature Pack for Web Services, the uninstaller shuts them down. A confirmation panel is displayed that lists a summary of the components that you are uninstalling. Click **Next** to begin the uninstallation.
- If servers are running and you chose to uninstall IBM Feature Pack for Web Services, a warning panel directs you to stop the servers. Stop any running servers manually and click **OK** to close the warning panel. The Welcome panel is displayed so you can restart the uninstallation process. Go to step 5.b above.
- If servers are running and you did *not* choose to uninstall the underlying product, a warning panel directs you to stop the servers. Stop any running servers manually and click **OK** to close the warning panel. The Welcome panel is displayed so you can restart the uninstallation process. Go to step 5.b above.

- e. Click **Finish** to close the wizard after the wizard removes the product. Go to step 7 on page 517.

6. **If uninstalling silently only:** Run the command that uninstalls WebSphere Process Server. Issue the following command to silently uninstall WebSphere Process Server and the underlying WebSphere Application Server product and to remove all profiles:

- **i5/OS**

```
install_root/bin/uninstall_wbi -OPT isUmbrellaUninstall="true"  
-OPT removeProfilesOnUninstall="true"
```

- **Linux**      **UNIX**

```
install_root/uninstall.wbi/uninstall  
-OPT isUmbrellaUninstall="true" -OPT removeProfilesOnUninstall="true" -silent
```

- **Windows**

```
install_root\uninstall.wbi\uninstall.exe  
-OPT isUmbrellaUninstall="true" -OPT removeProfilesOnUninstall="true" -silent
```

Issue the following command to silently uninstall WebSphere Process Server and the underlying WebSphere Application Server product and to retain all profiles:

- **i5/OS**  

```
install_root/bin/uninstall_wbi -OPT isUmbrellaUninstall="true"
-OPT removeProfilesOnUninstall="false"
```
- **Linux** **UNIX**  

```
install_root/uninstall.wbi/uninstall
-OPT isUmbrellaUninstall="true" -OPT removeProfilesOnUninstall="false" -silent
```
- **Windows**  

```
install_root\uninstall.wbi\uninstall.exe
-OPT isUmbrellaUninstall="true" -OPT removeProfilesOnUninstall="false" -silent
```

Issue the following command to silently uninstall WebSphere Process Server and keep the underlying WebSphere Application Server product. This command deletes all profiles:

- **i5/OS**  

```
install_root/bin/uninstall_wbi -OPT isUmbrellaUninstall="false"
```
- **Linux** **UNIX**  

```
install_root/uninstall.wbi/uninstall
-OPT isUmbrellaUninstall="false" -silent
```
- **Windows**  

```
install_root\uninstall.wbi\uninstall.exe -OPT isUmbrellaUninstall="false"
-silent
```

If you encounter any problems during the uninstallation, examine the log.txt file in the *install\_root/logs/wbi/uninstall* directory.

7. If you configured Business Process Choreographer, you must delete all external resources manually.  
For instructions on how to do this, see Removing the Business Process Choreographer configuration.
8. Remove any configuration entries in the managed node that describe a deleted deployment manager.

A common topology is to install the core product files on multiple workstations. One workstation has the deployment manager and other workstations have managed nodes created from custom profiles. If you delete an installation where you created a data manager into which you federated a custom profile from another installation, you must update the configuration of those custom profiles.

The official statement of support for a node configuration problem in the managed node is that you use the **backupConfig** command after the initial installation. Use the command again whenever you make significant changes to the configuration that you must save. With a valid backup of the configuration, you can always use the **restoreConfig** command to get back to a previously existing state in the configuration.

You can also use one of the following commands on the machine with the managed node to remove the node. In this example, *profile\_root* represents the installation directory of the managed node profile:

- **i5/OS** *profile\_root/bin/removeNode -force*
  - **Linux** **UNIX** *profile\_root/bin/removeNode.sh -force*
  - **Windows** *profile\_root\bin\removeNode.bat -force*
9. Remove any configuration entries in the deployment manager that describe a deleted managed node.

Open the administrative console of the deployment manager and click **System administration > Nodes**. Select the check box beside the node you wish to delete and then select **Remove node**.

If the administrative console cannot successfully remove the node, run the following command with the deployment manager running:

- `i5/OS install_root/bin/cleanupNode node_name`
- `Linux UNIX install_root/bin/cleanupNode.sh node_name`
- `Windows install_root\bin\cleanupNode.bat node_name`

The official statement of support for a node configuration problem in the deployment manager is that you use the **backupConfig** command after the initial installation. Use the command again whenever you make significant changes to the configuration that you must save. With a valid backup of the configuration, you can always use the **restoreConfig** command to get back to a previously existing state in the configuration.

## Results

This procedure uninstalls WebSphere Process Server, and if selected, WebSphere Application Server Network Deployment with Feature Pack for Web Services. After running the uninstallation wizard, the directory structure has only a few remaining directories, including the logs directory.

The uninstallation program leaves some log files in this directory, including the following:

- `i5/OS install_root/logs/wbi/uninstall/log.txt`
- `Linux UNIX install_root/logs/wbi/uninstall/log.txt`
- `Windows install_root\logs\wbi\uninstall\log.txt`

The `uninstlog.txt` file records file system or other unusual errors. Look for the `INSTCONFSUCCESS` indicator of success in the log:

```
Uninstall, com.ibm.ws.install.ni.ismp.actions.  
  ISMPLogSuccessMessageAction, msg1,  
  INSTCONFSUCCESS
```

## What to do next

If you intend to reinstall the product into the same installation root directory, you must do one of the following, depending on the success of the uninstallation:

- If uninstallation was successful, you must manually remove the `install_root` directory.

**Important:** You need to uninstall both WebSphere Process Server and the underlying WebSphere Application Server, WebSphere Application Server Network Deployment, or WebSphere Application Server Network Deployment with Feature Pack for Web Services product if you uninstall and plan to reinstall WebSphere Process Server into the same directory. Therefore the `install_root` directory, which you must manually remove, must be empty.

- If uninstallation was not successful, you must manually uninstall the remaining artifacts of the product. See “Preparing for reinstallation after failed uninstallation” on page 519 for more information. If you do not plan to reinstall, you do not need to perform this task.

For more information on the commands mentioned in this topic, see the following topics in the Command-line utilities section in the WebSphere Application Server Network Deployment information center:

- stopManager
- stopNode
- stopServer
- backupConfig
- restoreConfig

---

## Preparing for reinstallation after failed uninstallation

Learn how to reinstall the software. An uninstallation program that does not complete successfully can leave files that can prevent you from reinstalling into the original directory. This topic outlines the procedures you need to follow in order to reinstall.

### Before you begin

You can reinstall without a clean machine. However, such an installation creates a coexistence scenario that can prevent you from installing into the original directory.

Cleaning the machine means deleting everything from the previous installation, including log files that are left behind by the uninstallation wizard or silent uninstallation procedure. Before you start the procedure, back up log files, if necessary. See “Installation and profile creation log files” on page 669 for the location of log files.

### About this task

Other related products might be part of your installation and need to be uninstalled. For instructions, see the following topics in the WebSphere Application Server Network Deployment and IBM HTTP Server, version 6.1 information centers:

- Uninstalling the Web server plug-ins for WebSphere Application Server
- Linux UNIX Windows Uninstalling IBM HTTP Server
- Uninstalling Application Client for WebSphere Application Server

To prepare for reinstallation after a failed uninstallation, follow the appropriate instructions in the subtopics below. Cleaning the system eliminates all evidence of all deleted installation. After you have cleaned your system, go to Installing the software for information on how to install the product again.

## Preparing for reinstallation after failed uninstallation on AIX systems

Learn how to clean an AIX system if uninstallation of WebSphere Process Server fails. After running the uninstallation program, go through these manual steps to remove registry entries that can prevent you from reinstalling the product into the original directory.

## Before you begin

Before performing this procedure, ensure you have uninstalled WebSphere Process Server using the Uninstallation wizard or silently, and that the procedure was not completed successfully. If the procedure was successful, you do not need to perform this task.

Determine the *install\_root* directory for the product so that you remove the correct product and produce a clean system.

For details on default directory locations see “Default installation directories for the product, profiles, and tools” on page 539.

### Note:

The installation wizard and the Profile Management Tool let you specify your own locations for installation root directories. Examine the following files to determine the actual locations:

- The `/usr/.ibm/.nif/.nifregistry` file identifies the installation root for all installed WebSphere Process Server products; it also looks for all WebSphere Application Server products.
- The `install_root/logs/manageprofiles/profile_name_create.log` file for each created profile identifies the installation location in the stanza with the `invokeWSProfile` method.

Uninstalling the product leaves the *profile\_root* directory, including the *profile\_root/logs* file, where *profile\_root* represents the installation location of the profile. It leaves the *install\_root/logs* directory as well.

## About this task

Reinstalling the product into a new directory when files remain from a previous installation can create a coexistence scenario. However, you can delete all files and registry entries to completely remove WebSphere Process Server. A clean system lets you reinstall the product into the original directory without coexistence.

**Important:** Throughout this procedure, steps address removing artifacts left after uninstallation of both WebSphere Process Server and WebSphere Application Server or WebSphere Application Server Network Deployment. The WebSphere Application Server product addressed is assumed to be the one underlying the installation of WebSphere Process Server.

Perform the following procedure to produce a clean system.

### Procedure

1. Log on as the same user ID who installed the product.
2. Use the **kill** command to stop all Java processes that are running.

If you are running Java processes that are not related to WebSphere Process Server or WebSphere Application Server products and it is not possible to stop them, stop all WebSphere Process Server and WebSphere Application Server product-related processes. Use the following command to determine all processes that are running:

```
ps -ef | grep java
```

Stop all WebSphere Process Server and WebSphere Application Server product-related processes with the `kill -9 java_pid_1 java_pid_2...java_pid_n` command.

3. List WebSphere Process Server and WebSphere Application Server components that are installed.

Type the following command to search for related packages:

```
lslpp -l | grep -i WS
```

To narrow your query to search for WebSphere Process Server packages only, type the following command:

```
lslpp -l | grep -i WSEAA62
```

WebSphere Process Server, version 6.2 package names have a prefix of WSE and a suffix of 62. WebSphere Application Server Network Deployment, version 6.1 package names have a prefix of WSB or WSP and a suffix of 61. Do not remove packages for WebSphere Process Server and WebSphere Application Server products that you did not uninstall.

4. Change directories to the `/usr/IBM` directory, or the equivalent top directory of your installation.
5. Type `rm -rf WebSphere` to delete this WebSphere Process Server-related directory, but only if the `ProcServer` (or `AppServer` directory associated with the WebSphere Process Server installation you removed) is the only directory within the `WebSphere` directory. Delete the directory if the only products contained in the directory are products that you intend to delete.
6. Use the `installRegistryUtils` command to examine the installation locations for all installed WebSphere server products and remove the desired products from the installation registry.
7. Edit the `vpd.properties` file to remove the entries for WebSphere Process Server and WebSphere Application Server.

The file is located in the installation directory of the operating system, such as the root directory. Remove all entries for the installation of WebSphere Process Server that you have uninstalled. Each WebSphere Process Server entry starts with the characters WSE, followed by numbers representing the release number, and on the same line will have the `install_root` path corresponding to the installation you have uninstalled. (Each entry is on a single line if the file is displayed in a text editor with word wrap turned off.) For example, the line

```
WSEAA62|6|2|0|0|6.2.0.0|2=IBM WebSphere Process Server|
IBM WebSphere Process Server|IBM WebSphere Process Server V6.2|
IBM|http://www.ibm.com|6.2.0.0|
C:\Program Files\IBM\WebSphere\ProcServer|0|0|1|WSEAA62|6|2|0|0|6.2.0.0|2|0|
false|"properties/version/_uninst.wbi" "uninstall.jar" "uninstall.dat" "
"|true|3|WSEAA62|6|2|0|0|6.2.0.0|2
```

corresponds to the Websphere Application Server that was installed in the directory `C:\Program Files\IBM\WebSphere\ProcServer`.

**Note:** This text appears in several lines in this document for formatting purposes but would be a single line in the `vpd.properties` file.

Each WebSphere Application Server or WebSphere Application Server Network Deployment entry in the `vpd.properties` file has a similar format. For information about these entries to help you determine which to delete, and for more information about the `vpd.properties` file, refer to the topic `vpd.properties` file in the WebSphere Application Server Network Deployment, version 6.1 information center.

Do not delete or rename the `vpd.properties` file because the InstallShield MultiPlatform (ISMP) program uses it for other products that it installs. If the

WebSphere Process Server or WebSphere Application Server product that you are uninstalling is the only product with entries in the `vpd.properties` file, you can delete this file.

8. Run the `WPS_ODM_clean.sh` script.
  - a. Obtain the scripts from the technote document titled, Manual Object Data Manager (ODM) cleanup script for AIX on the WebSphere Application Server Support site.
  - b. Edit the `WPS_ODM_clean.sh` script and replace every instance of the string `/usr/WebSphere/AppServer` with the actual installation root directory.
  - c. Run the `WPS_ODM_clean.sh` script from the command line:
9. Clean the `nifregistry` file. To clean this file
  - a. Backup the `.nifregistry` file.
  - b. Open the `.nifregistry` file in a text editor (ensure that line wrapping is turned off).
  - c. Search and delete all lines that have the `<INSTALL_LOC>` and `<PRODUCT_ID>` in them where `<INSTALL_LOC>` is the install location where you have a failed uninstallation and `<PRODUCT_ID>` is the product offering ID of the product that you are trying to uninstall
  - d. Save the `.nifregistry` file and close the text editor.

## Results

This procedure results in having a clean system. You can reinstall into the same directories now. A clean system has no trace of a previously deleted installation.

## What to do next

After you have cleaned your system, go to Chapter 4, “Installing the software,” on page 67 to choose an installation procedure.

## Preparing for reinstallation after failed uninstallation on HP-UX systems

Learn how to clean a HP-UX system if uninstallation of WebSphere Process Server fails. After running the uninstallation program, go through these manual steps to remove registry entries that can prevent you from reinstalling the product into the original directory.

### Before you begin

Before performing this procedure, ensure you have uninstalled WebSphere Process Server using the uninstallation wizard or silently, and that the procedure was not completed successfully. If the procedure was successful, you do not need to perform this task.

Determine the `install_root` directory for the product so that you remove the correct product and produce a clean system.

For details on default directory locations see “Default installation directories for the product, profiles, and tools” on page 539.

The installation wizard and the Profile Management Tool let you specify your own locations for installation root directories. Examine the following files to determine the actual locations:



- The `/opt/.ibm/.nif/.nifregistry` file identifies the installation root for all installed WebSphere Process Server products; it also looks for all WebSphere Application Server products.
- The `install_root/logs/manageprofiles/profile_name_create.log` file for each created profile identifies the installation location in the stanza with the `invokeWSProfile` method.

Uninstalling the product leaves the `profile_root` directory, including the `profile_root/logs` file, where `profile_root` represents the installation location of the profile. It leaves the `install_root/logs` directory as well.

## About this task

Reinstalling the product into a new directory when files remain from a previous installation can create a coexistence scenario. However, you can delete all files and registry entries to completely remove WebSphere Process Server. A clean system lets you reinstall the product into the original directory without coexistence.

**Important:** Throughout this procedure, steps address removing artifacts left after uninstallation of both WebSphere Process Server and WebSphere Application Server or WebSphere Application Server Network Deployment. The WebSphere Application Server product addressed is assumed to be the one underlying the installation of WebSphere Process Server.

Perform the following procedure to produce a clean system.

### Procedure

1. Log on as the same user ID who installed the product.
2. Use the **kill** command to stop all Java processes that are running.

If you are running Java processes that are not related to WebSphere Process Server or WebSphere Application Server products and it is not possible to stop them, stop all WebSphere Process Server and WebSphere Application Server product-related processes. Use the following command to determine all processes that are running:

```
ps -ef | grep java
```

Stop all WebSphere Process Server and WebSphere Application Server product-related processes with the **kill -9 java\_pid\_1 java\_pid\_2...java\_pid\_n** command.

3. Use the HP-UX System Administration Manager (SAM) utility to remove packages.
  - a. Start the SAM utility with the `/usr/sbin/sam` command.
  - b. Verify that your `DISPLAY` and `TERM` environment variables are set properly.
  - c. Click **Software management**.
  - d. Click **View installed software**.
  - e. Look for WebSphere Process Server or WebSphere Application Server entries in the SD list.
  - f. Close the SD list.
  - g. Click **Remove local host software**.
  - h. Select any of the following instances that are displayed in the SD Remove List:
    - WSEAA62

- **WSBAA61**
  - i. Select **Actions** → **Mark for remove**.
  - j. Select **Actions** → **Remove**.
  - k. Click **OK** in the Remove analysis dialog box.
  - l. Click **Logs** to display real-time removal of selected packages.
  - m. Click **Done** when all packages are removed.
  - n. Exit SAM.
4. Search for the packages to verify their removal.  
Type `swlist | grep WS` to show packages for WebSphere Process Server and WebSphere Application Server.  
To narrow your query to search for WebSphere Process Server packages only, type the following command:  
`swlist | grep WSEAA62`
  5. Remove the installation root directory.  
Type `rm -rf install_root` to remove WebSphere Process Server. Ensure you specify the correct *install\_root* for the product you uninstalled. For example, if you uninstalled WebSphere Process Server from the default installation directory `/opt/IBM/WebSphere/ProcServer`, issue the following command:  
`rm -rf /opt/IBM/WebSphere/ProcServer`
  6. Use the `installRegistryUtils` command to examine the installation locations for all installed WebSphere server products and remove the desired products from the installation registry.
  7. Clean the `.nifregistry` file. To clean this file:
    - a. Backup the `.nifregistry` file.
    - b. Open the `.nifregistry` file in a text editor (ensure that line wrapping is turned off).
    - c. Search and delete all lines that have the `<INSTALL_LOC>` and `<PRODUCT_ID>` in them where `<INSTALL_LOC>` is the installation location where you have a failed uninstallation and `<PRODUCT_ID>` is the product offering ID of the product that you are trying to uninstall.
    - d. Save the `.nifregistry` file and close the text editor.

## Results

This procedure results in having a clean system. You can reinstall into the same directories now. A clean system has no trace of a previously deleted installation.

## What to do next

After you have cleaned your system, go to Chapter 4, “Installing the software,” on page 67 to choose an installation procedure.

## Preparing for reinstallation after failed uninstallation on i5/OS systems

Learn how to clean a i5/OS system if uninstallation of WebSphere Process Server fails. After running the uninstallation program, go through these manual steps to remove registry entries that can prevent you from reinstalling the product into the original directory.

## Before you begin

Before performing this procedure, ensure you have uninstalled WebSphere Process Server silently, and that the procedure was not completely successful. If the procedure was successful, you do not need to perform this task.

Determine the *install\_root* and *profile\_root* directories for the product so that you remove the correct product and produce a clean system.

For details on default directory locations see “Default installation directories for the product, profiles, and tools” on page 539

The installation wizard and the Profile Management Tool let you specify your own locations for installation root directories. Examine the following files to determine the actual locations:

- The `/QIBM/WAS/.ibm/.nif/.nifregistry` file identifies the installation root for all installed WebSphere Process Server products.
- The `user_data_root/profileRegistry/logs/manageprofiles/profile_create.log` file for each created profile identifies the installation location in the stanza with the `<method>invokeWSProfile</method>` tag.

Uninstalling the product leaves the `user_data_root/profileRegistry/logs` directory. It also leaves the `install_root/logs` directory.

## About this task

Reinstalling the product into a new directory when files remain from a previous installation can create a coexistence scenario. However, you can delete all files and registry entries to completely remove WebSphere Process Server. A clean system lets you reinstall the product into the original directory without coexistence.

**Important:** Throughout this procedure, steps address removing artifacts left after uninstallation of both WebSphere Process Server and WebSphere Application Server or WebSphere Application Server Network Deployment. The WebSphere Application Server product addressed is assumed to be the one underlying the installation of WebSphere Process Server.

Perform the following procedure to produce a clean system.

### Procedure

1. Sign onto the i5/OS system with a user profile that has \*ALLOBJ and \*SECADM special authorities.
2. In Qshell, go to the *install\_root* directory.
3. Remove the subdirectory related to the installation you are removing. Delete the installation subdirectory and all files and directories contained in this subdirectory.

**Note:** The name of the subdirectory increments with each additional install. For example, the first installation the directory name is ProcServer, then for the second installation is ProcServer1, and so on.

4. Next, go to the `user_data_root/profiles` directory.
5. Remove the subdirectory related to the installation you are removing. Delete the installation subdirectory and all files and directories contained in this subdirectory.

**Note:** The name of the subdirectory increments with each additional install. For example, the first installation the directory name is ProcServer, then for the second installation is ProcServer1, and so on.

6. Edit the /QIBM/WAS/.ibm/.nif/.nifregistry file. Remove all entries referring to your installation.
7. If this is the last installation of WebSphere Process Server being removed from the system, then you must also delete the i5/OS licensed program registry entry for WebSphere Process Server by issuing the following DLTLICPGM command at the i5/OS CL command prompt.  
DLTLICPGM LICPGM(5724L01)

## Results

This procedure results in having a clean system. You can reinstall into the same directories now. A clean system has no trace of a previously deleted installation.

## What to do next

After you have cleaned your system, go to Chapter 4, “Installing the software,” on page 67 to choose an installation procedure.

## Preparing for reinstallation after failed uninstallation on Linux systems

Learn how to clean a Linux system if uninstallation of WebSphere Process Server fails. After running the uninstallation program, go through these manual steps to remove registry entries that can prevent you from reinstalling the product into the original directory.

### Before you begin

Before performing this procedure, ensure you have uninstalled WebSphere Process Server using the uninstallation wizard or silently, and that the procedure was not completed successfully. If the procedure was successful, you do not need to perform this task.

Determine the *install\_root* directory for the product so that you remove the correct product and produce a clean system.

For details on default directory locations see “Default installation directories for the product, profiles, and tools” on page 539.

The installation wizard and the Profile Management Tool let you specify your own locations for installation root directories. Examine the following files to determine the actual locations:

- The *opt/.ibm/.nif/.nifregistry* file identifies the installation root for all installed WebSphere Process Server products and for all WebSphere Application Server products. The *install\_root/logs/manageprofiles/profile\_name\_create.log* file for each created profile identifies the installation location in the stanza with the *invokeWSProfile* method.

Uninstalling the product leaves the *profile\_root* directory, including the *profile\_root/logs* directory, where *profile\_root* represents the installation location of the profile. It also leaves the *install\_root/logs* directory.

## About this task

Reinstalling the product into a new directory when files remain from a previous installation can create a coexistence scenario. However, you can delete all files and registry entries to completely remove WebSphere Process Server. A clean system lets you reinstall the product into the original directory without coexistence.

**Important:** Throughout this procedure, steps address removing artifacts left after uninstallation of both WebSphere Process Server and WebSphere Application Server or WebSphere Application Server Network Deployment. The WebSphere Application Server product addressed is assumed to be the one underlying the installation of WebSphere Process Server.

Perform the following procedure to produce a clean system.

### Procedure

1. Log on as the same user ID who installed the product.
2. Stop all Java processes that are running.

If you are running Java processes that are not related to WebSphere Process Server or WebSphere Application Server products and it is not possible to stop them, stop all WebSphere Process Server and WebSphere Application Server product-related processes. Use the following command to determine all processes that are running:

```
ps -ef | grep java
```

Stop all WebSphere Process Server and WebSphere Application Server product-related processes with the `kill -9 java_pid_1 java_pid_2...java_pid_n` command.

3. Search for related packages. Issue the following command to show packages for the WebSphere Process Server and WebSphere Application Server products:

```
rpm -qa | grep WS
```

To narrow your query to search for WebSphere Process Server packages only, type the following command:

```
rpm -qa | grep WSEAA62
```

For example, after issuing the command `rpm -qa | grep WSEAA62`, the following package might be displayed:

```
WSEAA62LicensingComponent-6.2-0
```

WebSphere Process Server, version 6.2, package names have a prefix of WSE and a suffix of 62. WebSphere Application Server Network Deployment, version 6.1, package names have a prefix of WSB or WSP and a suffix of 61. Do not remove packages for WebSphere Process Server and WebSphere Application Server products that you did not uninstall.

4. If there are packages to delete, type `rpm -e packagename` to remove any packages for the product that you uninstalled.

Alternatively, you can search for packages to verify that every item in the list is something to delete:

```
rpm -qa | grep WSEAA62
```

If the list contains packages that you intend to delete and no others, remove all of the packages with the following command:

```
rpm -qa | grep WSEAA62 | xargs rpm -e
```

If there is a problem with package dependencies, you can use the following command to remove the packages:

```
rpm -e packagename --nodeps --justdb
```

The `nodeps` option skips the dependency check. The `justdb` option updates only the package database, and not the file system. Using only the `nodeps` option can cause a failure in package removal if there is any mismatch in the dependent file system (files and directories).

5. Remove the installation root directory. Type `rm -rf install_root` to remove WebSphere Process Server directories. Ensure you specify the correct `install_root` for the product you uninstalled. For example, if you uninstalled WebSphere Process Server from the default installation directory `/opt/ibm/WebSphere/ProcServer`, issue the following command:

```
rm -rf /opt/ibm/WebSphere/ProcServer
```

6. Edit the `vpd.properties` file to remove the entries for WebSphere Process Server and WebSphere Application Server or WebSphere Application Server Network Deployment.

The file is located in the installation directory of the operating system, such as the root directory. Remove all entries for the installation of WebSphere Process Server that you have uninstalled. Each WebSphere Process Server entry starts with the characters `WSE`, followed by numbers representing the release number, and on the same line will have the `install_root` path corresponding to the installation you have uninstalled. (Each entry is on a single line if the file is displayed in a text editor with word wrap turned off.) For example, the line

```
WSEAA62|6|2|0|0|6.2.0.0|2=IBM WebSphere Process Server|
IBM WebSphere Process Server|IBM WebSphere Process Server V6.2|
IBM|http://www.ibm.com|6.2.0.0|
C:\Program Files\IBM\WebSphere\ProcServer|0|0|1|WSEAA62|6|2|0|0|6.2.0.0|2|0|
false|"properties/version/_uninst.wbi" "uninstall.jar" "uninstall.dat" "
"|true|3|WSEAA62|6|2|0|0|6.2.0.0|2
```

corresponds to the WebSphere Process Server that was installed in the directory `C:\Program Files\IBM\WebSphere\ProcServer`.

**Note:** This text appears in several lines in this document for formatting purposes but would be a single line in the `vpd.properties` file.

Each WebSphere Application Server or WebSphere Application Server Network Deployment entry in the `vpd.properties` file has a similar format. For information about these entries to help you determine which to delete, and for more information about the `vpd.properties` file, refer to the topic `vpd.properties` file in the WebSphere Application Server Network Deployment, version 6.1 information center.

Do not delete or rename the `vpd.properties` file because the InstallShield MultiPlatform (ISMP) program uses it for other products that it installs. If the WebSphere Process Server or WebSphere Application Server product that you are uninstalling is the only product with entries in the `vpd.properties` file, you can delete this file.

7. Edit the `/opt/.ibm/.nif/.nifRegistry` file.

This file is located in the home directory of the user ID from which the product was installed.

The `/opt/.ibm/.nif/.nifRegistry` file contains a one-line entry for each WebSphere Process Server product installation and also an entry, for each WebSphere Application Server product installation.

Use a flat-file editor to remove the line that identifies the installation root directory of the product that you removed. Leave the other lines intact.

8. Use the `installRegistryUtils` command to examine the installation locations for all installed WebSphere Process Server products and remove the desired products from the install registry.

## Results

This procedure results in having a clean system. You can reinstall into the same directories now. A clean system has no trace of a previously deleted installation.

## What to do next

After you have cleaned your system, go to Chapter 4, “Installing the software,” on page 67 to choose an installation procedure.

## Preparing for reinstallation after failed uninstallation on Solaris systems

Learn how to clean a Solaris system if uninstallation of WebSphere Process Server fails. After running the uninstallation program, go through these manual steps to remove registry entries that can prevent you from reinstalling the product into the original directory.

### Before you begin

Before performing this procedure, ensure you have uninstalled WebSphere Process Server using the uninstallation wizard or silently, and that the procedure was not completed successfully. If the procedure was successful, you do not need to perform this task.

Determine the *install\_root* directory for the product so that you remove the correct product and produce a clean system.

For details on default directory locations see “Default installation directories for the product, profiles, and tools” on page 539.

The installation wizard and the Profile Management Tool let you specify your own locations for installation root directories. Examine the following files to determine the actual locations:

- The `/opt/.ibm/.nif/.nifregistry` file identifies the installation root for all installed WebSphere Process Server products; it also looks for all WebSphere Application Server products.
- The `install_root/logs/manageprofiles/profile_name_create.log` file for each created profile identifies the installation location in the stanza with the `invokeWSPprofile` method.

Uninstalling the product leaves the *profile\_root* directory, including the *profile\_root*/logs directory file, where *profile\_root* represents the installation location of the profile. It leaves the *install\_root*/logs directory as well.

### About this task

Reinstalling the product into a new directory when files remain from a previous installation can create a coexistence scenario. However, you can delete all files and registry entries to completely remove WebSphere Process Server. A clean system lets you reinstall the product into the original directory without coexistence.

**Important:** Throughout this procedure, steps address removing artifacts left after uninstallation of both WebSphere Process Server and WebSphere Application Server or WebSphere Application Server Network Deployment. The WebSphere Application Server product addressed is assumed to be the one underlying the installation of WebSphere Process Server.

Perform the following procedure to produce a clean system.

### Procedure

1. Log on as the same user ID who installed the product.

2. Use the **kill** command to stop all Java processes that are running.

If you are running Java processes that are not related to WebSphere Process Server or WebSphere Application Server products and it is not possible to stop them, stop all WebSphere Process Server and WebSphere Application Server product-related processes. Use the following command to determine all processes that are running:

```
ps -ef | grep java
```

Stop all WebSphere Process Server and WebSphere Application Server product-related processes with the **kill -9 java\_pid\_1 java\_pid\_2...java\_pid\_n** command.

3. Search for related packages. Issue the following command to show packages for the WebSphere Process Server and WebSphere Application Server products (if no packages appear when using these commands, skip the next step):

```
pkginfo | grep WS
```

To narrow your query to search for WebSphere Process Server packages only, type the following command:

```
pkginfo | grep WSEAA62
```

For example, after issuing the command `pkginfo | grep WSEAA62`, the following list of packages might be displayed:

```
application WSEAA62          IBM WebSphere Process Server
application WSEAA62LC       LAP Component
```

WebSphere Process Server, version 6.2, package names have a prefix of WSE and a suffix of 62. WebSphere Application Server Network Deployment, version 6.1, package names have a prefix of WSB or WSP and a suffix of 61. Do not remove packages for WebSphere Process Server and WebSphere Application Server products that you did not uninstall.

4. Change directories to the directory where package information is registered.

```
cd /var/sadm/pkg
```

5. Issue the following command to remove any WebSphere Process Server or WebSphere Application Server product-related packages.

```
pkgrm packagename1 packagename2 packagename3 ...
```

Do not remove packages for WebSphere Process Server and WebSphere Application Server products that you did not uninstall.

Issue the following commands from the `/var/sadm/pkg` directory to search for and remove any WebSphere Application Server product-related packages that are registered in the `/var/sadm/pkg` directory:

a. Change directories to the correct directory: `cd /var/sadm/pkg`

b. `ls |grep WSB|xargs -i pkgrm -n {}` for WebSphere Application Server products

c. `ls |grep WSC|xargs -i pkgrm -n {}` for WebSphere Application Server Clients



- d. `ls |grep WSP|xargs -i pkgrm -n {}` for Web server plug-ins for WebSphere Application Server
- e. `ls |grep WSE|xargs -i pkgrm -n {}` for WebSphere Process Server

Package names for Web server plug-ins for WebSphere Application Server are:

```
WSPAA61
WSPAA61AC
WSPAA61BC
WSPAA61CC
WSPAA61DC
WSPAA61FC
WSPAA61FB
WSPAA61GC
WSPAA61HC
```

If there is a problem removing the packages, remove the related package directories in the `/var/sadm/pkg` directory, including the preremove files. For example, remove the following file before issuing the `pkgrm -n WSBA61` command:

```
/var/sadm/pkg/WSBA61/install/preremove
```

- 6. Remove any profile directories that are not located in the installation root (*install\_root*) directory.

To determine the locations of profile directories, first use the `wasprofile -listProfiles` command to display profile names. Then, to determine where profile directories are located, use the `wasprofile -getPath -profileName profile_name` command, where *profile\_name* is the name of the profile corresponding to a given directory.

- 7. Remove the installation root directory. Type `rm -rf install_root` to remove WebSphere Process Server directories. Ensure you specify the correct *install\_root* for the product you uninstalled. For example, if you uninstalled WebSphere Process Server from the default installation directory `/opt/IBM/WebSphere/ProcServer`, issue the following command:

```
rm -rf /opt/IBM/WebSphere/ProcServer
```

Remove all of the profile directories as well.

- 8. Edit the `/opt/.ibm/.nif/.nifregistry` file.

This file contains a one-line entry for each WebSphere Process Server product installation; and also has an entry for each WebSphere Application Server product installation.

You can delete these files if there is just one line in each that identifies the product that you removed. Otherwise, use a flat-file editor to remove the line that identifies the installation root directory of the product that you removed. Leave the other lines intact.

- 9. Use the `installRegistryUtils` command to examine the installation locations for all installed WebSphere Process Server products and remove the desired products from the install registry.

## Results

This procedure results in having a clean system. You can reinstall into the same directories now. A clean system has no trace of a previously deleted installation.

## What to do next

After you have cleaned your system, go to Chapter 4, “Installing the software,” on page 67 to choose an installation procedure.

## Preparing for reinstallation after a failed uninstallation on Windows systems

Learn how to clean a Windows system if uninstallation of WebSphere Process Server fails. After running the uninstallation program, go through these manual steps to remove registry entries that can prevent you from reinstalling the product into the original directory.

### Before you begin

Before performing this procedure, ensure you have uninstalled WebSphere Process Server using the uninstallation wizard or silently, and that the procedure was not completed successfully. If the procedure was successful, you do not need to perform this task.

Determine the *install\_root* directory for the product so that you remove the correct product and produce a clean system.

For details on default directory locations see “Default installation directories for the product, profiles, and tools” on page 539.

The installation wizard and the Profile Management Tool let you specify your own locations for installation root directories. Examine the following files to determine the actual locations:

- The *.nifRegistry* file identifies the installation root for all installed WebSphere Process Server products; it also identifies the installation root for all installed WebSphere Application Server products. It is located as follows:
  - If the user ID that installed the product had administrative privileges, the file is located in the Windows root directory (C:\Windows or C:\WINNT on most Windows systems).
  - If the user ID that installed the product did not have administrative privileges, the file is located in the home directory of that user ID.
- The *install\_root\logs\manageprofiles\profile\_name\_create.log* file for a profile identifies the location of that profile. Search on the text `profilePath=` in this file to obtain the location of the profile.

Uninstalling the product leaves the *profile\_root* directory, including the *profile\_root\logs* directory, where *profile\_root* represents the installation location of the profile. It leaves the *install\_root\logs* directory as well.

### About this task

Reinstalling the product into a new directory when files remain from a previous installation can create a coexistence scenario. However, you can delete all files and registry entries to completely remove WebSphere Process Server. A clean system lets you reinstall the product into the original directory without coexistence.

**Important:** Throughout this procedure, steps address removing artifacts left after uninstallation of both WebSphere Process Server and WebSphere Application Server or WebSphere Application Server Network Deployment. The WebSphere Application Server product addressed is assumed to be the one underlying the installation of WebSphere Process Server.

Perform the following procedure to produce a clean system.

## Procedure

1. Log on as the same user ID who installed the product.
2. Optional: Verify that you have an Emergency Recovery Disk. Instructions for creating this disk are in the Windows help documentation.

This step is a safeguard. This procedure does not require the recovery disk.

3. Optional: Use the regback.exe program from the Windows Resource Kit to back up the registry.

This step is a safeguard. This procedure does not require the backup copy of the registry.

4. Delete product registry entries for the WebSphere Process Server and WebSphere Application Server products that you uninstalled.

Invoke regback.exe from a command prompt, to edit the Windows system registry.

### CAUTION:

**Handle the Registry with care. You can easily make a mistake while using the registry editor to view and edit registry contents. The editor does not warn you of editing errors, which can be extremely dangerous. A corrupt registry can disrupt your system to the point where your only option is to reinstall the Windows operating system.**

- a. Use **Ctrl-F** to search for all instances of "WebSphere," to determine whether you should delete each entry. You might not be able to remove all of the entries related to WebSphere Process Server and WebSphere Application Server, which is not a problem.
- b. Expand and select keys related to WebSphere Process Server and WebSphere Application Server products.

Delete the following keys if present for the WebSphere Application Server product:

- HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\Explorer\MenuOrder\Start Menu2\Programs\IBM WebSphere\Application Server Network Deployment V6.1
- HKEY\_CURRENT\_USER\Software\IBM\WebSphere Application Server Network Deployment\6.1.0.0
- HKEY\_LOCAL\_MACHINE\Software\IBM\Web server Plug-ins for IBM WebSphere Application Server\6.1.0.0

Delete the following key if present for the WebSphere Application Server 6.1 Feature Pack for Web Services product: HKEY\_CURRENT\_USER\Software\IBM\WebSphere Application Server 6.1 Feature Pack for Web Services\6.1.0.9.

Delete the following keys if present for the WebSphere Process Server product:

- HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\Explorer\MenuOrder\Start Menu2\Programs\IBM WebSphere\Process Server 6.2
- HKEY\_CURRENT\_USER\Software\IBM\WebSphere Process Server\6.2

- c. Select **Edit > Delete** from the menu bar for each related key.
  - d. Select **Yes** when asked to confirm deletion of the key.
  - e. Select **Registry > Exit** from the menu bar when you are finished.
5. Delete the installation root directory for the product that you uninstalled.

6. Using regedit, delete any registry keys of the form  
HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\  
IBMWAS61Service that are associated with the installation you uninstalled.
7. Determine all of the profile directories and remove the directories.
8. Open a Windows Explorer window and browse to the following directory  
(where *user\_id* is the user who installed the product): C:\Documents and  
Settings\*user\_id*\Start Menu\Programs\IBM WebSphere  
If you have only one installation of WebSphere Application Server, delete the  
following folder if present:  
Application Server V6.1  
If you have only one installation of WebSphere Application Server Network  
Deployment, delete the following folder if it is present:  
Application Server Network Deployment V6.1  
If you have only one installation of WebSphere Process Server, delete the  
following folder if it is present:  
Process Server 6.2  
If you have multiple versions of WebSphere Application Server or WebSphere  
Process Server installed, the folder names will be appended with a number,  
for example, Application Server Network Deployment V6.1 (2) or Process  
Server 6.2 (2). In this case, you can use the following procedure to  
determine which folder or folders to delete:
  - a. In Windows Explorer, open C:\Documents and Settings\*user\_id*\Start  
Menu\Programs\IBM WebSphere\ (where *user\_id* is the user who  
installed the product).
  - b. Open the Application Server V6.1 or Application Server Network  
Deployment V6.1 folder.
  - c. Right-click the Profile Management Tool subfolder and select **Properties**,  
then select the **Shortcut** tab.
  - d. Examine the **Target** property and determine if the Target directory points  
to the WebSphere Application Server installation that failed to uninstall. If  
that is the case, delete the Application Server V6.1 or Application  
Server Network Deployment V6.1 folder.
  - e. Repeat steps b through d, but this time for step b start with the Process  
Server 6.2 subfolder, and for step d, determine if the Target directory  
points to the WebSphere Process Server installation that failed to install.
  - f. Repeat steps b through e for each additional set of folders (for example,  
Application Server Network Deployment V6.1 (2) and Process Server  
6.2 (2)).
9. Edit your entries in the .nifRegistry file.  
The .nifRegistry file is located as follows:
  - If the user ID that installed the product had administrative privileges, the  
file is located in the Windows root directory (C:\Windows or C:\WINNT  
on most Windows systems).
  - If the user ID that installed the product did not have administrative  
privileges, the file is located in the home directory of that user ID.
 The .nifRegistry file contains a one-line entry for each WebSphere Process  
Server product installation and each WebSphere Application Server product  
installation.  
You can delete this file if there is just one line that identifies the product that  
you removed. Otherwise, use a flat-file editor to remove the line that identifies

the installation root directory of the product that you removed. Leave the other lines intact. Do not delete the .nifRegistry file unless you removed all of the installations listed in the file.

10. Restart your server if a prompt is displayed that directs you to restart.

## Results

This procedure results in having a clean system. You can reinstall into the same directories now. A clean system has no trace of a previously deleted installation.

## What to do next

After you have cleaned your system, go to Chapter 4, “Installing the software,” on page 67 to choose an installation procedure.

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## Uninstalling Business Process Choreographer

For information on how to remove the Business Process Choreographer component from a WebSphere Process Server installation, go to the WebSphere Process Server for Multiplatforms, version 6.2, information center and review the topics under **Installing and configuring WebSphere Process Server > Uninstalling the software > Removing the Business Process Choreographer configuration**. You can also find this information in the *Business Process Choreographer PDF*.



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## Chapter 13. Installation information

This reference section contains subtasks and supporting conceptual and reference information related to installing and configuring WebSphere Process Server.

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### Avoiding port conflicts

Avoid port conflicts that can occur when WebSphere Process Server coexists on the same machine with installations of other WebSphere products.

#### About this task

If you create a managed node on the same WebSphere Process Server system on which a managed node of another WebSphere product exists, and you check the **generate unique HTTP ports** checkbox, the addNode command automatically increments the port assignments of the second node agent process so that no conflicts occur. The addNode command increments port assignments automatically when the existing profile is one of the following types:

- WebSphere Process Server
- WebSphere Enterprise Service Bus
- WebSphere Application Server, version 6.0 or later
- WebSphere Application Server Network Deployment, version 6.0 or later

The Profile Management Tool also handles the port assignments successfully when you federate a WebSphere Process Server custom profile during its creation.

The addNode command does *not* increment port assignments automatically when the existing instance is one of the following types:

- WebSphere Business Integration Server Foundation
- WebSphere Application Server Enterprise
- WebSphere Application Server, versions prior to version 6.0
- WebSphere Application Server Network Deployment, versions prior to version 6.0

In this case, neither the addNode command nor the Profile Management Tool has a record of the port assignments given to these instances. Port assignments on the second WebSphere Process Server node agent process are not incremented and conflicts can occur.

These conflicts can prevent the second node from starting. For instance, if you start the existing managed node first, the WebSphere Process Server node cannot start. If you start the WebSphere Process Server node first, the existing node cannot start.

In those cases in which the addNode command does not increment port assignments automatically, you must perform the following procedure to create a WebSphere Process Server managed node with non-conflicting ports.

#### Procedure

1. Create the WebSphere Process Server stand-alone server or custom profile.  
Use the Profile Management Tool to create the profile. In the Profile creation options panel, choose to perform a Typical or an Advanced profile creation. If

you are creating a custom profile, do not federate it as you create it. Select the check box on the Profile Management Tool panel to federate the profile later.

2. Check for ports in use to determine a starting port number for the WebSphere Process Server node agent process.

Use the `netstat -a` command to check existing port assignments. Analyze the port assignments to determine twelve sequential free ports.

**Note:** i5/OS On i5/OS systems, the command is `netstat *cnn`, a CL command that must be run from the i5/OS command line.

3. Update the ports. If you are unfamiliar with how to do this, refer to the information in *Configuring ports*.

---

## Automatic installation of interim fixes

WebSphere Process Server interim fixes can be automatically installed by placing them in a pre-defined or a user defined directory location. During installation, the directories are checked for interim fixes, and if any are found, they are installed as part of the installation process.

Often a set of critical or mandatory interim fixes are required for the product to be fully functional and are shipped at the same time as the product. Any interim fixes that are not included in the product package disks can be included in the packaging of the installation image. These fixes would be at the pre-defined location of `<INSTALL_IMAGE_LOC>/WBI/WBI_Fixes`. If you are installing from a writable location, not a DVD, then during installation, the software will check this pre-defined directory to see if there are any interim fixes that need to be installed.

**Restriction:** You cannot use the automatic installation of interim feature for WebSphere Application Server interim fixes.

If interim fixes are found, the fixes will be installed after the product binaries. The installer program will verify any interim fixes found at this location and report them on the Installation summary panel. If no interim fixes are found, then installation will continue normally.

To provide more flexibility, you can download relevant interim fixes and put them either into the default directory if you are not installing directly off of a DVD or in a directory of your choice. The user defined directory is an additional directory. Both the user defined and default directories will be checked for interim fixes.

For interactive installations, the installation program should be launched with the parameter `-OPT fixLocation=<user_fix_dir>`, where `<user_fix_dir>` is the user defined directory.

- Linux UNIX **On Linux and UNIX platforms:** `install -OPT fixLocation=<user_fix_dir>`
- Windows **On Windows platforms:** `install.exe -OPT fixLocation=<user_fix_dir>`

**Note:** i5/OS Automatic installation of interim fixes is not available when you are doing a remote installation for an i5/OS platform. You can only use this feature when you are doing a silent installation directly on a System i server.

For silent installations, the response file will contain an additional parameter to be set:



fixLocation=<user\_fix\_dir>

By default this parameter will be commented out in the provided sample response file.

There is a defined order for installing the interim fixes from the pre-defined and the user defined directories. The pre-defined directory will be checked first, and then the user defined. If the installation program finds fixes in both the pre-defined and the user defined directories, both sets of fixes will be installed. If the same fix is found in both directories, the interim fix from the user defined directory will always be used. The installation program will check only the specified directory for fixes. Subdirectories will not be recursively checked. The installation program will check that the interim fixes are valid before displaying the Installation summary panel. Invalid fixes will not be displayed on this summary panel and will not be installed, but no error message will be displayed.

---

## Default installation directories for the product, profiles, and tools

References in product information to *install\_root*, *user\_data\_root*, *profile\_root*, *updi\_root*, and *cip\_proc\_server\_root*, represent specific default directory locations for the product installation, profile configuration files, and tools. This topic describes the conventions in use for WebSphere Process Server. The meaning of these variables can differ based on whether you are installing the product on a clean server or on one with an existing installation of WebSphere Application Server, WebSphere Application Server Network Deployment, WebSphere Process Server or WebSphere Enterprise Service Bus. They can also differ depending on whether you are performing the installation as a root (Administrator on a Windows system) or non-root user.

### Limitations of non-root installers

**Linux** **UNIX** **Windows** Root, Administrator, and non-root users can install the product. The default directories the installation wizard provides will differ based on whether the user has root (Administrator) privileges.

**Linux** **UNIX** **Windows** Root and Administrator users can register shared products and install into system-owned directories (globally shared resources that are available to all users), while non-root users cannot. Non-root users can install only into directories they own.

### Variables used in the documentation

Several variables representing specific default directories are used throughout the documentation. These file paths are default locations. You can install the product and other components and create profiles in any directory for which you have write access. Multiple installations of WebSphere Process Server products or components, of course, require multiple locations.

Here are the main variables used in the documentation:

**Note:** **i5/OS** **On i5/OS platforms:** To perform an installation on an i5/OS system, you must have a user profile with \*SECADM and \*ALLOBJ special authorities.

**Linux** **UNIX** **Windows** **On Linux, UNIX, and Windows platforms:**  
*install\_root*

Installation location of WebSphere Process Server. WebSphere Process Server is always installed in the same location as the WebSphere Application Server Network Deployment installation with which it is associated.

**i5/OS** **On i5/OS platforms:** *user\_data\_root*

The default user data directory for WebSphere Process Server. The *user\_data\_root* is different from *install\_root*, and they cannot be the same location. The profiles and profileRegistry subdirectories are created under this directory when you install the product.

*profile\_root*

Location of a WebSphere Process Server profile.

*updi\_root*

Installation location of the Update Installer for WebSphere Software.

*cip\_proc\_server\_root*

Installation location of a customized installation package (CIP) produced by the Installation Factory. A CIP is a WebSphere Process Server product bundled with one or more maintenance packages and other optional files and scripts.

## Default directories on a clean server

The following tables show the default installation locations of WebSphere Process Server, WebSphere Process Server profiles, the Update Installer for WebSphere Software, and a customized installation package (CIP) produced by the Installation Factory, when there is *not* an existing installation of any other WebSphere product.

Table 142 shows the default installation root directory into which the installation wizard installs both WebSphere Process Server and WebSphere Application Server Network Deployment for both root (Administrator) and non-root users:

Table 142. *install\_root* default directory

Default <i>install_root</i> for root or Administrator users	Default <i>install_root</i> for non-root users
<b>AIX</b> <b>On AIX platforms:</b> /usr/IBM/WebSphere/ProcServer	<b>AIX</b> <b>On AIX platforms:</b> <i>user_home</i> /IBM/WebSphere/ProcServer
<b>HP-UX</b> <b>Solaris</b> <b>On HP-UX and Solaris platforms:</b> /opt/IBM/WebSphere/ProcServer	<b>HP-UX</b> <b>Solaris</b> <b>On HP-UX and Solaris platforms:</b> <i>user_home</i> /IBM/WebSphere/ProcServer
<b>Linux</b> <b>On Linux platforms:</b> /opt/ibm/WebSphere/ProcServer	<b>Linux</b> <b>On Linux platforms:</b> <i>user_home</i> /ibm/WebSphere/ProcServer
<b>Windows</b> <b>On Windows platforms:</b> C:\Program Files\IBM\WebSphere\ProcServer	<b>Windows</b> <b>On Windows platforms:</b> C:\IBM\WebSphere\ProcServer

Table 143 on page 541 shows the default installation directory for a profile named *profile\_name* for both root (Administrator) and non-root users:

Table 143. *profile\_root* default directory

Default <i>profile_root</i> for root or Administrator users	Default <i>profile_root</i> for non-root users
<b>AIX</b> On AIX platforms: /usr/IBM/WebSphere/ProcServer/profiles/ <i>profile_name</i>	<b>AIX</b> On AIX platforms: <i>user_home</i> /IBM/WebSphere/ProcServer/ profiles/ <i>profile_name</i>
<b>HP-UX</b> <b>Solaris</b> On HP-UX and Solaris platforms: /opt/IBM/WebSphere/ProcServer/profiles/ <i>profile_name</i>	<b>HP-UX</b> <b>Solaris</b> On HP-UX and Solaris platforms: <i>user_home</i> /IBM/WebSphere/ProcServer/profiles/ <i>profile_name</i>
<b>Linux</b> On Linux platforms: /opt/ibm/WebSphere/ProcServer/profiles/ <i>profile_name</i>	<b>Linux</b> On Linux platforms: <i>user_home</i> /ibm/WebSphere/ProcServer/ profiles/ <i>profile_name</i>
<b>Windows</b> On Windows platforms: C:\Program Files\IBM\WebSphere\ ProcServer/profiles/ <i>profile_name</i>	<b>Windows</b> On Windows platforms: C:\IBM\WebSphere\ProcServer/profiles\ <i>profile_name</i>

Table 144 shows the default installation directory for the Update Installer for WebSphere Software for both root (Administrator) and non-root users:

Table 144. *updi\_root* default directory

Default <i>updi_root</i> for root or Administrator users	Default <i>updi_root</i> for non-root users
<b>AIX</b> On AIX platforms: /usr/IBM/WebSphere/UpdateInstaller	<b>AIX</b> On AIX platforms: <i>user_home</i> /IBM/WebSphere/UpdateInstaller
<b>HP-UX</b> <b>Linux</b> <b>Solaris</b> On HP-UX, Linux, and Solaris platforms: /opt/IBM/WebSphere/UpdateInstaller	<b>HP-UX</b> <b>Linux</b> <b>Solaris</b> On HP-UX, Linux, and Solaris platforms: <i>user_home</i> /IBM/WebSphere/UpdateInstaller
<b>Windows</b> On Windows platforms: C:\Program Files\IBM\WebSphere\ UpdateInstaller	<b>Windows</b> On Windows platforms: C:\IBM\WebSphere\UpdateInstaller

**Linux** **UNIX** **Windows** On Linux, UNIX, and Windows platforms:  
Table 145 shows the default installation directory for both root (Administrator) and non-root users for a customized installation package (CIP) produced by the Installation Factory. The *cip\_uid* variable is the CIP unique ID generated during creation of the build definition file. You can override the generated value in the Build definition wizard. Use a unique value to allow multiple CIPs to install on the system.

Table 145. *cip\_proc\_server\_root* default directory

Default <i>cip_proc_server_root</i> for root or Administrator users	Default <i>cip_proc_server_root</i> for non-root users
<b>AIX</b> On AIX platforms: /usr/IBM/WebSphere/ProcServer/cip/ <i>cip_uid</i>	<b>AIX</b> On AIX platforms: <i>user_home</i> /IBM/WebSphere/ProcServer/cip/ <i>cip_uid</i>
<b>HP-UX</b> <b>Solaris</b> On HP-UX and Solaris platforms: /opt/IBM/WebSphere/ProcServer/cip/ <i>cip_uid</i>	<b>HP-UX</b> <b>Solaris</b> On HP-UX and Solaris platforms: <i>user_home</i> /IBM/WebSphere/ProcServer/cip/ <i>cip_uid</i>

Table 145. *cip\_proc\_server\_root* default directory (continued)

Default <i>cip_proc_server_root</i> for root or Administrator users	Default <i>cip_proc_server_root</i> for non-root users
<b>Linux</b> On Linux platforms: /opt/ibm/WebSphere/ProcServer/cip/ <i>cip_uid</i>	<b>Linux</b> On Linux platforms: <i>user_home</i> /ibm/WebSphere/ProcServer/cip/ <i>cip_uid</i>
<b>Windows</b> On Windows platforms: C:\Program Files\IBM\WebSphere\ ProcServer\cip\iip_uid	<b>Windows</b> On Windows platforms: C:\IBM\WebSphere\ProcServer\cip\iip_uid

Table 146 shows the default directories for the i5/OS platform.

Table 146. *i5/OS* default directories on a clean server

Default directory variable	Default directory
<i>install_root</i>	<b>i5/OS</b> On i5/OS platforms: /QIBM/ProdData/WebSphere/ProcServer
<i>updi_root</i>	<b>i5/OS</b> On i5/OS platforms: /QIBM/ProdData/WebSphere/ UpdateInstaller
<i>user_data_root</i>	<b>i5/OS</b> On i5/OS platforms: /QIBM/UserData/WebSphere/ProcServer/
<i>profile_root</i>	<b>i5/OS</b> On i5/OS platforms: /QIBM/UserData/WebSphere/ProcServer/ profiles/ <i>profile_name</i>

## Default directories when an installation of WebSphere Application Server or WebSphere Application Server Network Deployment exists

When an installation of a supported version of WebSphere Application Server or WebSphere Application Server Network Deployment exists on a server and you elect to install WebSphere Process Server on top of it, WebSphere Process Server is installed into the same location. Table 147 shows the default installation root directory in such a case for both root (Administrator) and non-root users:

Table 147. *install\_root* default directory when an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment exists

Default <i>install_root</i> for root or Administrator users	Default <i>install_root</i> for non-root users
<b>AIX</b> On AIX platforms: /usr/IBM/WebSphere/AppServer	<b>AIX</b> On AIX platforms: <i>user_home</i> /IBM/WebSphere/AppServer
<b>HP-UX</b> <b>Linux</b> <b>Solaris</b> On HP-UX, Linux, and Solaris platforms: /opt/IBM/WebSphere/AppServer	<b>HP-UX</b> <b>Linux</b> <b>Solaris</b> On HP-UX, Linux, and Solaris platforms: <i>user_home</i> /IBM/WebSphere/AppServer
<b>Windows</b> On Windows platforms: C:\Program Files\IBM\WebSphere\ AppServer	<b>Windows</b> On Windows platforms: C:\IBM\WebSphere\AppServer

Default directories for *profile\_root*, *updi\_root*, and *cip\_proc\_server\_root* are handled similarly.

Table 148 shows the default directories for the i5/OS platform.

Table 148. i5/OS default directories when an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment exists

Default directory variable	Default directory
<i>install_root</i>	<b>i5/OS</b> On i5/OS platforms: /QIBM/ProdData/WebSphere/Appserver/V61/ND
<i>user_data_root</i>	<b>i5/OS</b> On i5/OS platforms: /QIBM/UserData/WebSphere/Appserver/V61/ND
<i>profile_root</i>	<b>i5/OS</b> On i5/OS platforms: /QIBM/UserData/WebSphere/Appserver/V61/ND/profiles/ <i>profile_name01</i>

## Default directories when a WebSphere Process Server installation exists

When an installation of WebSphere Process Server exists on a server, if you run the installation wizard to initiate a second installation of the product, the installation wizard detects the existing installation and appends a number to the second default directory. For instance, if WebSphere Process Server exists in the default directory /opt/IBM/WebSphere/ProcServer and you then run the installation wizard a second time, the wizard will offer the default installation location of /opt/IBM/WebSphere/ProcServer1 for the second product installation on the Installation location panel. Table 149 shows the default installation root directory in such a case for both root (Administrator) and non-root users:

Table 149. *install\_root* default directory when an existing installation of WebSphere Process Server exists

Default <i>install_root</i> for root or Administrator users	Default <i>install_root</i> for non-root users
<b>AIX</b> On AIX platforms: /usr/IBM/WebSphere/ProcServer1	<b>AIX</b> On AIX platforms: <i>user_home</i> /IBM/WebSphere/ProcServer1
<b>HP-UX</b> <b>Solaris</b> On HP-UX and Solaris platforms: /opt/IBM/WebSphere/ProcServer1	<b>HP-UX</b> <b>Solaris</b> On HP-UX and Solaris platforms: <i>user_home</i> /IBM/WebSphere/ProcServer1
<b>Linux</b> On Linux platforms: /opt/ibm/WebSphere/ProcServer1	<b>Linux</b> On Linux platforms: <i>user_home</i> /ibm/WebSphere/ProcServer1
<b>Windows</b> On Windows platforms: C:\Program Files\IBM\WebSphere\ProcServer1	<b>Windows</b> On Windows platforms: C:\IBM\WebSphere\ProcServer1

**Important:** This scenario assumes that a second installation of WebSphere Application Server Network Deployment without WebSphere Process Server already installed over it does *not* exist on the server. If one does, you can install WebSphere Process Server into that same directory (/opt/IBM/WebSphere/

AppServer for instance) or you can install a new installation of both WebSphere Process Server and WebSphere Application Server Network Deployment into the directories as listed previously.

Table 150 shows the default directories for the i5/OS platform.

Table 150. i5/OS default directories when a WebSphere Process Server installation exists

Default directory variable	Default directory
<i>install_root</i>	<b>i5/OS</b> On i5/OS platforms: /QIBM/ProdData/WebSphere/ProcServer1
<i>user_data_root</i>	<b>i5/OS</b> On i5/OS platforms: /QIBM/UserData/WebSphere/ProcServer1
<i>profile_root</i>	<b>i5/OS</b> On i5/OS platforms: /QIBM/UserData/WebSphere/ProcServer1/ profiles/ <i>profile_name</i> 01

## Default directories when a WebSphere Enterprise Service Bus installation exists

When an installation of WebSphere Enterprise Service Bus exists on a server and you install WebSphere Process Server on top of it, WebSphere Process Server is installed into the same location. Table 151 shows the default installation root directory in such a case for both root (Administrator) and non-root users:

Table 151. *install\_root* default directory when you install WebSphere Process Server over an existing installation of WebSphere Enterprise Service Bus

Default <i>install_root</i> for root or Administrator users	Default <i>install_root</i> for non-root users
<b>AIX</b> On AIX platforms: /usr/IBM/WebSphere/ESB	<b>AIX</b> On AIX platforms: <i>user_home</i> /IBM/WebSphere/ESB
<b>HP-UX</b> <b>Solaris</b> On HP-UX and Solaris platforms: /opt/IBM/WebSphere/ESB	<b>HP-UX</b> <b>Solaris</b> On HP-UX and Solaris platforms: <i>user_home</i> /IBM/WebSphere/ESB
<b>Linux</b> On Linux platforms: /opt/ibm/WebSphere/ESB	<b>Linux</b> On Linux platforms: <i>user_home</i> /ibm/WebSphere/ESB
<b>Windows</b> On Windows platforms: C:\Program Files\IBM\WebSphere\ESB	<b>Windows</b> On Windows platforms: C:\IBM\WebSphere\ESB

**Important:** This scenario assumes that a second installation of WebSphere Application Server Network Deployment without WebSphere Process Server already installed over it does *not* exist on the server. If one does, you can install WebSphere Process Server into that same directory (/opt/IBM/WebSphere/AppServer for instance).

Default directories of *profile\_root*, *updi\_root*, and *cip\_proc\_server\_root* are handled similarly.

Table 152 on page 545 shows the default directories for the i5/OS platform.

Table 152. i5/OS default directories when a WebSphere Enterprise Service Bus installation exists

Default directory variable	Default directory
<i>install_root</i>	<b>i5/OS</b> On i5/OS platforms: /QIBM/ProdData/WebSphere/ESB1
<i>user_data_root</i>	<b>i5/OS</b> On i5/OS platforms: /QIBM/UserData/WebSphere/ESB1
<i>profile_root</i>	<b>i5/OS</b> On i5/OS platforms: QIBM/UserData/WebSphere/ESB1/ profiles/ <i>profile_name01</i>

## i5/OS scripts

These WebSphere Application Server scripts are commonly used to perform tasks when using WebSphere Process Server. The default location of these scripts is *install\_root*/bin directory. When a profile is created, copies of the scripts are also put in the *profile\_root*/bin directory.

**Note:** Unlike the other platforms, i5/OS Qshell scripts do not have an extension (.bat or .sh) in the file name. For example, the script addNode.bat for Windows platforms will be addNode on i5/OS.

Refer to the table for a description of commonly used scripts used for WebSphere Process Server for i5/OS.

Table 153. Scripts commonly used for WebSphere Process Server for i5/OS

Script	Description
backupConfig	The backupConfig command is a simple utility to back up the configuration of your node to a file.
enableJVM	The enableJVM command allows you to switch between using the IBM J2SE 5.0 32-bit JVM and the i5/OS Java Developer Kit 5.0 JVM (64 bit also known as the "classic" JVM) for the JVM when starting the server.  The i5/OS V6R1 release includes support for an additional JVM, the Java 2 Standard Edition (J2SE) 64-bit for i5/OS JVM. To enable this JVM use <b>-jvm std64</b> . The other options are <i>std32</i> to specify the IBM J2SE 5.0 32-bit JVM and <i>classic</i> to specify the i5/OS Java Developer Kit 5.0 JVM.
historyInfo	The historyInfo command generates a report from data extracted from XML files in the properties/version folder and the properties/version/history folder. The report includes a list of changed components and a history of installed or uninstalled maintenance packages.
wbi_ivt	The installation verification (wbi_ivt) script verifies that the deployment manager or stand-alone server for an instance is functioning correctly. When run on a stand-alone server, the script also performs a Health Monitor test and generates a report.

Table 153. Scripts commonly used for WebSphere Process Server for i5/OS (continued)

Script	Description
manageprofiles	The manageprofiles command line tool creates all application server run-time environments. The command creates a profile, which is the set of files that define the run-time environment for a stand-alone application server.
restoreConfig	Use the restoreConfig command to restore the configuration of your node after backing up the configuration using the backupConfig command.
startNode	The startNode command reads the configuration file for the node agent process and constructs a launch command.
startServer	The startServer command reads the configuration file for the specified application server and starts the server.
stopNode	The stopNode command reads the configuration file for the Network Deployment node agent process and sends a Java Management Extensions (JMX) command telling the node agent to shut down.
stopServer	The stopServer command reads the configuration file for the specified server process. This command sends a Java Management Extensions (JMX) command to the server telling it to shut down.
versionInfo	The versionInfo command generates a report from data extracted from XML files in the properties/version folder. The report includes a list of changed components and installed or uninstalled maintenance packages.

WebSphere Application Server on i5/OS also provides some i5/OS platform specific scripts. The following table contains some i5/OS platform specific scripts.

Table 154. i5/OS platform specific scripts

Script	Description
chgwassvr	The chgwassvr command allows you to change the ports for an application server within a profile.
dspwasinst	The dspwasinst command displays information about a profile and the application servers it contains.

---

## install command

The install command installs the product and most of the components in the product. When you install the product, the installer program installs the core product files and creates one or no profiles, depending on your installation selections. A silent parameter runs the installation wizard in silent mode without displaying the graphical user interface.

### Purpose

This topic describes the command-line syntax for the install command. Start the install command module from the command line to install the product.

### Before you begin installing the product



Prepare the operating system for installation. Follow the procedure in “Preparing the operating system for WebSphere Process Server installation” on page 35 to get started.

The command file resides in the root directory of the component on the product disk or CIP.

The install command starts the installation program in almost all components in the product package:

- **i5/OS** On i5/OS platforms (i5/OS native installation): install
- **i5/OS** On i5/OS platforms (remote Windows installation): install.exe
- **Linux** **UNIX** On Linux and UNIX platforms: install
- **Windows** On Windows platforms: install.exe

If the command or an alternative command is not applicable for a component on a particular operating system, the N/A abbreviation is displayed in Table 155. A command is not applicable if the component cannot be installed on the operating system.

Table 155. Installation commands for software on WebSphere Application Server Network Deployment Supplements V6.1 CD and WebSphere Application Server Toolkit V6.1.1 Disk 1 CD

Operating System	Application Client	IBM HTTP Server	Web Server Plug-ins	IBM Support Assistant	Application Server Toolkit
AIX	/AppClient/install	/IHS/install	/plugin/install	/ISA/install.bin	N/A
HP-UX	/AppClient/install	/IHS/install	/plugin/install	/ISA/install.bin	N/A
i5/OS	<ul style="list-style-type: none"> <li>• /AppClient/install (native installation)</li> <li>• \AppClient\install.exe (remote Windows installation)</li> </ul>	N/A	<ul style="list-style-type: none"> <li>• /plugin/install (native installation)</li> <li>• \plugin\install.exe (remote Windows installation)</li> </ul>	N/A	N/A
Linux	/AppClient/install	/IHS/install	/plugin/install	/ISA/install.bin	/install
Solaris	/AppClient/install	/IHS/install	/plugin/install	/ISA/install.bin	N/A
Windows	\AppClient\install.exe	\IHS\install.exe	\plugin\install.exe	\ISA\install.exe	\install.exe

Table 156. Installation commands for software on WebSphere Process Server DVD

Operating System	WebSphere Process Server	IBM WebSphere Installation Factory	IBM WebSphere Profile Management Tool Client for i5/OS	IBM WebSphere Process Server Help System	Update Installer (UPDI)	Message Service Clients for C/C++	Message Service Clients for .NET
AIX	/WBI/install	/IF/setupif.sh	N/A	/IEHS/install	/UpdateInstaller/install	MsgClients/XMSCC/setupAix.bin	N/A
HP-UX	/WBI/install	/IF/setupif.sh	N/A	/IEHS/install	/UpdateInstaller/install	N/A	N/A

Table 156. Installation commands for software on WebSphere Process Server DVD (continued)

Operating System	WebSphere Process Server	IBM WebSphere Installation Factory	IBM WebSphere Profile Management Tool Client for i5/OS	IBM WebSphere Process Server Help System	Update Installer (UPDI)	Message Service Clients for C/C++	Message Service Clients for .NET
i5/OS	<ul style="list-style-type: none"> <li>/WBI/install (native installation)</li> <li>\WBI\install.exe (remote Windows installation)</li> </ul>	\IF\setupif.bat (runs only on remote Windows server)	\PMTClient\PMInstaller.exe (remote Windows installation)	\IEHS\install.exe (runs only on remote Windows server)	<ul style="list-style-type: none"> <li>/UpdateInstaller/install (native headless)</li> <li>\UpdateInstaller\install.exe (GUI on Windows)</li> </ul>	N/A	N/A
Linux	/WBI/install	/IF/setupif.sh	N/A	/IEHS/install	/UpdateInstaller/install	<ul style="list-style-type: none"> <li>32-bit: MsgClients/XMSCC/setuplinuxia32</li> <li>64-bit: MsgClients/XMSCC/setuplinux-x86_64</li> </ul>	N/A
Solaris	/WBI/install	/IF/setupif.sh	N/A	/IEHS/install	/UpdateInstaller/install	MsgClients/XMSCC/setup-solaris	N/A
Windows	\WBI\install.exe	\IF\setupif.bat	N/A	\IEHS\install.exe	\UpdateInstaller\install.exe	MsgClients\XMSCC\setup.exe	MsgClients\XMSNET\dotNETClientsetup.exe

## Parameters and syntax

This section describes the command that starts the installation wizard.

- Issue the install command to start the installation wizard and display the graphical user interface:
  - i5/OS** On i5/OS platforms (i5/OS native installation):  
`component_disc_directory/install`
  - i5/OS** On i5/OS platforms (remote Windows installation):  
`component_disc_directory\install.exe`
  - Linux** **UNIX** On Linux and UNIX platforms:  
`component_disc_directory/install`
  - Windows** On Windows platforms: `component_disc_directory\install.exe`
- Issue the install -silent command to start the installation wizard in silent mode, without the graphical user interface:
  - i5/OS** On i5/OS platforms (i5/OS native installation):  
`component_disc_directory/install -options "response_file_name" -silent`
  - i5/OS** On i5/OS platforms (remote Windows installation):  
`component_disc_directory\install.exe -options "response_file_name" -silent`
  - Linux** **UNIX** On Linux and UNIX platforms:  
`component_disc_directory/install -options "response_file_name" -silent`
  - Windows** On Windows platforms: `component_disc_directory\install.exe -options "response_file_name" -silent`

Use the following install command options to perform the following tasks:

- Perform a new product installation.
- Perform an incremental installation by adding features to an existing installation.
- Update an existing installation to a new service level (the term "slip install" is sometimes used to describe an update to an existing installation that updates the installation to a new service level).
- Convert an existing WebSphere Application Server or WebSphere Application Server Network Deployment installation into a WebSphere Process Server installation.
- Convert an existing WebSphere Enterprise Service Bus or WebSphere Process Server Client installation into a WebSphere Process Server installation.
- Configure an existing WebSphere Process Server product by creating a profile.

Use Table 157 to determine valid values for each option.

Table 157. WebSphere Process Server install command option values table

Option name (-OPT)	Values	Default	Description
silentInstallLicenseAcceptance	true/false	false	Choose whether to accept license agreements
allowNonRootSilentInstall	true/false	false	Choose to accept non-root user installation
disableOSPrereqChecking	true/false	false	Choose whether you want to disable the operating system prerequisite checking
disableNonBlockingPrereqChecking	true/false	false	Choose whether you want to disable non-blocking prerequisite checking
installType	<ul style="list-style-type: none"> <li>• installNew</li> <li>• addFeature</li> <li>• upgrade</li> </ul>	installNew	Choose a type of installation to perform
createProfile	true/false	false	Choose whether to create a profile for an existing installation
wpsInstallType	<ul style="list-style-type: none"> <li>• typical</li> <li>• ndGuided</li> <li>• client</li> </ul>	typical	Choose between a typical installation, a deployment environment installation, or a client installation
fixLocation	Any valid location	none	Choose the path that contains additional interim fixes
ndGuidedInstallType	<ul style="list-style-type: none"> <li>• deploymentManager</li> <li>• additionalRoles</li> </ul>	none	Choose the type of a deployment environment installation to perform
PROF_topologyPattern	<ul style="list-style-type: none"> <li>• Reference - Remote messaging and remote support</li> <li>• CondensedAsync - Remote messaging</li> <li>• CondensedSync - Single cluster</li> </ul>	none	Choose the deployment environment installation

Table 157. WebSphere Process Server install command option values table (continued)

Option name (-OPT)	Values	Default	Description
PROF_topologyRole	<ul style="list-style-type: none"> <li>• ADT - Application Deployment Target</li> <li>• Messaging - Messaging infrastructure</li> <li>• Support - Support infrastructure</li> </ul>	none	Choose at least one cluster to assign this node to the deployment environment topology. For more than one selection, use the comma character (,) as the separator. The options available are dependent on your choice of deployment environment installation.
samplesSelected	<ul style="list-style-type: none"> <li>• true - the feature is selected for installation</li> <li>• false - the feature is not selected for installation</li> </ul>	false	Choose the required value if you wish to use this feature
installLocation	Any valid installation location	Default location for the platform type	Choose the installation destination path
useExistingWAS	true/false	false	Choose whether you intend to use an existing installation of WebSphere Application Server. If you choose 'true,' you must set the installLocation option to the installation root of the existing WebSphere Application Server installation.
defaultProfileLocation	Any valid user data location	none	Applicable to i5/OS platform only. Choose the desired default location of profiles. The default profile location directory used by the existing WebSphere Application Server installation must be supplied if installing over WebSphere Application Server.
profileType	<ul style="list-style-type: none"> <li>• standAlone</li> <li>• deploymentManager</li> <li>• custom</li> <li>• none</li> </ul>	standAlone	Choose one of the four profile creation options
PROF_enableAdminSecurity	true/false	none	Choose whether to enable out-of-box security. You must select 'true' if you set the samplesSelected option to 'true' or the wpsInstallType option to 'ndGuided.'

Table 157. WebSphere Process Server install command option values table (continued)

Option name (-OPT)	Values	Default	Description
traceFormat	<ul style="list-style-type: none"> <li>• text - the trace file will be produced in plain text format for readability</li> <li>• XML - the trace files will be produced in standard Java logging XML format</li> </ul>	Both formats are produced in two different trace files. If you require only one format to be produced, choose the appropriate option.	Choose the trace file output format
traceLevel	<ul style="list-style-type: none"> <li>• OFF 0 - no trace is produced</li> <li>• SEVERE 1 - Only severe errors are output to trace files</li> <li>• WARNING 2 - Messages regarding non-fatal exceptions and warnings are added to the trace file</li> <li>• INFO 3 - Informational messages are added to the trace files</li> <li>• CONFIG 4 - Configuration related messages are added to the trace file</li> <li>• FINE 5 - Tracing method calls for non-public methods</li> <li>• FINER 6 - Tracing method calls for non-public methods except getters and setters</li> <li>• FINEST 7 - Trace all method calls, trace entry and exit, and will include parameters and return value</li> </ul>	0	Choose the amount of trace information you want to capture

## Mounting disk drives on Linux and UNIX operating systems

Some Linux and UNIX operating systems require you to mount the drive before you can access data on the disks supplied with the product.

### Before you begin

Insert the product disk into the disk drive before mounting the drive. You must be a root user to mount disk drives.

### About this task

Use these procedures to mount the product disks supplied with WebSphere Process Server.

- **AIX** **Mounting a CD or DVD on AIX systems.** To mount a CD or DVD on an AIX system using the System Management Interface Tool (SMIT), perform the following steps:
  1. Log in as a user with root authority.
  2. Insert the disk in the drive.

3. Create a disk mount point by entering the `mkdir -p /cdrom` command, where `cdrom` represents the disk mount point directory.
4. Allocate a disk file system using SMIT by entering the **smit storage** command.
5. After SMIT starts, select **System Storage Management (Physical & Logical Storage) > File Systems > Add / Change / Show / Delete File Systems > CDROM File Systems > Add CDROM File System**.
6. In the Add a CDROM File System window:
  - Enter a device name for your disk file system in the **DEVICE Name** field. Device names for disk file systems must be unique. If there is a duplicate device name, you might need to delete a previously defined disk file system or use another name for your directory. The example uses `/dev/cd0` as the device name.
  - Enter the disk mount point directory in the **MOUNT POINT** window. In our example, the mount point directory is `/cdrom`.
  - In the **Mount AUTOMATICALLY at system restart** field, select yes to enable automatic mounting of the file system.
  - Select **OK** to close the window, then select **Cancel** three times to exit SMIT.
7. Next, mount the disk file system by entering the **smit mountfs** command.
8. In the Mount a File System window, do the following:
  - Enter the device name for this disk file system in the **FILE SYSTEM name** field. In our example, the device name is `/dev/cd0`.
  - Enter the disk mount point in the **Directory over which to mount** field. In our example, the mount point is `/cdrom`.
  - Enter `cdrfs` in the **Type of Filesystem** field. To view the other kinds of file systems you can mount, select List.
  - In the **Mount as READ-ONLY system** field, select yes.
  - Accept the remaining default values and select **OK** to close the window.

Your disk file system is now mounted. To view the contents of the CD or DVD, place it in the drive and enter the `cd /cdrom` command where `cdrom` is the disk mount point directory.

- **HP-UX Mounting a CD or DVD on HP-UX systems.** Because WebSphere Process Server contains several files with long file names, the mount command can fail. The following steps let you mount disks on the HP-UX platform successfully:

1. Log in as a user with root authority.
2. In the `/etc` directory, add the following line to the `pfs_fstab` file:
 

```
/dev/dsk/c0t2d0 mount_point pfs-rrip ro,hard
```

where `mount_point` represents the mount point of the CD or DVD.

3. Start the `pfs` daemon by entering the following commands (if they are not already running):
 

```
/usr/sbin/pfs_mountd &
/usr/sbin/pfsd 4 &
```
4. Insert the CD or DVD in the drive and enter the following commands:
 

```
mkdir /cdrom
/usr/sbin/pfs_mount /cdrom
```

The `/cdrom` variable represents the mount point of the disk.
5. Log out.

- **Linux** **Mounting a CD or DVD on Linux systems.** To mount a CD or DVD on a Linux system, do the following:

1. Log in as a user with root authority.
2. Insert the disk in the drive and enter the following command:

```
mount -t iso9660 -o ro /dev/cdrom /cdrom
```

The */cdrom* variable represents the mount point of the disk.

3. Log out.

Some window managers can automatically mount your CD or DVD for you. Consult your system documentation for more information.

- **Solaris** **Mounting a CD or DVD on Solaris systems.** To mount a CD or DVD on a Solaris system, do the following:

1. Log in as a user with root authority.
2. Insert the disk into the drive.
3. If the Volume Manager (vold) is not running on your system, enter the following commands to mount the disk:

```
mkdir -p /cdrom/unnamed_cdrom  
mount -F hsfs -o ro /dev/dsk/c0t6d0s2 /cdrom/unnamed_cdrom
```

The */cdrom/unnamed\_cdrom* variable represents the disk mount directory and */dev/dsk/c0t6d0s2* represents the disk drive device.

If you are mounting the disk drive from a remote system using NFS, the disk file system on the remote machine must be exported with root access. You must also mount that file system with root access on the local machine.

If the Volume Manager (vold) is running on your system, the disk is automatically mounted as:

```
/cdrom/unnamed_cdrom
```

4. Log out.

---

## Mozilla 1.7 support for national languages

Mozilla 1.7 might not be available on all native language and operating system combinations.

The WebSphere Process Server version 6.2 distributed product is supported on these native languages:

- Brazilian-Portuguese
- Czech
- English
- French
- German
- Hungarian
- Italian
- Japanese
- Korean
- Polish
- Russian
- Spanish
- Simplified Chinese

- Traditional Chinese

Versions of Mozilla earlier than 1.7 have known security exposures. Details regarding these security exposures are available from the Mozilla Web site: <http://www.mozilla.org/security/known-vulnerabilities/older-vulnerabilities.html>.

---

## Naming considerations for profiles, nodes, hosts, and cells

This topic discusses reserved terms and issues you must consider when naming your profile, node, host and cell (if applicable).

### Profile naming considerations

The profile name can be any unique name with the following restrictions. Do not use any of the following characters when naming your profile:

- Spaces
- Illegal special characters that are not allowed within the name of a directory on your operating system, such as \*, &, or ?.
- Slashes (/) or back slashes (\)

Double-byte characters are allowed.

**Restriction:** i5/OS **On i5/OS platforms:** The i5/OS operating system limits the length of each component of a path name to a maximum of 255 characters. IBM recommends that you keep the path name of the profile root directory as short as possible.

### Node, host, and cell naming considerations

**Reserved names:** Avoid using reserved folder names as field values. The use of reserved folder names can cause unpredictable results. The following words are reserved:

- buses
- cells
- nodes
- servers
- clusters
- applications
- deployments

**Descriptions of fields on the node and hosts names and node, host, and cell names panels:** Table 158 describes the fields found on the node and host names and node, host, and cell names panels of the Profile Management Tool, including the field names, default values, and constraints. Use this information as a guide when you are creating profiles.

*Table 158. Naming guidelines for nodes, hosts, and cells*

Field name	Default value	Constraints	Description
Stand-alone server profiles			



Table 158. Naming guidelines for nodes, hosts, and cells (continued)

Field name	Default value	Constraints	Description
Node name	<p><b>On Linux, UNIX, and Windows platforms:</b>  <i>shortHostName</i>                      Node  <i>NodeNumber</i>                      where:</p> <ul style="list-style-type: none"> <li>• <i>shortHostName</i> is the short host name.</li> <li>• <i>NodeNumber</i> is a sequential number starting at 01.</li> </ul> <p><b>On i5/OS platforms:</b>  <i>shortHostName_profileName</i>                      where:</p> <ul style="list-style-type: none"> <li>• <i>shortHostName</i> is the short host name.</li> <li>• <i>profileName</i> is the profile name.</li> </ul>	Avoid using the reserved names.	Pick any name you want. To help organize your installation, use a unique name if you plan to create more than one server on the system.
Host name	<p><b>On Linux, UNIX, and Windows platforms:</b> The long form of the domain name server (DNS) name.</p> <p><b>On i5/OS platforms:</b> The fully qualified machine name including the domain name suffix.</p>	The host name must be addressable through your network.	Use the actual DNS name or IP address of your workstation to enable communication with it. See additional information about the host name following this table.

Table 158. Naming guidelines for nodes, hosts, and cells (continued)

Field name	Default value	Constraints	Description
Cell name	<p><b>On Linux, UNIX, and Windows platforms:</b>  <i>shortHostName</i>                      Node  <i>NodeNumber</i>                      Cell where:</p> <ul style="list-style-type: none"> <li>• <i>shortHostName</i> is the short host name.</li> <li>• <i>NodeNumber</i> is a sequential number starting at 01.</li> </ul> <p><b>On i5/OS platforms:</b>  <i>shortHostName_profileName</i>                      where:</p> <ul style="list-style-type: none"> <li>• <i>shortHostName</i> is the short host name.</li> <li>• <i>profileName</i> is the profile name.</li> </ul>	<p>Use a unique name for the deployment manager cell. A cell name must be unique in any circumstance in which the product is running on the same physical workstation or cluster of workstations, such as a Sysplex. Additionally, a cell name must be unique in any circumstance in which network connectivity between entities is required either between the cells or from a client that must communicate with each of the cells. Cell names also must be unique if their name spaces are going to be federated. Otherwise, you might encounter symptoms such as a <code>javax.naming.NameNotFoundException</code> exception, in which case, you need to create uniquely named cells.</p>	<p>All federated nodes become members of the deployment manager cell, which you name in the Node, host, and cell names panel of the Profile Management Tool.</p>
Deployment manager profiles			

Table 158. Naming guidelines for nodes, hosts, and cells (continued)

Field name	Default value	Constraints	Description
Node name	<p><b>On Linux, UNIX, and Windows platforms:</b>  <i>shortHostName</i>            Cell            ManagerNode            Number where:</p> <ul style="list-style-type: none"> <li>• <i>shortHostName</i> is the short host name.</li> <li>• <i>NodeNumber</i> is a sequential number starting at 01.</li> </ul> <p><b>On i5/OS platforms:</b>  <i>profileName</i>            Manager            where  <i>profileName</i> is the name of the profile.</p>	Use a unique name for the deployment manager. Avoid using the reserved names.	The name is used for administration within the deployment manager cell.
Host name	<p><b>On Linux, UNIX, and Windows platforms:</b> The long form of the domain name server (DNS) name.</p> <p><b>On i5/OS platforms:</b> The fully qualified machine name including the domain name suffix.</p>	The host name must be addressable through your network. Avoid using the reserved names.	Use the actual DNS name or IP address of your workstation to enable communication with it. See additional information about the host name following this table.

Table 158. Naming guidelines for nodes, hosts, and cells (continued)

Field name	Default value	Constraints	Description
Cell name	<p><b>On Linux, UNIX, and Windows platforms:</b>  <i>shortHostName</i>            Cell  <i>CellNumber</i>            where:</p> <ul style="list-style-type: none"> <li>• <i>shortHostName</i> is the short host name.</li> <li>• <i>CellNumber</i> is a sequential number starting at 01.</li> </ul> <p><b>On i5/OS platforms:</b>  <i>profileName</i>            Network            where  <i>profileName</i> is the name of the profile.</p>	<p>Use a unique name for the deployment manager cell. A cell name must be unique in any circumstance in which the product is running on the same physical workstation or cluster of workstations, such as a Sysplex. Additionally, a cell name must be unique in any circumstance in which network connectivity between entities is required either between the cells or from a client that must communicate with each of the cells. Cell names also must be unique if their name spaces are going to be federated. Otherwise, you might encounter symptoms such as a <code>javax.naming.NameNotFoundException</code> exception, in which case, you need to create uniquely named cells.</p>	<p>All federated nodes become members of the deployment manager cell, which you name in the Node, host, and cell names panel of the Profile Management Tool.</p>
Custom profiles			

Table 158. Naming guidelines for nodes, hosts, and cells (continued)

Field name	Default value	Constraints	Description
Node name	<p><b>On Linux, UNIX, and Windows platforms:</b>  <i>shortHostName</i>            Node  <i>NodeNumber</i>            where:</p> <ul style="list-style-type: none"> <li>• <i>shortHostName</i> is the short host name.</li> <li>• <i>NodeNumber</i> is a sequential number starting at 01.</li> </ul> <p><b>On i5/OS platforms:</b>  <i>shortHostName_profileName</i>            where:</p> <ul style="list-style-type: none"> <li>• <i>shortHostName</i> is the short host name.</li> <li>• <i>profileName</i> is the profile name.</li> </ul>	<p>Avoid using the reserved names.</p> <p>Use a unique name within the deployment manager cell.</p>	<p>The name is used for administration within the deployment manager cell to which the custom profile is added. Use a unique name within the deployment manager cell.</p>
Host name	<p><b>On Linux, UNIX, and Windows platforms:</b> The long form of the domain name server (DNS) name.</p> <p><b>On i5/OS platforms:</b> The fully qualified machine name including the domain name suffix.</p>	<p>The host name must be addressable through your network.</p>	<p>Use the actual DNS name or IP address of your workstation to enable communication with it. See additional information about the host name following this table.</p>

#### Host name considerations:

The host name is the network name for the physical workstation on which the node is installed. The host name must resolve to a physical network node on the server. When multiple network cards exist in the server, the host name or IP address must resolve to one of the network cards. Remote nodes use the host name to connect to and to communicate with this node.

WebSphere Process Server is compliant to both Internet Protocol version 4 (IPv4) and version 6 (IPv6). Wherever you can enter IP addresses in the administrative console, or elsewhere, you can do so in either format. Note that if IPv6 is implemented on your system you must enter the IP address in IPv6 format, and conversely, if IPv6 is not yet available to you, enter IP addresses in IPv4 format. For more information on IPv6 see the Official IPv6 Web site.

The following guidelines can help in determining the appropriate host name for your machine:

- Select a host name that other workstations can reach within your network.
- Do not use the generic identifier, localhost, for this value.
- Do not attempt to install WebSphere Process Server products on a server with a host name that uses characters from the double-byte character set (DBCS). DBCS characters are not supported when used in the host name.
- Avoid using the underscore ( \_ ) character in server names. Internet standards dictate that domain names conform to the host name requirements described in Internet Official Protocol Standards RFC 952 and RFC 1123. Domain names must contain only letters (upper or lower case) and digits. Domain names can also contain dash characters ( - ) as long as the dashes are not on the ends of the name. Underscore characters ( \_ ) are not supported in the host name. If you have installed WebSphere Process Server on a server with an underscore character in the server name, access the server with its IP address until you rename it.

If you define coexisting nodes on the same computer with unique IP addresses, define each IP address in a domain name server (DNS) look-up table.

Configuration files for stand-alone servers do not provide domain name resolution for multiple IP addresses on a workstation with a single network address.

The value that you specify for the host name is used as the value of the hostName property in configuration documents. Specify the host name value in one of the following formats:

- Fully qualified domain name servers (DNS) host name string, such as xmachine.manhattan.ibm.com
- The default short DNS host name string, such as xmachine
- Numeric IP address, such as 127.1.255.3

The fully qualified DNS host name has the advantage of being totally unambiguous and also flexible. You have the flexibility of changing the actual IP address for the host system without having to change the stand-alone server configuration. This value for host name is particularly useful if you plan to change the IP address frequently when using Dynamic Host Configuration Protocol (DHCP) to assign IP addresses. A format disadvantage is being dependent on DNS. If DNS is not available, then connectivity is compromised.

The short host name is also dynamically resolvable. A short name format has the added ability of being redefined in the local hosts file so that the system can run the stand-alone server even when disconnected from the network. Define the short name to 127.0.0.1 (local loopback) in the hosts file to run disconnected. A disadvantage of the short name format is being dependent on DNS for remote access. If DNS is not available, then connectivity is compromised.

A numeric IP address has the advantage of not requiring name resolution through DNS. A remote node can connect to the node you name with a numeric IP address

without DNS being available. A format disadvantage is that the numeric IP address is fixed. You must change the setting of the hostName property in configuration documents whenever you change the workstation IP address. Therefore, do not use a numeric IP address if you use DHCP, or if you change IP addresses regularly. Another format disadvantage is that you cannot use the node if the host is disconnected from the network.

---

## .nifregistry and vpd.properties files

The installer program for WebSphere Process Server uses the InstallShield MultiPlatform (ISMP) program to install code. The .nifregistry and vpd.properties files list program components that are currently installed. The file helps ISMP and the installer programs of WebSphere Process Server recognize previous installations of WebSphere Process Server and control options for new installations.

### Location of the .nifregistry file

The location of the .nifregistry file varies per operating platform:

- **AIX** On **AIX platforms**: The root directory /usr/.ibm/.nif/.nifregistry or the non-root directory <NON-ROOT-HOME>/.ibm/.nif/.nifregistry
- **HP-UX** On **HP-UX platforms**: The root directory /opt/.ibm/.nif/.nifregistry or the non-root directory <NON-ROOT-HOME>/.ibm/.nif/.nifregistry
- **i5/OS** On **i5/OS platforms**: The root directory /QIBM/WAS/.ibm/.nif/.nifregistry
- **Linux** On **Linux platforms**: The root directory /opt/.ibm/.nif/.nifregistry or the non-root directory <NON-ROOT-HOME>/.ibm/.nif/.nifregistry
- **Solaris** On **Solaris platforms**: The root directory /opt/.ibm/.nif/.nifregistry or the non-root directory <NON-ROOT-HOME>/.ibm/.nif/.nifregistry
- **Windows** On **Windows platforms**: The root directory C:\Windows\nifregistry

For example:

```
NON-ROOT user: fvttest
NON-ROOT-HOME: /home/fvttest .nifregistry dir: /home/fvttest/.ibm/.nif/.nifregistry
```

### Examples of the .nifregistry file

For a particular product, the .nifregistry file contains one entry (line) each for every PAK that gets installed and one entry (line) for the product offering.

The following line shows an example of a PAK entry in the .nifregistry file:

```
<pak installrooturi="file:///C:/IBM/WebSphere/ProcServer/" name="wbi.primary.pak"
paklocationuri="zip:///C:/IBM/WebSphere/ProcServer/properties/version/nif/backup/
wbi.primary.pak" productid="WBI"/>
```

The following line shows an example of a product offering entry in the .nifregistry file:

```
<product installrooturi="file:///C:/IBM/WebSphere/ProcServer/"
lastvisited="2008-09-04 16:56:33-0400" productid="WBI" version="6.2.0.0"/>
```

### Cleaning up the .nifregistry file after a failed uninstallation

For these steps to clean the .nifregistry file after a failed uninstallation:

1. Backup the .nifregistry file.

2. Open the .nifregistry file in a text editor (ensure that line wrapping is turned off).
3. Search and delete all lines that have the <INSTALL\_LOC> and <PRODUCT\_ID> in them where <INSTALL\_LOC> is the install location where you have a failed uninstallation and <PRODUCT\_ID> is the product offering ID of the product that you are trying to uninstall.
4. Save the .nifregistry file and close the text editor.

**HP-UX** **Solaris** **Operating system exceptions for using the vpd.properties file**

- ISMP uses the vpd.properties file to track WebSphere products that it installs on all platforms except Solaris and HP-UX.
- ISMP uses native operating system registration on these platforms when installing as root, and does not create a vpd.properties file.

When installing as a non-root installer, the installer programs create a vpd.properties file on all platforms, including Solaris and HP-UX.

### Situations that require you to edit the vpd.properties file

Certain situations require you to edit the vpd.properties file before reinstalling WebSphere Process Server. The uninstaller programs for WebSphere Process Server edit the vpd.properties while uninstalling a product, to remove entries for the product and any of its features that might have entries in the file.

Some situations that occur require you to manually remove product entries from the vpd.properties file before you can reinstall a product. These situations include:

- Bypassing the uninstaller program to uninstall a product manually
- Uninstalling a product manually when the uninstaller program is not present or is not working

If the vpd.properties file has entries for a product that you uninstalled, you must edit the file and remove the entries. If you do not edit the vpd.properties file to remove entries for a product or features of a product, you cannot reinstall the product into the same directory structure. If product entries in the vpd.properties file are present, the installer program reads the vpd.properties file, determines that the product is already installed, and displays the panel that prompts you to install additional features into the existing product or to install the binaries a second time. Unfortunately, the existing binaries might not be valid at that point. The installer program does not verify the products that it finds listed in the vpd.properties file.

**Vista** **Restriction on using the vpd.properties file by a non-Administrator on Microsoft® Windows Vista™ and Windows 2008 operating systems:** For a non-Administrator on the Windows Vista and Windows 2008 operating systems, this file is not valid if User Access Control (UAC) is enabled. It might contain some Administrator's properties and will not remain consistent.

### Location of the vpd.properties file

The location of the vpd.properties file varies per operating platform:

- **AIX** **On AIX platforms:** The root directory or the usr/lib/objrepos directory
- **i5/OS** **On i5/OS platforms:** /InstallShield/VitalProductData/vpd.properties



- **Linux** **On Linux platforms:** The root directory
- **Windows** **On Windows platforms:** Installation directory of the operating system, such as the C:\WINNT directory or the C:\windows directory

## Example of the vpd.properties file

The following example shows the entry for the vpd.properties file for Version 6.2.0.0 of the WebSphere product on a Windows platform. The example shows entire lines but wraps each line for formatting purposes.

```
WSEAA62|6|2|0|0|6.2.0.0|2=IBM WebSphere Process Server|
IBM WebSphere Process Server|IBM WebSphere Process Server V6.2|
IBM|http://www.ibm.com|6.2.0.0|
C:\Program Files\IBM\WebSphere\ProcServer|0|0|1|WSEAA62|6|2|0|0|6.2.0.0|2|0|
false|"properties/version/_uninst.wbi" "uninstall.jar" "uninstall.dat" "
"|true|3|WSEAA62|6|2|0|0|6.2.0.0|2
```

## Identifying entries in the vpd.properties file

Use the following table to help identify product entries.

Table 159. Identifier in the vpd.properties file for WebSphere products

Identifier	Product
WSE...62	All version 6.2 products use this identifier to identify the core product files: <ul style="list-style-type: none"> <li>• WebSphere Process Server, Version 6.2</li> <li>• WebSphere Enterprise Service Bus, Version 6.2</li> </ul>

## Operating system registry keys

Use the installation procedures to register WebSphere Process Server and associated products with the native operating system registry. This topic describes possible registry key values.

Installations are registered with the native operating system registries, such as the Red Hat Package Manager (RPM) on Linux systems.

**Note:** It is not possible to register with the native operating system registries when performing a non-root installation.

The InstallShield MultiPlatform (ISMP) installation wizard also creates the .nifregistry and vpd.properties files that contain a list of product codes that ISMP uses to track installations that it has performed.

**i5/OS** The licensed program product codes for i5/OS are:

- 5724I82 WebSphere Enterprise Service Bus V6.2
- 5724L01 WebSphere Process Server V6.2

If you install any of the other WebSphere Process Server options, you will see 5724L01 WebSphere Process Server V6.2.

See Limitations of non-root installers for more information about registry entries.

**Note:** **i5/OS** Non-root installation is not available on i5/OS platforms.

Table 160. Keys used to register WebSphere Process Server and WebSphere Enterprise Service Bus

Registry file location	WebSphere Process Server	WebSphere Enterprise Service Bus
vpd.properties	WSEAA62	WSEAA62
AIX	WSEAA62	WSEAA62
HP-UX	WSEAA62	WSEAA62
i5/OS	WSEAA62	WSEAA62
Linux	WSEAA62	WSEAA62
Solaris	WSEAA62	WSEAA62
Windows	HKEY_LOCAL_MACHINE\SOFTWARE\IBM\WebSphere Process Server\6.2	HKEY_LOCAL_MACHINE\SOFTWARE\IBM\WebSphere Enterprise Service Bus\6.2

In addition to the vpd.properties file, the installation programs also create a record of installed products in an installation registry file and creates a catalog signature file for use by IBM Tivoli License Compliance Manager.

### The installation registry file

The version 6.2 installation registry file is an XML file that contains data entries for all of the installed products that are listed in the preceding table:

- **Product information:** product ID (offering), product installation location, and product version
- **Package information:** package name, package installation location, product installation location, and any associated products

### The catalog signature files

Packages installed by a non-root installer might not register using native operating system mechanisms.

**AIX** For example, a WebSphere Process Server version 6.2 product installed as a non-root user on an AIX version 5.3 operating system cannot register to the AIX lpp command. Thus, running the ls lpp command does not list the current WebSphere Process Server version that is installed.

You can use the IBM Tivoli License Compliance Manager to manage the WebSphere Process Server license and version.

To enable the IBM Tivoli License Compliance Manager to detect and monitor WebSphere Process Server software components, obtain the ITLMReadinessOfferings.xml catalog file. This file is also referred to in IBM Tivoli License Compliance Manager as the IBMUseOnlySoftwareCatalog\_\*\*\*\*-\*\*-\*\*.xml or IBMSoftwareCatalog\_\*\*\*\*-\*\*-\*\*.xml file. The IBMUseOnlySoftwareCatalog\_\*\*\*\*-\*\*-\*\*.xml file is used with the Sub-Capacity version. The IBMSoftwareCatalog\_\*\*\*\*-\*\*-\*\*.xml file is used for the Full version.

The catalog file lists software signature recognition and usage files in XML format that are used by the IBM Tivoli License Compliance Manager components to identify and monitor software found on the agents. You can obtain the catalog file from IBM Tivoli License Compliance Manager.

## Example package entries

**Linux** Issue the following command on a Linux system to show packages for WebSphere Process Server:

```
rpm -qa | grep WS
```

---

## Port number settings

Prevent port conflicts from occurring when you want an installation of WebSphere Process Server to coexist with another installation of WebSphere Process Server, or with an installation of WebSphere Enterprise Service Bus, WebSphere Application Server, WebSphere Business Integration Server Foundation, or WebSphere Application ServerNetwork Deployment.

Because WebSphere Process Server is based on WebSphere Application Server, the port settings are the same for both products. Use the tables in Port number settings in WebSphere Application Server versions to help you determine which ports may already be in use within your various servers, allowing you to prevent port collisions. The values in those tables are the default port numbers and you must increment the values to avoid conflicts.

If you installed WebSphere Process Server over an installation of WebSphere Application Server, use values in the column with the heading **Application Server**. If you installed WebSphere Process Server over an installation of WebSphere Application ServerNetwork Deployment, or installed WebSphere Application Server Network Deployment as part of your WebSphere Process Server installation, use values in the column with the heading **Deployment Manager**.

In those tables, the column with the heading **Application Server** denotes the values used for either a stand-alone or a managed server.

**Note:** The values for WebSphere Application Server version 5.x and WebSphere Application Server Network Deployment version 5.x also apply for WebSphere Business Integration Server Foundation version 5.x.

---

## Installable features of WebSphere Process Server

This topic describes the WebSphere Process Server Samples feature.

The WebSphere Process Server Samples feature installs the sample applications for both WebSphere Process Server and WebSphere Application Server Network Deployment. It includes both source code files and integrated enterprise applications that demonstrate some of the latest Java 2 Platform, Enterprise Edition (J2EE) and WebSphere technologies.

For more information about the samples, see [Installing and accessing the Samples Gallery](#).

For better performance in a production environment, do not install the Samples Gallery.

---

## Product version and history information

Information and links to product version and history information.

The WBI.product file in the properties/version directory contains information such as product, version, build date, and build level. For example:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE product SYSTEM "product.dtd">
<product name="IBM WebSphere Process Server">
<id>WBI</id>
<version>6.2.0.0</version>
<build-info date="11/15/08" level="o0845.22"/>
</product>
```

Click on the following links for appropriate product version and history information:

Table 161. Product version and history information links.

Item	Link
Product version information	<a href="http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.nd.multiplatform.doc/info/ae/ae/rins_prodVersion.html">http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.nd.multiplatform.doc/info/ae/ae/rins_prodVersion.html</a>
genVersionReport command	<a href="http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.nd.multiplatform.doc/info/ae/ae/rins_genVersionReport.html">http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.nd.multiplatform.doc/info/ae/ae/rins_genVersionReport.html</a>
versionInfo command	<a href="http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.nd.multiplatform.doc/info/ae/ae/rins_versionInfo.html">http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.nd.multiplatform.doc/info/ae/ae/rins_versionInfo.html</a>
historyInfo command	<a href="http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.nd.multiplatform.doc/info/ae/ae/rins_historyInfo.html">http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.nd.multiplatform.doc/info/ae/ae/rins_historyInfo.html</a>
genHistoryReport command	<a href="http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.nd.multiplatform.doc/info/ae/ae/rins_genHistoryReport.html">http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.nd.multiplatform.doc/info/ae/ae/rins_genHistoryReport.html</a>

## Product library, directories, subsystem, job queue, job description, and output queues

An i5/OS platform uses different configurations than installations of WebSphere Process Server on other platforms. This topic describes the product library, directories, subsystems, job queue, job description, and output queues that WebSphere Process Server uses on the i5/OS platform.

### Product library and directories

In a default installation, WebSphere Process Server for i5/OS uses the following library and directories:

#### QWBI61

The product library.

#### /QIBM/ProdData/WebSphere/ProcServer

The default root directory; it contains product data shared by all WebSphere Process Server profiles.

#### /ICBM/UserData/WebSphere/ProcServer

The default WebSphere Process Server user data root directory; all WebSphere Process Server profiles and profileRegistry subdirectories are created under this directory.

### Subsystem

Installations of WebSphere Process Server for i5/OS can use one of the following subsystems:

## QWAS61

The subsystem provided and configured by WebSphere Application Server. By default, the server runs in this subsystem.

## QWBI61

A subsystem specific to WebSphere Process Server. In order to run your server in the QWBI61 subsystem, you must modify the startServer script and then restart the server.

Run the startServer script with the following parameters:

- **-sbs** QWBI61/QWBI61
- **-jobq** QWBI61/QWBIJOBQ
- **-jobd** QWBI61/QWBIJOBQ
- **-outq** QWBI61/QWBIJOBQ

For more information, see Configuring subsystems on i5/OS.

## Job queue

WebSphere Process Server for i5/OS uses one of the following job queues for server, node agent, and deployment manager processes, depending on which subsystem is used:

- The QWASJOBQ queue is used with the QWAS61 subsystem.
- The QWBIJOBQ queue is used with the QWBI61 subsystem.

## Job description

WebSphere Process Server for i5/OS uses one of the following job descriptions for server, node agent, and deployment manager processes, depending on which subsystem is used:

- The QWASJOBQ description is used with the QWAS61 subsystem.
- The QWBIJOBQ description is used with the QWBI61 subsystem.

## Output queue

WebSphere Process Server for i5/OS uses one of the following output queues for server, node agent, and deployment manager processes, depending on which subsystem is used:

- The QWASOUTQ queue is used with the QWAS61 subsystem.
- The QWBIOUTQ queue is used with the QWBI61 subsystem.

---

## Profile commands in a multiprofile environment

When two or more profiles exist on a server, certain commands require that you specify the profile to which the command applies. These commands use the `-profileName` attribute to identify which profile to address. To overcome having to specify the `-profileName` attribute for each command, use the versions of the commands that exist in the `bin` directory of each profile.

The first profile that you create within one installation of WebSphere Process Server is the default profile. The default profile is the default target for commands issued from the `bin` directory in the directory where WebSphere Process Server is installed. If only one profile exists on a system, every command operates on that profile. To target a command to a profile other than the default, you must issue the command as follows:

- If you want to issue the command from any directory, follow the command with the `-profileName` attribute and the fully qualified path to the profile to address. For example:  

```
startServer -profileName server1
```
- To overcome having to specify the `-profileName` attribute for a command, use the version of the command that exists in the `bin` directory of the profile to address. The directory is `profile_root/bin` on i5/OS, Linux, and UNIX platforms or `profile_root\bin` on Windows platforms.

---

## Special considerations when installing from Passport Advantage

If you plan to install from images obtained from Passport Advantage, you must review the downloading instructions provided with the images and observe certain guidelines concerning user permissions and directory setup.

**Note:** i5/OS **On i5/OS platforms:** The installation images obtained from Passport Advantage must be downloaded to a Windows workstation.

Images map one-for-one to the *WebSphere Process Server V6.2 DVD* and the *WebSphere Application Server CDs*. They are grouped by platform into electronic assemblies. Each assembly contains all the images for that platform, allowing you to quickly identify all software needed for the platform.

Observe the following guidelines when installing from images obtained from Passport Advantage:

- Linux UNIX **On Linux and UNIX platforms:** Ensure that the user who extracts the files with the `untar` command is the same user who will install the product. The product installer will not work properly if different users perform these tasks.
- Make sure that you extract the contents of the images for *WebSphere Process Server V6.2 DVD*, the *WebSphere Application Server Network Deployment Supplements V6.1 CD*, and the *WebSphere Application Server Toolkit V6.1.1 Disk 1 CD* into three separate directories. If you extract the files from the images into the same directory, errors will occur. Consider using three sibling directories, for example:
  - i5/OS **On i5/OS platforms:**

```

%/downloads/WPS/image1
%/downloads/WPS/image2
%/downloads/WPS/image3

```
  - Linux UNIX **On Linux and UNIX platforms:**

```

%/downloads/WPS/image1
%/downloads/WPS/image2
%/downloads/WPS/image3

```
  - Windows **On Windows platforms:**

```

C:\downloads\WPS\image1
C:\downloads\WPS\image2
C:\downloads\WPS\image3

```

---

## Chapter 14. Using the IBM WebSphere Installation Factory

The IBM WebSphere Installation Factory creates turn-key installation packages for installing WebSphere products in a reliable and repeatable way, tailored to your specific needs. The installation packages are customized WebSphere Process Server installation images that can include one or more maintenance packages, scripts and other files that help customize the resulting installation.

Before creating and installing a customized installation package (CIP), you must understand how to install and configure WebSphere Process Server. See the *Planning for WebSphere Process Server* PDF.

You can also view the planning topics in the WebSphere Process Server for Multiplatforms, version 6.2, online information center at <http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r2mx/index.jsp> under **Planning for WebSphere Process Server**.

When you have planned your installation strategy you can use the following information to expedite your installation:

---

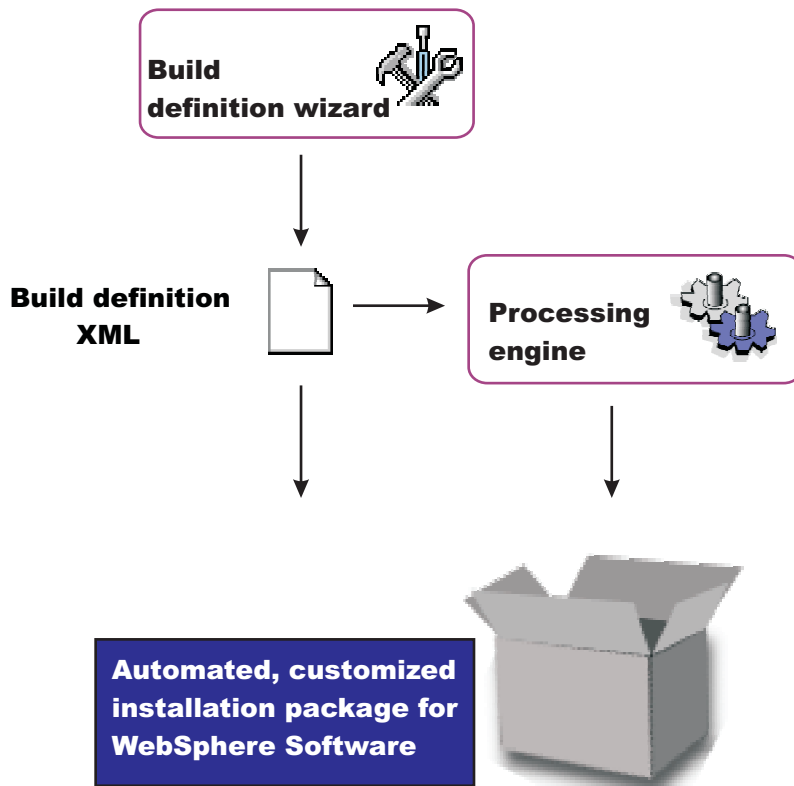
### IBM WebSphere Installation Factory - overview

The IBM WebSphere Installation Factory combines the installation image for WebSphere Process Server with applicable maintenance packages, customization scripts, and other files, to create a customized installation package (CIP). These installation packages can be installed in a single step.

Installing and configuring WebSphere Process Server is usually a multiple step process:

1. Install the shipped version of WebSphere Process Server.
2. Install the current fix pack.
3. Install a refresh pack.
4. Install one or more interim fixes as needed.
5. Create and configure application servers and other artifacts.
6. Deploy applications.

The IBM WebSphere Installation Factory simplifies the process by creating a single installation image - the customized installation package (CIP). The installation image can be created with a wide array of optional assets to allow you to customize the resulting installation to your needs.




---

## Installing the IBM WebSphere Installation Factory

The Installation Factory is provided on the product media. The latest version can also be downloaded from the IBM support site.

### Before you begin

You must be authenticated to your system and all hardware and software requirements must be met. See the software and hardware requirements page.

### Procedure

1. Obtain a copy of the appropriate Installation Factory archive file for your operating system.

Option	Description
From the product media.	Copy the appropriate archive from the /IF directory on the product media to a local directory on your system.



Option	Description
From the IBM support site.	<ol style="list-style-type: none"> <li>1. Download the base Installation Factory tool. Select “WebSphere” for the category and WebSphere Application Server for the sub category. Click the right arrow button. On the subsequent page click <b>tools and utilities</b>. The Installation Factory download page should be listed. Download the appropriate archive file for the operating system of the workstation on which you intend to work.</li> <li>2. Download the Installation Factory plug-in for WebSphere Process Server. Select “WebSphere” for the category and WebSphere Process Server for the sub category. Click the right arrow button. On the subsequent page click <b>tools and utilities</b>. The Installation Factory download page should be listed. Download the appropriate archive file for the operating system of the workstation on which you intend to work.</li> </ol> <p><b>Note:</b> The Installation Factory can be used on one operating system to create installation packages for a different operating system. However not all combinations are supported. Please consult the list of supported operating systems before deciding on which platform to install the Installation Factory.</p>

2. Extract the archive file to an otherwise empty directory.
3. Optional: Add the bin directory from your expanded package to your path environment variable. Adding the bin directory to the path variable allows you to access the Installation Factory commands from any directory on your system without qualifying the path to that command.
4. Optional: Ensure that all users who will need to use the Installation Factory have write permission to the logs directory in the install directory. If you do not make this directory writable to all Installation Factory users, the user will need to use the -logFile and -traceFile options when they invoke Installation Factory commands to change the location of the log and trace files that will be created.

### What to do next

The Installation Factory is ready to use.

---

## Working with customized installation packages

A customized installation package (CIP) is a customized WebSphere Process Server installation image that can include one or more maintenance packages, profile customizations, EAR files, scripts and other files that help you to customize the resulting installation. The IBM WebSphere Installation Factory creates CIPs.

## Before you begin

Read through this topic and its related topics to prepare for creating and installing customized installation packages (CIPs). Become familiar with CIP installation options before you start to use the installation tools. Review the hardware and software requirements on the Supported hardware and software Web site: Supported hardware and software.

If you encounter a problem such as needing more disk space or more temporary space, or missing prerequisite packages on your system, cancel the installation, make the required changes, and restart the installation.

## About this task

You can use the IBM WebSphere Installation Factory to create a CIP. The first step is to create a build definition for the CIP using the Installation Factory console. Use the `ifgui` command to start the Installation Factory console.

**i5/OS** The Installation Factory console is not supported on i5/OS. However, you can work with the Installation Factory on a Windows, UNIX or Linux server to create build definition files and CIPs for use on i5/OS.

**Note:** You can install the CIP on i5/OS either remotely from a Windows platform or silently on the i5/OS server.

After defining the build parameters in the build definition file, create the CIP, which will then contain a version of the WebSphere Process Server installation wizard.

The following procedure describes how to get started creating and installing a CIP for WebSphere Process Server.

### Procedure

1. Use the Installation Factory to create a customized installation package. See the subtopic: **Creating customized installation packages** for more information.
2. Prepare your operating system platform for installation. See the related information: Preparing the operating system for installation.
3. Install WebSphere Process Server using the CIP. The CIP installation wizard performs the following actions:
  - Automatically checks prerequisites.
  - Looks for a previous WebSphere Process Server Version 6.2 installation to determine installation options to display. Options include adding features and maintenance to the product binaries, and installing a new set of product binaries at the updated maintenance level that is included in the CIP.
  - Looks for previous versions of related WebSphere products from which an upgrade path is available.
  - Optionally create a stand-alone server, custom or deployment manager profile as well as install a deployment environment or WebSphere Process Server Client when installing a new set of product binaries and the maintenance packages included in the CIP.

4. Choose an installation scenario to continue the installation:

Option	Description
Perform a typical installation with the CIP installation wizard.	The typical installation of the base product allows you to install any of the features in the CIP and also what type of profile to create.
Perform a slip installation from a lower maintenance level to a higher one.	The CIP installation wizard can install maintenance to an existing product without installing features.
Install maintenance packages and additional features with the CIP installation wizard to increment an existing installation.	The CIP installation wizard can install maintenance and add features to an existing product.
Perform a trade-up installation from a lower-level product to the full product.	The CIP installation wizard can install maintenance packages when upgrading from a lower-level product.
Perform a silent installation with the CIP installation wizard.	See the related task: <b>Installing a customized installation package silently</b> . A silent installation requires you to edit the response file that contains all of your installation choices. After creating a valid response file, you issue the install command with the silent parameter from a command window.

The installer program does not support console-mode installation.

## Results

You can use a CIP to install WebSphere Process Server by following the procedures outlined in subsequent topics.

## Starting the IBM WebSphere Installation Factory

Launch the Installation Factory console from a command line. The Installation Factory console provides GUIs to create installation packages.

### Before you begin

You must have installed the Installation Factory on the system before commencing this task. If you intend to create a CIP with the Installation Factory GUI, you should have a copy of the installation image for the target operating system either on the local workstation or in location that can be accessed from the workstation you are working on.

### About this task

The Installation Factory console provides you with all the tools you need to create a build definition file and a customized installation package (CIP) for your system. Gather all the components that you intend to include in the installation package before launching the console. Optional assets include:

- Maintenance packages.
- Scripts or Java classes.
- Additional user files.
- Enterprise archive (EAR) files.

## Procedure

1. Launch the Installation Factory graphical user interface.

From the Installation Factory directory, invoke the ifgui command:

**AIX**   **HP-UX**   **Linux**   **Solaris**   bin/ifgui.sh

**Windows**   bin\ifgui.bat

2. On the launch panel of the Installation Factory console, choose between creating a new customized installation package, creating a new integrated installation package and opening an existing build definition. You can also launch the Installation Factory help system. Details of the options on the Installation Factory console are found in subsequent topics.

## The ifgui command

The ifgui command launches the IBM WebSphere Installation Factory console which can be used to create a build definition XML file that identifies the product to install, the features of the product, the maintenance packages, and other customizations to include in a customized installation package (CIP). The ifgui tool can, when used in connected mode, also create the CIP directly.

## Purpose

**Note:** The Installation Factory console is sometimes referred to as the Build Definition wizard.

The ifgui command gives you access to the Installation Factory console, which is the simplest method of creating build definition files.

## Location

The ifgui command file is located in the /bin directory of the directory where you unpack the Installation Factory. The command file is a script named:

**AIX**   **HP-UX**   **Linux**   **Solaris**   ifgui.sh

**Windows**   ifgui.bat

## Logging

The ifgui command creates a log file that shows whether the build definition file is produced successfully. In connected mode, the log also contains information about the CIP creation. When the build definition file is not successfully built, examine the trace file to determine what is wrong.

The following files record build file definition data:

- *IF\_working\_directory*/logs/trace.xml is a detailed trace log in XML format.
- *IF\_working\_directory*/logs/log.txt is the log file.

The tracing and logging output and level are configurable as described in the **logLevel** and **traceLevel** parameters. The success indicator is INSTCONFSUCCESS.

Common problems that can cause failure include mismatched fix packs and interim fixes, or insufficient disk space.

## Syntax for ifgui.sh

AIX

HP-UX

Linux

Solaris

To display help:

```
./ifgui.sh -help
```

To create a build definition:

```
./ifgui.sh  
-logLevel log_level  
-logFile log_file_path_name  
-traceLevel trace_level  
-traceFile trace_file_path_name
```

## Syntax for ifgui.bat

Windows

To display help:

```
.\ifgui.bat -help  
.\ifgui.bat -?
```

To create a build definition:

```
.\ifgui.bat  
-logLevel log_level  
-logFile log_file_path_name  
-traceLevel trace_level  
-traceFile trace_file_path_name
```

## Parameters

Supported arguments include

**-?** Shows usage information.

**-help**  
Shows usage information.

**-logFile** *log\_file\_path\_name*  
Identifies the log file. The default value is *current\_working\_directory/logs/log.txt*.

**-logLevel** *log\_level*  
Sets the level for logging of messages. Valid values for *log\_level* are:

- ALL
- CONFIG
- INFO
- WARNING
- SEVERE
- OFF (Turns off logging)

The default value is INFO.

**-traceFile** *trace\_file*  
Identifies the trace file. The default value is *current\_working\_directory/logs/trace.xml*.

### **-traceLevel** *trace\_level*

Sets the level of tracing. Valid values for *trace\_level* are:

- ALL
- FINE
- FINER
- FINEST
- OFF (Turns off tracing).

The default value is OFF.

## **Usage**

Use the build definition file in connected mode to create a CIP from within the wizard. In most instances it is advisable to use the build definition wizard in connected mode, even if you are creating a CIP for a different operating system. Use the build definition in disconnected mode as input to the Installation Factory processing engine to create a customized installation package. See the `ifcli` command for more information.

## **Options on the Installation Factory console**

The console for the Installation Factory provides options that you can select to build and modify build definition files. These build definition files can in turn be used to create customized or integrated installation packages (CIPs or IIPs).

The Installation Factory console provides you with options to create a new build definition file and optionally a corresponding customized installation package (CIP) to create an integrated installation package (IIP) from a new build definition or to open and edit an existing build definition and optionally create a CIP or IIP from that build definition. In addition an option to launch the Installation Factory help system is offered.

### **Create New Customized Installation Package**

The Create New Customized Installation Package option launches a product selection wizard. The build definition wizard launches when you choose the product and release to install. Use the build definition wizard to create a build definition file and optionally a corresponding customized installation package.

### **Create New Integrated Installation Package**

The Create New Integrated Installation Package option launches a product selection wizard. The build definition wizard launches when you choose the product and release to install. Use the build definition wizard to create a build definition file and optionally a corresponding integrated installation package

### **Open Build Definition**

If you choose the Open Build Definition option, the Modify an Existing Build Definition panel is displayed, with a file browser to allow you to choose the build definition that you want to edit.

## **Help**

Click the Help icon to launch the Installation Factory documentation.

## Creating build definitions

A build definition is an XML document which you can use to create a customized installation package (CIP). Create a build definition using the Build Definition wizard from the Installation Factory console.

### Before you begin

Ensure that you have correctly set up the Installation Factory before performing this task.

**Note:** i5/OS You must use a Windows, UNIX or Linux server to create the build definition and CIP for an i5/OS installation. From Windows you can install the CIP on i5/OS, but from Linux or UNIX, you must transfer the CIP to either the i5/OS server or a Windows server before installing.

### About this task

Before creating a CIP, you must first create a build definition for the CIP. The build definition is an XML document that defines how the Installation Factory is to customize the WebSphere Process Server installation. The Build Definition wizard is the easiest way to create a build definition. Launch the Installation Factory console with the `ifgui` command from the `Installation_Factory_home/bin` directory (where `Installation_Factory_home` is the directory where you unpacked the Installation Factory). Launch the Build Definition wizard by either choosing to create a new CIP, or by opening an existing build definition. You can save a build definition and use it to generate the CIP directly from the Build Definition wizard. Alternatively, you can pass the build definition to the command-line interface through an option on the `ifcli` command. This second approach is useful when you want to create the build definition interactively on one workstation using the console, but then generate the CIP in batch mode, for instance on a different workstation, and perhaps as part of some larger automated process.

i5/OS Run the Build Definition wizard in connected mode, select i5/OS as your target operating system and choose to create the CIP when you have the option to do so. This CIP can then be transferred to your i5/OS system and installed silently. You can also install a CIP for i5/OS from a Windows server using the installation GUI.

### Procedure

1. Launch the Installation Factory console. From the `Installation_Factory_home/bin` directory (where `Installation_Factory_home` is the directory where you unpacked the Installation Factory) use the `ifgui` command to launch the console.
2. Work through the panels of the Build Definition wizard to create your customized build definition. See subsequent topics for the details of the console panels.
3. Save the build definition.
4. Use the build definition to generate a CIP. You can generate the CIP either directly with the Installation Factory console, or using a command-line tool.

Option	Description
From the Build Definition wizard	Choose the option to create a CIP.
Using the <code>ifcli</code> command-line tool	Pass the saved build definition as an option to the <code>ifcli</code> command.

## **Build Definition wizard:**

To create a customized installation package (CIP), you must first create a build definition file, which the IBM WebSphere Installation Factory uses to generate the CIP. The build definition file describes exactly what the Installation Factory includes in the CIP so that you can achieve the installation customizations that you require. The Build Definition wizard allows you to easily create build definition files.

### **Purpose**

The Build Definition wizard within the Installation Factory GUI steps you through the process of creating a build definition file. You can create as many different build definition files as needed to define the CIPs you require. You can also use the Build Definition wizard to modify an existing build definition file. A build definition file is saved as an XML document in a location that you choose.

### **Overview**

Each panel in the Build Definition wizard prompts you for information about the CIP. For example, prompts exist for the locations of maintenance packages, scripts, and other components that you can include. Another prompt requests the location for generating the CIP. All of this information is saved in the new build definition file, or modified and saved in a build definition file that you are changing.

The last wizard panel provides an option for generating a CIP that is based on the content of the build definition file that you just defined. Alternately, you can save just the build definition file. Use the `ifcli` command to create a CIP from a previously saved build definition file. The `ifcli` command generates the CIP outside of the Installation Factory console, and can be used on a different machine or operating system.

When you create a new build definition file, an initial wizard helps you choose the specific product and installation package to customize, such as an installation package for the WebSphere Process Server product. This wizard is the Product Selection wizard. You can choose one of: WebSphere Process Server, Enterprise Service Bus or WebSphere Process Server Client.

After you have selected the installation package to customize, the Build Definition wizard helps you create the build definition file, as previously described.

### **Sample**

Sample build definition files are provided in the `IF_root/samples/wbi` directory.

## **Build Definition wizard panels:**

The Build Definition wizard provides a convenient tool for creating build definition files and customized installation packages.

### **Purpose**

The Build Definition wizard is used to create build definition files. Build definition files can in turn be used to create customized installation packages.



## Panels

- Mode selection panel
- Package identification panel
- Build information panel
- Product installation image panel
- Feature selection panel
- Maintenance packages panel
- Installation and uninstallation scripts panel
- Profile customization panel
- Additional files panel
- Authorship panel
- Customized installation preview panel

*Build Definition wizard: Mode selection panel:*

Choose between connected and disconnected modes using the mode selection panel. Choose connected mode on the mode selection panel to create a CIP for an i5/OS server.

When the Build Definition wizard has access to the product installation image, maintenance packages, and other components required to create the customized installation package (CIP), then you can use it in what is called "connected mode." In this mode, the Build Definition wizard can validate the files that are provided as input and optionally generate the CIP in addition to creating the build definition file. If the product installation image, maintenance packages, and other components are not accessible because they are on a separate machine, the Build Definition wizard can only be used in disconnected mode. It is recommended to use connected mode when creating a CIP for an i5/OS server.

In disconnected mode, the Build Definition wizard can be used to create a build definition file for a target platform but it is not able to validate any of the input nor actually generate a CIP. The build definition file can then be copied to the target machine and used as input to the ifcli command to actually generate the CIP, at which time all of the input that was provided in the Build Definition wizard is validated.

It is convenient to run in connected mode whenever possible. Choose connected mode when the Build Definition wizard and the processing engine run on the same machine.

## The mode affects component location specifications

In connected mode, specify local file paths for all components. The processing engine that builds the CIP is also on this machine. Therefore, the processing engine can access the local components. In disconnected mode, specify component locations in terms of the target machine, where the processing engine will run to build the CIP. For example, suppose that the product installation image is on the target machine in the /tmp/IBM/WASimage directory. Specify the location in terms of the target machine where the processing engine must find the product image to include in the CIP.

## The mode affects component validation

In connected mode, the Build Definition wizard can validate connected installation images, maintenance packages, and other components while creating the build definition file because everything is on the same machine. When running in disconnected mode, the Build Definition wizard does not attempt to access components and cannot verify those components. In such a case, the Installation Factory relies on the processing engine to verify all components. The processing engine verifies each component as it adds the component to the CIP.

## The mode affects the target operating system

Disconnected mode provides a selection field to identify the target operating system and hardware platform. Choose the operating system and hardware platform where the processing engine runs to create the CIP and upon which the CIP will be installed. The command-line invocation tool (ifcli) runs on 32-bit kernels and 64-bit kernels.

## Supported architectures

**Linux** **UNIX** You can create CIPs for the following architectures:

- HP-UX on HP PA-RISC.
- HP-UX on Intel Itanium® 64-bit.
- IBM AIX on IBM PowerPC32.
- IBM AIX on IBM PowerPC64.
- IBM i5/OS on IBM PowerPC64.
- Linux on Intel IA32.
- Linux on AMD Opteron 64-bit/Intel EM64T.
- Linux on IBM PowerPC32.
- Linux on IBM PowerPC64.
- Linux z/Architecture®.
- Linux 64-bit z/Architecture.
- Sun Solaris on Sun SPARC 32-bit.
- Sun Solaris on Sun SPARC 64-bit.
- Sun Solaris on AMD Opteron 64-bit/Intel EM64T.
- Windows on Intel IA32.
- Windows on AMD Opteron 64-bit/Intel EM64T.

**Windows** You can create CIPs for the following architectures:

- i5/OS
- WindowsIA32
- WindowsAMD64

*Build Definition wizard: Package identification panel:*

Specify an identifier and version for the customized installation package (CIP) on the package identification panel.

Package identification fields include:

- Identifier: Type a descriptor. For example, if you work in the Functional Verification Test department on the installation development team for

WebSphere Process Server, you might use *com.ibm.toronto.wps.fot* to identify test CIPs that you create. Suppose that you work in IT for the Sports Information department at the University of North Carolina. You might use *edu.unc.tarheels.sid.wps* as an identifier for CIPs that you create to install WebSphere Process Server updates on machines used by the Press.

The package identifier is designed to be universally unique. Multiple CIPs can install on a single installation. Each CIP installs customization assets in the installation under a unique directory. The unique directory name is modelled after the unique identifier provided. For this reason, the identifier must be unique. That is why IBM suggests a unique reverse domain notation with a version number.

- **Version:** Type a version number to help identify CIPs that you create. For example, the GUI field is pre-filled with 1.0.0.0, so you may want to start with that and increment from there.

The version number of the CIP does not have to reflect the version number of the product.

- **Full package identifier:** Informational only. This field shows the concatenation of the previous two fields. The Installation Factory uses this unique identifier as the name of a directory that holds the customized installation package. For example, the full package identifier might be *edu.unc.tarheels.sid.wps\_1.0.0.0*. The full package identifier is sometimes referred to as the variable *cip\_uid*.

The full package identifier must

- **Windows** Contain 45 or fewer characters
- Start and end with alphabetic characters (A-Z, a-z) or numbers (0-9) only
- Contain alphabetic characters (A-Z, a-z), numbers (0-9), periods (.) and underscores (\_) only
- Not contain spaces or the following characters: ~ ` ! @ # \$ % ^ & ( ) { } [ ] | \ / : ; , ? ' " < = > + \*

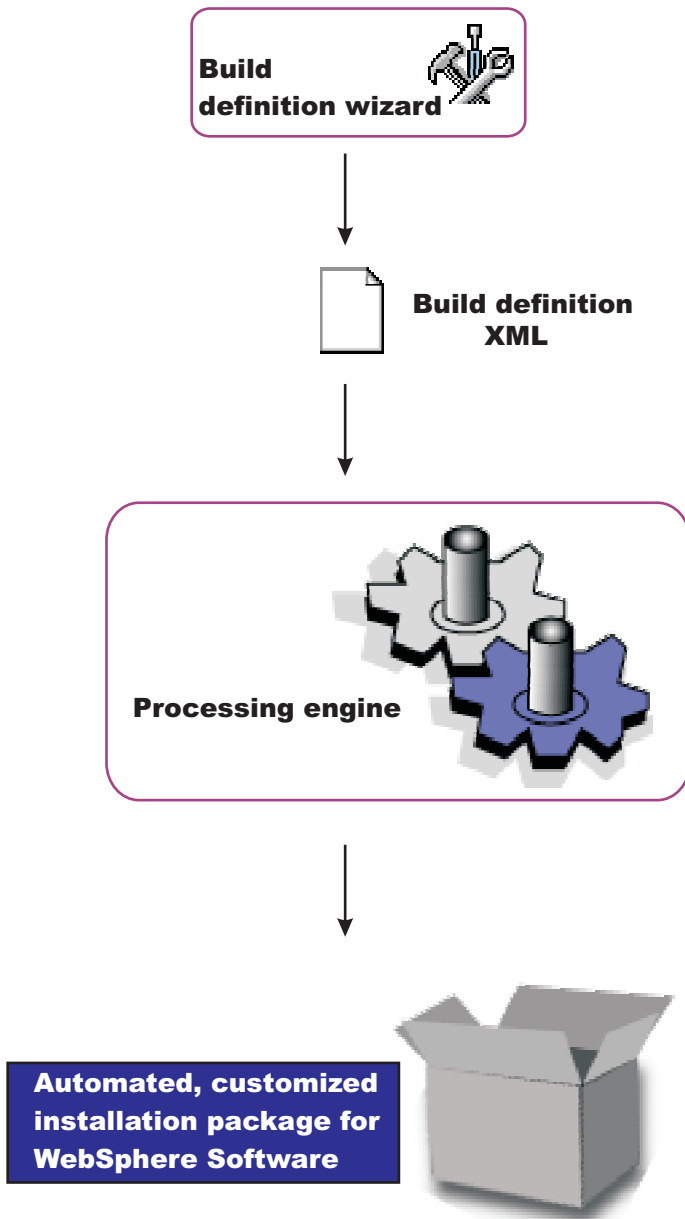
*Build Definition wizard: Build information panel:*

Specify the build settings for your customized installation package (CIP) on the build information panel.

The Build Definition wizard creates the XML build definition file, which specifies the location for outputting the CIP. The name and location of both files are under your control. The build definition file is always saved to a directory path on the Build Definition wizard machine. Name the build definition file in the Build Definition field. You can think of the build definition file as a response file for the processing engine. The XML file provides the information that the processing engine needs to locate all of the components for the CIP. Name the directory where you want to create the CIP in the Customized Installation Package field. The Installation Factory creates a compressed file containing the CIP and stores the file in the directory name that you specify.

**Note:** **Windows** The number of characters in the CIP build directory must be no more than 30 characters.

The processing engine reads the CIP location from the build definition file to determine where to store the CIP.



### Customized installation package build location

`/opt/ifactory/wpsimages`

You can type the file and directory locations directly into the fields. Or, in connected mode, click **Browse** to search for and select either an existing build definition file or an existing CIP. The CIP directory path is on the target machine, when you are working in disconnected mode you must type in the appropriate path and that path must be appropriate for the remote system. For example the build definition directory path and file names could be:

- **AIX** **HP-UX** **Linux** **Solaris** /IF/builddefs/com.ibm.ws.install.wbiserver\_1.0.0.0.xml
- **Windows** C:\IF\builddefs\com.ibm.ws.install.wbiserver\_1.0.0.0.xml
- **i5/OS** /IF/builddefs/com.ibm.ws.install.wbiserver\_1.0.0.0.xml

and the corresponding CIP build directory paths could be:

- AIX  HP-UX  Linux  Solaris /IF/
- Windows C:\IF\
- i5/OS /IF/

Validation is performed when you click **Next**. Validation consists of checking that the build directory path is in the correct format.

*Build Definition wizard: Product installation image panel:*

Identify the location of the installation image of the WebSphere Process Server on the product installation image panel.

The build definition file must provide the processing engine with the location of the directory that contains the installation image for the WebSphere Process Server product that you are installing.

**Note:** The installation image is the generally available installer of WebSphere Process Server. Customized installation packages contain installation images, but are not themselves installation images.

Specify the location of the directory for the product installation image in the **product installation image directory path** field. The path that you provide is to the directory that contains the latest installation image for the WebSphere Process Server product you are installing (either from the product media or from a downloaded image).

You can also specify the parent directory, such as /tmp if the image is in the /tmp/WPS directory, for example.

You can type directly into the field to identify the directory location. Or, click **Browse** in connected mode to search for and select the existing directory.

The processing engine requires the directory to exist and to have a valid installation image that matches the product that you selected with the Product Selection wizard. In connected mode, validation occurs when you click **Next**. In disconnected mode, the processing engine performs validation while building the customized installation package.

The directory for the installation image must exist in connected mode. In disconnected mode, remember to specify the file path in terms of the machine on which the processing engine machine runs. Specify the mount point for the CD-ROM drive on the target machine, for example. The processing engine must be able to locate the image at build time.

*Build Definition wizard: Feature selection panel:*

Select the features that you want to include in your build definition file using the feature selection panel.

**Note:** This panel is not displayed when you are installing WebSphere Process Server Client. In this case, the wizard moves on immediately to the Maintenance packages panel.

The build definition file must identify product features to include in the customized installation package (CIP). Select the features to include. Features that you include in the CIP are displayed when an installer uses the CIP to install the product.

Required features are listed with the word “Required” appended to the feature name, but are not selectable. Some products contain features that you must include in the CIP to have a viable product to install.

Optional features that you do not include in the CIP are not available when an installer uses the CIP to install the product.

**Important:** You must include any features that you might want to include in your installation at this stage. When you install the CIP you will have the option to exclude these features from the installation, but you cannot add features that are not included in the CIP.

*Build Definition wizard: Maintenance packages panel:*

Select any maintenance packages (\*.pak files) that want to include in your customized installation package (CIP) using the maintenance packages panel. Maintenance packages include refresh packs, fix packs and interim fixes.

Selecting maintenance packages is optional. The types of packages to include are your choice. For example, you can skip fix packs and install an interim fix. Or you can install one refresh pack and five interim fixes.

Fix pack compressed files are bundled with the Update Installer for WebSphere Software. Decompress the file to expose the maintenance package (\*.pak) file in the /updateinstaller/maintenance directory.

Always select a \*.pak file when selecting a maintenance package, such as the updateinstaller\maintenance\6.2-WS-WBI-WinX32-RP0000001.pak file.

You can select only one fix pack and one refresh pack. Fix packs are cumulative. Always select the latest available package.

Type directly into each field to identify the file path and file name of the \*.pak files. In connected mode, you can instead click the **Browse** buttons to locate available refresh packs and fix packs.

### **Validation**

The processing engine requires selected maintenance packages to have a valid file path and valid format. In connected mode, validation of the file path occurs when you click **Next**. When fix packs are validated, a dialog is displayed which displays the base WebSphere Application Server maintenance level that is required for the WebSphere Process Server CIP that is being created.

In disconnected mode, the processing engine performs validation while building the customized installation package from the build definition.

### **Disconnected mode affects file path specifications**

The directory and valid maintenance package must exist in connected mode. In disconnected mode, remember to specify the file path and the name of the \*.pak

file in terms of the machine on which the processing engine machine runs. The processing engine must be able to locate the maintenance package at build time.

### **What are maintenance packages?**

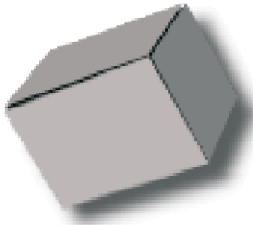
Maintenance packages include fix packs, refresh packs and interim fixes.

A fix pack is a cumulative package of fixes, such as Version 6.2.0.1. Fix packs install on top of a previous fix pack, such as applying Version 6.2.0.2 to Version 6.2.0.1. Fix packs are cumulative, so Version 6.2.0.2 includes all fixes in Version 6.2.0.1. Check the list of delivered fixes in the fix pack to determine which interim fixes must be reinstalled. If an interim fix is deleted, but the fix is not in the fix pack, reinstall the interim fix.

A refresh pack is a cumulative package of fixes, such as Version 6.2.1. Refresh packs install on top of a previous refresh pack, such as applying Version 6.2.2 to Version 6.2.1. Refresh Packs are cumulative, so Version 6.2.2 includes all fixes in Version 6.2.1. A refresh pack also includes the fixes from all of the intermediate fix packs. Check the list of delivered fixes in the refresh pack to determine which interim fixes must be reinstalled. If an interim fix is deleted, but the fix is not in the refresh pack, reinstall the interim fix.

An interim fix is a single published emergency fix that resolves one or more product defects.

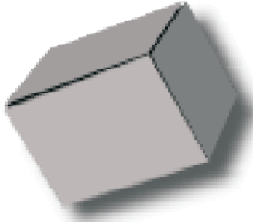
An interim fix can be applied to a release, refresh pack, or fix pack where applicable. Interim fixes are validated by at least one customer prior to publishing.



### Refresh packs

Rp1

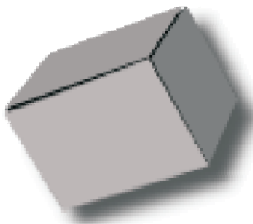
C:\WBI\_downloads\name\_of\_refresh\_pack\_1\_ZIP\_file.pak



### Fix packs

FP3

C:\WBI\_downloads\name\_of\_fix\_pack\_3\_ZIP\_file.pak



### SDK, Java technology edition fix pack

SDK

C:\WBI\_downloads\name\_of\_SDK\_fix\_pack\_ZIP\_file.pak

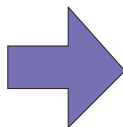


### Interim fixes

iFix "A" and iFix "B"

C:\WBI\_downloads\name\_of\_ifix\_A\_file.pak

C:\WBI\_downloads\name\_of\_ifix\_B\_file.pak



### Build definition wizard




*Build definition wizard: Installation and uninstallation scripts panel:*

The build definition wizard provides a way to include configuration scripts that run after successfully installing the customized installation package (CIP) or before uninstalling the CIP, as part of a complete uninstallation. If you are updating an existing installation by installing a CIP that includes maintenance, these scripts do not run.

You can include scripts as part of your CIP. These scripts can be run as part of an installation or an uninstallation. The supported script types are:



- ANT (.ant)
- JACL (.jacl)
- Jython (.py)
-  Batch shell script (.bat).

**Note:** The platform refers to target platform, not necessarily the platform on which you are running the IBM WebSphere Installation Factory.

-    Shell script (.sh)

**Note:** The platform refers to target platform, not necessarily the platform on which you are running the Installation Factory. Also note that on i5/OS the shell script does not have the .sh extension.

- JAR file (.jar)

### Install tab

Identify scripts to run after successful installation of the CIP on the install tab.

### Uninstall tab

Identify scripts to run before uninstalling the CIP during a full uninstallation using the uninstall tab.

### File name

The name of the script appears in the **File Name** field, after you add your script. You can modify this name using the **Modify** button.

### Directory path

The directory where the script file resides is reported in the Directory Path field, after you add your script. You can modify the path using the **Modify** button.




### Failure action

The action to be taken in event of a script error is reported in the **Failure Action** field. The value is initially set depending on whether you select the **Stop the operation if an error occurs while running this script** check box on the Add script panel. If the check box is selected the value “Fatal error” is reported in the Failure Action field, otherwise the value “Continue” is reported.

The value of the Failure Action field can be modified by pressing the **Modify** button, and by selecting or deselecting the **Stop the operation if an error occurs while running this script** check box.

### Add Scripts

Press the **Add scripts** button to search for and select scripts to include in the CIP. Scripts can be any of the following supported script types:

- ANT scripts (\*.ant)
-  Windows batch files (.bat)
-   Shell scripts (.sh)
- JACL scripts

- Jython scripts
- JAR files

The .jar files should have the main class defined in the META-INF/MANIFEST.MF file inside each .jar file. Scripts are in the cip\_uid\_root/config/install directory when the CIP is installed. These scripts run as configuration actions after all of the configuration actions run that are in the normal installation procedure.

- **Modify** Select an entry and click Modify to change the file name or the directory path.
- **Remove** Removes selected scripts from the CIP.
- **Move Up** Move a script up in the list to make it run earlier than scripts below it.
- **Move Down** Move a script down in the list to make it run after scripts above it.

*Build Definition wizard: Profile customization panel:*

You can use the profile customization panel to run scripts at profile creation or deletion time. You can also deploy one or more enterprise archive file (EAR) file as part of profile augmentation.

**Note:** The WebSphere Process Server Client provides no additional profile templates, therefore this panel is not displayed when you are installing WebSphere Process Server Client. In this case, the wizard moves on immediately to the Additional files panel.

You can use the profile customization panel to create customizations for one of three types of profile:

- Stand-alone server
- Deployment manager
- Custom

When you install the CIP, the Profile Management Tool will prompt you for the choice of profile type. In order to use the customizations that you define here, you must select the same type of profile on the Profile Management Tool as you do on the profile customization panel.

**Note:** Only deployment manager and custom can be selected when installing into a network deployment environment.

**Note:** You can deploy EAR files only with default options using the profile customization panel. If you need to deploy the EAR file with other options, include the EAR file as a user file and use a script to deploy the EAR with the necessary options.

### **Profile types**

Select the type of profile for which you want to create customizations:

- Stand-alone server
- Deployment manager
- Custom

## *Profile\_type* Profiles

In the section entitled *Profile\_type* Profiles (where *Profile\_type* is the type of profile you are working with) you can specify whether the Profile Management Tool displays options to use the customizations to create new profiles or augment existing profiles.

**Note:** Augmenting existing profiles is not supported.

Select **Allow creation of new profiles using the customizations** to allow the Profile Management Tool to list all available profile types to be created using your customizations.

## *Profile\_type* Customizations

In the section entitled *Profile\_type* Customizations (where *Profile\_type* is the type of profile you are working with) you can specify the customizations that you want to make on profile creation or deletion.

### Profile creation

Specifies scripts that run or files to include after successfully installing the CIP.

Perform such actions as running scripts, including and restoring configuration archives, including enterprise archive (EAR) files, and deploying applications within an EAR file.

### Profile deletion

Specifies scripts that run when the profile is unaugmented.

At profile deletion time, the CIP can specify additional scripts to run. Generally, these scripts are needed to reverse the customization actions that occurred at profile creation time. If there are any profile deletion time configuration actions to run, then the *cip\_app\_server\_root/if\_augmentingTemplates/deleteRegistry.xml* file contains the configuration actions. The *manageprofiles* command typically unaugments any Installation Factory customized augments when deleting a profile.

### *cip\_app\_server\_root*

The following list shows the default installation root directories for a customized installation package (CIP) produced by the Installation Factory.

AIX	/usr/IBM/WebSphere/ProcServer/cip/ <i>cip_uid</i>
HP-UX	/opt/IBM/WebSphere/ProcServer/cip/ <i>cip_uid</i>
Linux	/opt/ibm/WebSphere/ProcServer/cip/ <i>cip_uid</i>
Solaris	/opt/IBM/WebSphere/ProcServer/cip/ <i>cip_uid</i>
Windows	C:\Program Files\IBM\WebSphere\ProcServer\cip\ <i>cip_uid</i>
i5/OS	/QIBM/ProdData/WebSphere/ProcServer/V61/ND/cip/ <i>cip_uid</i>

The *cip\_uid* variable is the CIP unique ID generated during creation of the build definition file. You can override the generated value in the Build definition wizard. Use a unique value to allow multiple CIPs to install on the system.

## Action Type

Specifies one of the following types of configuration actions:

- Run a script
- Deploy an enterprise archive. You will only be able to deploy an EAR file to a stand-alone server.

## File Name

Specifies scripts, enterprise archive files, or the configuration archive file.

## Directory Path

Specifies the directory that contains scripts, enterprise archive files, or the configuration archive file.





## Failure Action

Specifies what action to take if a script fails or a file cannot be loaded. The following choices are valid:

- Fatal error
- Continue

## Add scripts

Opens a file browsing dialog window where you can search for and select scripts to include in the CIP. Scripts can be any of the following supported script types:

- ANT scripts (\*.ant)
-  Windows batch files (\*.bat)
-    Shell scripts (\*.sh)

**Note:** On i5/OS the shell script does not have the .sh extension.

- JAR files (.jar)
- JACL scripts (.jacl)
- Jython scripts (.py)

**Note:** The script that you add becomes specifically associated with the type of profile and the action (either creation or deletion) that you have selected on this panel. Hence you should select the type and event before adding the script.

## Add enterprise archives

Opens a browse dialog where you can search for and select an enterprise application archive (EAR) file to include in the CIP for aWebSphere Process Server profile.

An EAR file is an enhanced Java archive (JAR) file, defined by the J2EE standard used to deploy J2EE applications to J2EE application servers. An EAR file contains enterprise beans, a deployment descriptor, and Web archive (WAR) files for individual Web applications.

*Build Definition wizard: Additional files panel:*

Use the additional files panel to add files and directories to the customized installation package (CIP).

Scripts can run at any of four possible times:

- CIP installation,
- CIP uninstallation,
- profile creation,
- profile deletion.

A script can call other scripts that you can include as additional files.

All additional files and directories are in the installed CIP in the *install\_root/cip/cip\_uid/userFiles* directory.

### **Add files**

Browse within a configured system or within a cache of relevant files to select additional files to include in the CIP. For example, you can include one or more script files that are called by a script listed in the Profile Customization panel. When the script runs at profile creation or deletion time, the script can call other scripts that you include as additional files.

Similarly, a script listed in the Installation and uninstallation scripts panel runs at CIP installation or CIP deletion time. Such a script can call other scripts that you include as additional files.

### **Add directories**

Browse to select additional directories to include in the CIP. You can include a directory full of scripts, for example.

### **Modify**

Select an entry and click **Modify** to change the file path and file name or the directory path and directory name.

### **Remove**

Removes selected files and directories from the CIP.

### **File Name**

Identifies the file.

### **Directory Path**

Identifies the directory where the file resides.

*Build Definition wizard: Authorship panel:*

Use the Authorship panel to specify useful information about the customized installation package (CIP).

The person who performs the installation can view an **About this customized installation package** panel. You can provide additional information to the person performing the installation by populating the fields on the authorship panel.

### Organization

Enter identifying information about your organization.

### Description

Enter a description of the CIP.

*Build Definition wizard: Customized installation package preview panel:*

The Build Definition wizard provides a summary panel to let you review all of your selections.

If you run the Build Definition wizard in connected mode, you can also start the processing engine to build the customized installation package (CIP). If you run the Build Definition wizard in disconnected mode, copy the build definition file to the target system before using the ifcli command to start the processing engine on the target system.

The build definition file will be created automatically when you click **Finish**. If the specified file already exists, a dialog will appear asking you to verify that you want to overwrite the file. The directory for the CIP will also be created automatically. If the specified directory already exists, a dialog will appear asking you to verify that you want to overwrite the current contents.

You can make an estimate of the size of the proposed CIP and compare that with the disk space available on the local system by clicking the **Estimate Size and Available Space** button.

### Build definition file:

A build definition file is an XML file that identifies components and characteristics for a customized installation package (CIP).

### Purpose

The build definition file identifies the contents of a CIP. If you use the Installation Factory graphical user interface, you do not need to edit the file. If you edit the build definition file, you should start with a sample build definition file and use a validating XML editor to make your changes. The sample build definition file is found in the *IF\_root*/samples/wbi directory, where *IF\_root* is the name of the directory where you unpacked the Installation Factory.

### Sample

The following sample from the WebSphere Process Server, version 6.1 product shows some elements from one version of the build definition file. See the *IF\_root*/samples/wbi/SampleBuildDefinition.xml file for a current example. Always consult the latest build definition XML schema for definitive answers to XML coding questions.

```

<basebuilddef:buildDefinition
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:basebuilddef="http://www.ibm.com/xmlns/prod/websphere/ib/basebuilddef"
xmlns:builddef="http://www.ibm.com/xmlns/prod/websphere/ib/builddef"
xmlns:common="http://www.ibm.com/xmlns/prod/websphere/ib/common"
xsi:type="builddef:BuildDefinition">
  <installFactoryVersion>
    <version>6</version>
    <release>1</release>
    <refreshPack>0</refreshPack>
    <fixPack>0</fixPack>
    <buildID>o0618.44</buildID>
  </installFactoryVersion>
  <description lang="en_US">Custom Install Package for
  WebSphere Process Server</description>
  <qualifiedVersionedPackageId>
    <offeringId>WBI</offeringId>
    <editionId></editionId>
    <installPackageId></installPackageId>
    <version>
      <version>6</version>
      <release>1</release>
      <refreshPack>0</refreshPack>
      <fixPack>1</fixPack>
    </version>
  </qualifiedVersionedPackageId>
  <modeSelection>Connected</modeSelection>
  <supportMultiPlatformsImage>false</supportMultiPlatformsImage>
  <buildOptions>
    <targetLocation>E:\test</targetLocation>
    <overwriteWithoutWarning>false</overwriteWithoutWarning>
  </buildOptions>
  <authorInfo lang="en_US">
    <organization>IBM</organization>
  </authorInfo>
  <packageIdentifier>
    <fullPackageIdentifier>com.ibm.ws.install.wbiserver_1.0.0.0
    </fullPackageIdentifier>
    <identifier>com.ibm.ws.install.wbiserver</identifier>
    <version>1.0.0.0</version>
  </packageIdentifier>
  <packageMergeInfo>
  <sourceFullInstallPackageLocation>
  E:\WPSImage\v6.1\installimage</sourceFullInstallPackageLocation>
  <sourceMaintenanceInstallPackages installOrder="1" maintenanceType="fixPack">
    <rootFolder>
      <whichFolderToUse>literalRootProvided</whichFolderToUse>
      <rootFolder>E:\WPSImage\v6.1\FixPack\Windows\6.1.0.1</rootFolder>
    </rootFolder>
    <relativeFolder>.</relativeFolder>
    <fileNamePattern isRegex="false">6.1.0-WS-WPS-ESB-WinX32-FP0000001.pak
    </fileNamePattern>
  </sourceMaintenanceInstallPackages>
  <interimFixes maintenanceType="interimFix">
    <rootFolder>
      <whichFolderToUse>literalRootProvided</whichFolderToUse>
      <rootFolder>E:\ICT\maintenance</rootFolder>
    </rootFolder>
    <relativeFolder>.</relativeFolder>
    <fileNamePattern isRegex="false">6.1.0.1-WS-WBI-IFJR78946.pak
    </fileNamePattern>
  </interimFixes>
  </packageMergeInfo>
  <userFiles>
    <files>
      <fileSet>
        <rootFolder>

```

```

        <whichFolderToUse>literalRootProvided</whichFolderToUse>
        <rootFolder>E:\test\  
</rootFolder>
        <relativeFolder includeSubfolders="false">.</relativeFolder>
        <fileNamePattern isRegex="false">myFile</fileNamePattern>
    </fileSet>
</files>
</userFiles>
<common:features>
    <feature>
        <featureId>
            <featureId isRegex="false">wbi.server.samples</featureId>
        </featureId>
        <selectedByDefault>>false</selectedByDefault>
        <userModifiable>>true</userModifiable>
        <hidden>>false</hidden>
    </feature>
</common:features>
</basebuilddef:buildDefinition>

```

Below is a sample CustomInstallInfo.xml for WebSphere Process Server, version 6.1:

```

<custinstinfo:customInstallInfo
xmlns:common="http://www.ibm.com/xmlns/prod/websphere/ib//common"
xmlns:custinstinfo="http://www.ibm.com/xmlns/prod/websphere/ib/custinstinfo">
    <installFactoryVersion>
        <version>6</version>
        <release>1</release>
        <refreshPack>0</refreshPack>
        <fixPack>0</fixPack>
        <buildID>o0618.44</buildID>
    </installFactoryVersion>
    <common:bundle>
        com.ibm.ws.install.factory.wbiserver.cip.v61.comd.provider.wbiservercip
    </common:bundle>
    <description lang="en_US">Custom Install Package for WebSphere Process Server
    </description>
    <qualifiedVersionedPackageId>
        <offeringId>WBI</offeringId>
        <editionId></editionId>
        <installPackageId></installPackageId>
        <version>
            <version>6</version>
            <release>1</release>
            <refreshPack>0</refreshPack>
            <fixPack>1</fixPack>
        </version>
    </qualifiedVersionedPackageId>
    <offeringDisplayName>
        <messageKey>COMD.OfferingName.WPS</messageKey>
    </offeringDisplayName>
    <platformInfo>
        <common:osVendor isRegex="false">MICROSOFT</common:osVendor>
        <common:osName isRegex="false">WINDOWS</common:osName>
        <common:osVersion isRegex="false">NA</common:osVersion>
        <common:osPatchLevel isRegex="false">NA</common:osPatchLevel>
        <common:osArch isRegex="false">x86</common:osArch>
        <displayName>
            <osVendorDisplayName>
                <messageKey></messageKey>
            </osVendorDisplayName>
            <osNameDisplayName>
                <messageKey>COMD.OS.Windows</messageKey>
            </osNameDisplayName>
            <osVersionDisplayName>
                <messageKey></messageKey>
            </osVersionDisplayName>
        </displayName>
    </platformInfo>

```



```

        </osVersionDisplayName>
        <osArchDisplayName>
          <messageKey>COMD.Arch.x32</messageKey>
        </osArchDisplayName>
      </displayName>
    </platformInfo>
    <authorInfo lang="en_US">
      <organization>IBM</organization>
    </authorInfo>
    <packageIdentifier>
      <fullPackageIdentifier>com.ibm.ws.install.wbiserver_1.0.0.0
    </fullPackageIdentifier>
      <identifier>com.ibm.ws.install.wbiserver</identifier>
      <version>1.0.0.0</version>
    </packageIdentifier>
    <buildDate>2006-06-26</buildDate>
    <buildTime>15:59:44</buildTime>
    <rollbackSupported>true</rollbackSupported>
    <fixes>
      <fix>
        <name>6.1.0.1-WS-WBI-IFJR78946.pak</name>
      </fix>
      <folderWithinPackageForInterimFixes>custom.wbi/maintenance
    </folderWithinPackageForInterimFixes>
    </fixes>
    <common:features>
      <feature>
        <featureId>
          <featureId>wbis</featureId>
          <common:displayName>
            <messageKey>COMD.FeatureName.wbis</messageKey>
          </common:displayName>
        </featureId>
        <selectedByDefault>true</selectedByDefault>
        <userModifiable>false</userModifiable>
        <hidden>true</hidden>
      </feature>
      <feature>
        <featureId>
          <featureId>wbisonly</featureId>
          <common:displayName>
            <messageKey>COMD.FeatureName.wbisonly</messageKey>
          </common:displayName>
        </featureId>
        <selectedByDefault>true</selectedByDefault>
        <userModifiable>false</userModifiable>
        <hidden>true</hidden>
      </feature>
      <feature>
        <featureId>
          <featureId>wbis.itlm</featureId>
          <common:displayName>
            <messageKey>COMD.FeatureName.wbis.itlm</messageKey>
          </common:displayName>
        </featureId>
        <selectedByDefault>true</selectedByDefault>
        <userModifiable>false</userModifiable>
        <hidden>true</hidden>
      </feature>
      <feature>
        <featureId>
          <featureId>wbi.common2</featureId>
          <common:displayName>
            <messageKey>COMD.FeatureName.wbi.common2</messageKey>
          </common:displayName>
        </featureId>
        <selectedByDefault>true</selectedByDefault>
        <userModifiable>false</userModifiable>
      </feature>
    </common:features>
  </product>
</product>

```

```

    <hidden>true</hidden>
  </feature>
  <feature>
    <featureId>
      <featureId>wesb</featureId>
      <common:displayName>
        <messageKey>COMD.FeatureName.wesb</messageKey>
      </common:displayName>
    </featureId>
    <selectedByDefault>true</selectedByDefault>
    <userModifiable>false</userModifiable>
    <hidden>true</hidden>
  </feature>
  <feature>
    <featureId>
      <featureId>bpc</featureId>
      <common:displayName>
        <messageKey>COMD.FeatureName.bpc</messageKey>
      </common:displayName>
    </featureId>
    <selectedByDefault>true</selectedByDefault>
    <userModifiable>false</userModifiable>
    <hidden>true</hidden>
  </feature>
  <feature>
    <featureId>
      <featureId>soacore</featureId>
      <common:displayName>
        <messageKey>COMD.FeatureName.soacore</messageKey>
      </common:displayName>
    </featureId>
    <selectedByDefault>true</selectedByDefault>
    <userModifiable>false</userModifiable>
    <hidden>true</hidden>
  </feature>
</common:features>
<omittedFeatures>
  <featureId>
    <featureId>wbis.samples</featureId>
    <common:displayName>
      <messageKey>COMD.FeatureName.wbis.samples</messageKey>
    </common:displayName>
  </featureId>
  <featureId>
    <featureId>bpc.samples</featureId>
    <common:displayName>
      <messageKey>COMD.FeatureName.bpc.samples</messageKey>
    </common:displayName>
  </featureId>
  <featureId>
    <featureId>wesb.samples</featureId>
    <common:displayName>
      <messageKey>COMD.FeatureName.wesb.samples</messageKey>
    </common:displayName>
  </featureId>
  <featureId>
    <featureId>soacore.samples</featureId>
    <common:displayName>
      <messageKey>COMD.FeatureName.soacore.samples</messageKey>
    </common:displayName>
  </featureId>
  <featureId>
    <featureId>wbis.brb</featureId>
    <common:displayName>
      <messageKey>COMD.FeatureName.wbis.brb</messageKey>
    </common:displayName>
  </featureId>

```

```

<featureId>
  <featureId>wbis.brb.samples</featureId>
  <common:displayName>
    <messageKey>CMD.FeatureName.wbis.brb.samples</messageKey>
  </common:displayName>
</featureId>
<featureId>
  <featureId>wbis.cmm</featureId>
  <common:displayName>
    <messageKey>CMD.FeatureName.wbis.cmm</messageKey>
  </common:displayName>
</featureId>
<featureId>
  <featureId>wbis.cmm.samples</featureId>
  <common:displayName>
    <messageKey>CMD.FeatureName.wbis.cmm.samples</messageKey>
  </common:displayName>
</featureId>
<featureId>
  <featureId>wbis.javadocs</featureId>
  <common:displayName>
    <messageKey>CMD.FeatureName.wbis.javadocs</messageKey>
  </common:displayName>
</featureId>
</omittedFeatures>
<slipInstallInfo>
  <supportsSlipInstall>true</supportsSlipInstall>
</slipInstallInfo>
</custinstinfo:customInstallInfo>

```

## Creating customized installation packages

You can create a customized installation package (CIP) either using the build definition wizard directly, or by creating a build definition file with the build definition wizard and using a command-line tool to build the CIP.

### About this task

**i5/OS** On i5/OS, you must create a customized installation package (CIP) using the IBM WebSphere Installation Factory console on a Windows, Linux or UNIX server. You can then export the CIP to your i5/OS server and install the CIP directly or on a Windows server you can use the install GUI to install the CIP on a remote i5/OS server.

Each panel in the Build Definition wizard prompts you for information about the CIP. For example, prompts exist for the locations of maintenance packages, scripts, and other components that you can include. Another prompt requests the location for generating the CIP. All of this information is saved in the new build definition file, or modified and saved in a build definition file that you are changing.

The last wizard panel provides an option for generating a CIP that is based on the content of the build definition file that you just defined. Alternately, you can save only the build definition file, for later use with the ifcli command. In disconnected mode you do not have the option to create the CIP. The ifcli command generates the CIP outside of the Installation Factory console, perhaps even on a different workstation or operating system.

**i5/OS** When you have completed the Build Definition wizard, save the build definition file and (if working in connected mode) create the CIP, for later installation on your i5/OS server.

### Procedure

1. Create a new, or edit an existing, build definition file using the build definition wizard.
2. Choose to create the CIP, or choose to save only the new or modified build definition file.

In general it is advantageous to have the CIP available, so you should select the option to create the CIP. Select **Save build definition file and generate customized installation package** rather than the default **Save build definition file only**.

**Note:** If you are working in disconnected mode you will not have the option to create the CIP.

**i5/OS** Choose to create the CIP.

3. If you choose not to create the CIP, transfer the build definition file to the target server and use the ifcli command on the target server to create a CIP from your build definition file.
4. **i5/OS** Transfer the CIP to the target server and install it directly.

### Creating a customized installation package to use on the processing engine workstation

The Installation Factory allows you to create customized installation packages for use on the local workstation or for other servers. The process for creating a CIP on the workstation which hosts the build definition wizard is described.

#### Before you begin

You must be working on a workstation which has the IBM WebSphere Installation Factory plug-in installed.



#### About this task

Use the following procedure to create the build definition file and the customized installation package on one workstation.

### Procedure

1. Mount or access the product installation image for your operating system. Ensure that the product media (DVD or download image) with the WebSphere Process Server installation image is accessible from the workstation on which you are working. You need the installation image to create the customized installation package.
2. Download maintenance packages. Locate download packages for WebSphere Process Server on the following Web site: Recommended updates for WebSphere Process Server.
3. Start the Installation Factory console with the ifgui script.
  - **AIX** **HP-UX** **Linux** **Solaris** Use the `IF_root/bin/ifgui.sh` script.
  - **Windows** Use the `IF_root\bin\ifgui.bat` script.

4. Create a new build definition or edit an existing build definition.

Option	Description
Create a new build definition file 	Click the button for a New build definition file. From here the Installation Factory launches two wizards in sequence. The two wizards are the Product Selection wizard and the Build Definition wizard.
Open an existing build definition file 	Click the button to Open an existing build definition file. Opening an existing build definition starts the Build Definition wizard only. If you must change the product, start a new build definition.

5. Select **Connected mode** so that you can create a customized installation package later in addition to creating the build definition file. Browse to select the installation image directory and the maintenance package files.
6. Provide all required parameters to identify the product, installation image, maintenance packages, the enterprise archive file, other files and directories, scripts, the output location for the build definition file, and the output location for the customized installation package (CIP).
7. Select the Save build definition file and generate customized installation package option. Select **Save build definition file and generate customized installation package** rather than the default **Save build definition file only**.
8. Click **Finish** to generate the CIP.  
 The amount of time required to generate the CIP depends on the number of maintenance packages and the number of features that you include in the package.  
 The Installation Factory logs a completion message in the /logs/log.txt file when the processing engine is finished.
9. You can install the customized installation package using the InstallShield MultiPlatform (ISMP) Installation wizard that is included in the CIP. Panels in the CIP Installation wizard vary according to the product that you are installing. The Installation wizard for WebSphere Process Server is the install command in the *CIP\_directory*/WBI directory.
10. Create a CIP-based custom stand-alone server profile in one of the following ways.

Option	Description
<b>Using the Profile Management Tool</b>	After the CIP installation, run the Profile Management Tool. <b>Note:</b> You can only augment the profile if the CIP contains no profile customizations, or if the CIP does contain profile customizations but you elect not to use them.

Option	Description
Using the <code>manageprofiles</code> command	<p>After the CIP installation run the <code>manageprofiles</code> command to create and optionally augment a server profile. You can do this by running the command once (create and augment) or twice (create then augment).</p> <p><b>Note:</b> You can only augment the profile if the CIP contains no profile customizations, or if the CIP does contain profile customizations but you elect not to use them.</p>
Using the CIP installation wizard	<p>If you are using a CIP to create a new installation, not an upgrade or patch, you can create the server profile by doing the following:</p> <ol style="list-style-type: none"> <li>1. On the Feature selection panel, select the Install profile customizations check box.</li> <li>2. On the Environment selection panel, select a profile that has profile customization defined. If the profile that you select has profile customization defined, then the installation wizard will effectively run the <code>manageprofiles</code> command once to do a create and augment. If there is no profile customization defined, you get a regular profile.</li> </ol>

## What to do next

In some cases, you might be unable to use the Installation Factory console on the target operating system platform. For instance, on certain platforms the `ifcli` command is supported but the `ifgui` command is not. You have two options in such a case:

- Use the console in disconnected mode on a supported workstation to create a build definition file for the target operating system on another workstation. Copy the file to the target operating system and use the command-line interface to start the processing engine and create the customized installation package. See the related tasks for a fuller description of this process.
- Create the build definition XML document using a validating XML editor. Copy one of the sample build definition documents from the `IF_root/samples/wbi` directory to get started. After making your changes, validate the build definition document with its XML schema (the `Commom.xsd`, `BaseBuildDefinition.xsd`, and `BuildDefinition.xsd` files) using a validating XML parser or editor. Then use the command-line interface to start the processing engine and create the customized installation package.

## Creating build definition files for use on a remote system

In some instances it is necessary or convenient to create a build definition file on one workstation for use on another workstation. The build definition file is the precursor to the customized installation package (CIP). To install a CIP on an i5/OS server, create the build definition file and CIP on a Windows, Linux or

UNIX server in connected mode. The CIP can then be exported either to the i5/OS server or to a Windows server and installed on the i5/OS server from there.

## Before you begin

You must have downloaded and unpacked the IBM WebSphere Installation Factory for WebSphere Process Server on the server workstation that will be used to create the customized installation package.

## About this task

Use the following procedure to create the build definition file and the associated CIP and complete the installation on a different server. For simplicity we will refer to the workstation on which you intend to install the customized installation package as the “target system”, and the workstation on which you will create the build definition file as the “processing engine”.

## Procedure

1. Mount or access the product installation image for your target system’s operating system.

If you intend to work in connected mode, ensure that the product media (DVD or download image) with the WebSphere Process Server installation image is accessible from the processing engine.

You need to know the location of the image so that you can create a build definition file that points to the image.

Write down the mount point or the storage location so that you can provide the storage location to the Build Definition wizard that is running on the processing engine.

2. Download to your processing engine the maintenance packages for the target system’s operating system.

Locate download packages for WebSphere Process Server on the following Web site: Recommended updates for WebSphere Process Server.


Refresh pack and fix pack zipped files are bundled with the Update Installer for WebSphere Software. Extract the file to expose the maintenance package (\*.pak) file in the updateinstaller/maintenance directory.


Write down the storage location of the downloaded maintenance package so that you can provide the location to the Build Definition wizard that is running on the processing engine.


3. Start the Installation Factory console on the processing engine with the ifgui script.

- **AIX** **HP-UX** **Linux** **Solaris** Use the `IF_root/bin/ifgui.sh` script.
- **Windows** Use the `IF_root\bin\ifgui.bat` script.






4. Create a new build definition or edit an existing build definition.

Option	Description
Create a new build definition file 	Click the button for a New build definition file. From here the Installation Factory launches two wizards in sequence. The two wizards are the Product Selection wizard and the Build Definition wizard.

Option	Description
Open an existing build definition file 	Click the button to Open an existing build definition file. Opening an existing build definition starts the Build Definition wizard only. If you must change the product, start a new build definition.

5. Select **Connected mode** and then select the operating system of your target system from the list.
6. Provide all required parameters to identify the product, installation image, maintenance packages, the enterprise archive file, other files and directories, scripts, the output location for the build definition file, and the output location for the customized installation package (CIP).
7. Select the option to create both the CIP and the build definition file. Select **Save build definition file and generate customized installation package** rather than the default **Save build definition file only**.
8. Click **Finish** to save the build definition and create the CIP on the processing engine.
9. Copy the CIP to the target system.
10.  Alternatively you can install the CIP onto i5/OS directly from a Windows server. See the related task: Installing a CIP on System i using a Windows workstation graphical interface.
11. On the target system install the customized installation package using the InstallShield MultiPlatforms (ISMP) installation wizard that is included in the CIP.

Panels in the CIP installation wizard vary according to the product that you are installing. The installation wizard for WebSphere Process Server is in the WBI directory and is named:

-     install
-  install.exe

## Performing a slip installation

You can perform a slip installation of a WebSphere Process Server customized installation package (CIP) and a WebSphere Application Server Network Deployment CIP. Both CIPs must be located at the same directory level to perform this type of an installation.

### Before you begin

The WebSphere Application Server Network Deployment CIP must be at the correct fix pack level.

### About this task

Use the following procedure to perform a slip installation of a WebSphere Process Server customized installation package (CIP) and a WebSphere Application Server customized installation package (CIP).

### Procedure



1. After creating both the WebSphere Application Server CIP and the WebSphere Process Server CIP, copy them into the same directory location. The final directory structure should appear as follows:

*Image location/custom/WAS/JDK/custom.wbi/WBI*

2. From the WBI folder, launch the installer program using the following command:
  - `i5/OS` (You use a Windows system client machine to connect to the i5/OS system.) `install.exe`
  - `Linux` `UNIX` `./install`
  - `Windows` `install.exe`

## Results

The installer automatically installs the WebSphere Application Server before installing the WebSphere Process Server.

## The ifcli command

The ifcli command-line tool invokes the Installation Factory processing engine for a specified build definition file. The processing engine then creates a customized installation package (CIP).

## Purpose

The ifcli command-line tool takes a build definition XML file as input and invokes the Installation Factory processing engine. The processing engine interprets the XML file, locates the product source files and maintenance packages, and then creates a customized installation package (CIP).

## Location

The command file is located in the `/bin` directory of the directory where you unpack the Installation Factory. The command file is a script named:

`HP-UX` `Linux` `AIX` `Solaris` `ifcli.sh`

`Windows` `ifcli.bat`

## Logging

The ifcli command creates a build log file that shows whether the customized installation image is produced successfully. When the CIP is not successfully built, examine the trace file to determine what is wrong.

The following files record CIP creation data:

- `trace.xml` is a detailed trace log in XML format
- `log.txt` is the log file.

The tracing and logging output and level are configurable as described in the `logLevel` and `traceLevel` parameters.

## Syntax for ifcli.sh

AIX

HP-UX

Linux

Solaris

To display help:

```
./ifcli.sh -help
```

To create a customized installation package:

```
./ifcli.sh -buildDef build_definition_file  
-silent  
-logLevel log_level  
-logFile log_file_path_name  
-traceLevel trace_level  
-traceFile trace_file_path_name
```

## Syntax for ifcli.bat

Windows

To display help:

```
.\ifcli.bat -help  
.\ifcli.bat -?
```

To create a customized installation package:

```
.\ifcli.bat -buildDef build_definition_file  
-silent  
-logLevel log_level  
-logFile log_file_path_name  
-traceLevel trace_level  
-traceFile trace_file_path_name
```

## Parameters

Supported arguments include

Windows **-?**

Shows usage information.

### **-help**

Shows usage information.

### **-buildDef** *build\_definition\_file*

Identifies the build definition file created by the Build Definition wizard.

### **-logFile** *log\_file\_path\_name*

Identifies the log file. The default value is *current\_working\_directory/logs/log.txt*.

### **-logLevel** *log\_level*

Sets the level for logging of messages. Valid values for *log\_level* are:

- ALL
- CONFIG
- INFO
- WARNING
- SEVERE
- OFF (Turns off logging)

The default value is INFO.

**-silent**

Specifies that the processing engine runs in silent mode, without displaying results to the console.

**-traceFile** *trace\_file*

Identifies the trace file. The default value is *current\_working\_directory/logs/trace.xml*.

**-traceLevel** *trace\_level*

Sets the level of tracing. Valid values for *trace\_level* are:

- ALL
- FINE
- FINER
- FINEST
- OFF (Turns off tracing).

The default value is OFF.

## Usage

Use the ifcli command to create a customized installation package for a WebSphere Process Server product from a build definition file.

### Validating the CIP dependencies

The WebSphere Process Server customized installation package (CIP) requires that an integrated installation package (IIP) be available at the same directory level. The IIP must contain both a WebSphere Application Server Network Deployment CIP and a Web Services Feature Pack CIP.

The following requirements must be met for a successful installation:

- Both the WebSphere Application Server Network Deployment CIP and the Web Services Feature Pack CIP must be included in the IIP.
- The WebSphere Application Server Network Deployment CIP and the Web Services Feature Pack CIP must be at the correct fix pack level.
- The IIP folder must be located at the same directory level as the WebSphere Process Server CIP.
- The JDK folder from the WebSphere Application Server Network Deployment CIP must be copied and pasted to the same directory level as the WebSphere Process Server CIP.

The final directory structure should appear as follows:

*Image location/custom.wbi/WBI/JDK/iip*

## Installing customized installation packages: task roadmap

There are several methods that you can use to install a customized installation package.

The customized installation package (CIP) is treated in much the same way as any installation image. This means that you can follow the installation routes of a regular installation when installing a CIP.

You can install the CIP in a variety of ways:

- Interactively using the WebSphere Process Server installer to create a new installation.
- Silently using a response file.

- Interactively using the WebSphere Process Server installer to add maintenance to an existing installation.
- In a trade-up from a lower level product to a higher level.

### Installing a customized installation package interactively

Install a customized installation package (CIP) using the Installation wizard on distributed operating system platforms. You install from a CIP image created with the IBM WebSphere Installation Factory.

#### Before you begin

You can install a customized installation package (CIP) that includes a WebSphere Process Server product and one or more maintenance packages and other customizations. You must create a CIP with the IBM Installation Factory before you can install the CIP. See **Creating customized installation packages** for more information about generating customized installation packages (CIPs).

- The steps required to install a CIP interactively are the same as for a conventional installation. See “Installing WebSphere Process Server interactively” on page 79 for the required steps.
- On the Welcome panel an additional **About this customized installation package** button is displayed when you are installing a CIP. Click the button to see the detailed information about the CIP, including:
  - the version of the Installation Factory used to create the CIP,
  - the package and version of the product that the CIP will install,
  - the build time and date of the CIP,
  - a list of features and interim fixes,
  - the operating system on which the CIP can be installed,
  - whether slip installation is supported,
  - any organization or description that the creator added on the Authorship panel.

#### Results

You have started the installation wizard, accepted the licensing agreement, checked prerequisites, and identified any existing installations of WebSphere products that could impact your installation. If no existing installations of WebSphere products impact your installation, you have also chosen the type of installation you want to perform (Typical, Deployment environment, or Client).

#### What to do next

Continue your installation by following the instructions from the appropriate link depending on the choices you have made.

### Installing a customized installation package on System i using a Windows workstation graphical interface

i5/OS

On System i, you can install your WebSphere Process Server CIP from a Windows workstation graphical user interface (GUI).

## Before you begin

This topic assumes that you have a CIP image created using the Installation Factory, that the target operating system of the CIP is i5/OS and that you want to install the product from the CIP. See “Creating customized installation packages” on page 597 for more information on generating the CIP.

A WebSphere Process Server CIP being installed from a Windows workstation to an i5/OS system cannot be used to upgrade, add features to, or apply maintenance to an existing WebSphere Process Server install. The WebSphere Process Server CIP must be run using a local silent installation from the i5/OS system in these cases.

## About this task

When you run the GUI installation tool, you specify installation options interactively during the installation process.

Use this procedure to install WebSphere Process Server on i5/OS from a CIP with the GUI installation program:

### Procedure

1. If TCP/IP is not started or if you don't know if TCP/IP is started, enter the Start TCP/IP (STRTCP) command on the Control Language (CL) command line.
2. Verify that the host server jobs are started on your System i server. The host server jobs allow the installation code to run on System i.  
Enter this command on a CL command line:  
`STRHOSTSVR SERVER(*ALL)`
3. Verify that your user profile has the \*ALLOBJ and \*SECADM special authorities.
4. Place the CIP for i5/OS disc in the disc drive of your Windows workstation. The autorun feature brings up the launchpad.  
Do not use the IBM WebSphere Process Server Windows disc or any other operating system platform disc from the product package.
5. Enter the name of the i5/OS server where you are installing WebSphere Process Server and your corresponding i5/OS login information, then click **OK**.  
You also must enter a valid user ID and password for the server. Your profile must have \*ALLOBJ and \*SECADM special authorities for this step.
6. On the Welcome panel, click **Next**.
7. On the License agreement panel, review the IBM and non-IBM licensing terms and, if you accept the terms, select **I accept both the IBM and the non-IBM terms**, then click **Next**. If you do not accept the terms of the license agreement, you cannot continue with the installation.
8. The system prerequisites check verifies that your server meets the minimum requirements to install the product. If the prerequisites are met, click **Next**. If the prerequisites are not met, you can continue the installation. However, it is recommended that you exit the installation wizard and make the required changes.
9. On the Installation type panel, select the type of installation you want to perform and click **Next**.

The installation wizard provides a choice of installation paths (not all might appear based on selections you made on previous panels). The next step depends on the type of installation you want and (in the case of the WebSphere

Process Server Client) on whether you are installing over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment.

Installation type	Next step
<p><b>Typical Installation</b> (the default): installs WebSphere Process Server and WebSphere Application Server Network Deployment using default installation selections and configurations. You can also create a stand-alone server, deployment manager, or custom profile.</p> <p><b>Important:</b> If you create a typical installation and select a stand-alone server and you turn on security, then a Business Process Choreographer sample configuration is created. If security is turned off then no Business Process Choreographer sample configuration is created. If you decide at a later date to federate this server, you must remove any Business Process Choreographer sample configuration that was created.</p>	<p>The Features selection panel is displayed. Go to the topic “Installing WebSphere Process Server and creating a profile interactively” on page 93.</p>
<p><b>Deployment Environment Installation:</b> installs WebSphere Process Server and WebSphere Application Server Network Deployment, and guides you through setting up a deployment environment. You can choose to create a deployment manager based on a deployment environment pattern or continue to define a deployment environment that you have already created.</p>	<p>The Features selection panel is displayed. Go to the topic “Installing WebSphere Process Server with a deployment environment interactively” on page 100.</p>
<p><b>Client Installation:</b> installs the WebSphere Process Server Client and can install WebSphere Application Server Network Deployment. It allows you to run client applications that interact with WebSphere Process Server within the same cell.</p>	<p>The panel that is displayed depends on whether or not you are installing over an existing installation of WebSphere Application Server (either base or Network Deployment):</p> <ul style="list-style-type: none"> <li>• If you are <i>not</i> installing over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment, the Installation location panel is displayed. Go to the topic “Installing the WebSphere Process Server Client interactively” on page 112.</li> <li>• If you <i>are</i> installing over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment, the Installation summary panel is displayed. Go to the topic “Installing the WebSphere Process Server Client interactively” on page 112.</li> </ul>

## Results

This procedure results in installing the product from a Windows workstation GUI.

## What to do next

Go to “Installing customized installation packages: task roadmap” on page 605 to continue the installation.

## Installing a customized installation package silently

Installing a customized installation package (CIP) using silent installation refers to using a response file to supply installation options without user interaction. To configure the installation, change the options in the response file before you issue the installation command. Silent installation mode does not accept interactive installation options. To specify non-default options during a silent installation, you must edit the response file in advance. To install silently, you must accept the license agreement in the agreement option.

## Before you begin

- Make sure that you have reviewed the list of prerequisites for installing the product at “Prerequisites for installing WebSphere Process Server” on page 31.
- Make sure that you are logged in as an administrator when security and role-based authorization are enabled. Security is enabled by default during silent installation. To disable security change the **PROF\_enableAdminSecurity** value in the response file to “false”.

**Important:** The installation path cannot contain parentheses. You cannot install over an existing WebSphere Application Server installation that contains parentheses in the installation path.

**Note:** If you select to create a stand-alone server profile during a Typical installation and enable security, the installer creates a sample Business Process Choreographer configuration for the profile. If you do not enable security, the sample configuration is not created. If you plan to federate the stand-alone server to a deployment manager, you will first have to delete this sample configuration.

## About this task

You can install a customized installation package (CIP) that includes WebSphere Process Server and one or more maintenance packages and other customizations. You must create a CIP using the Installation Factory before you can install it. See “Creating customized installation packages” on page 597 for more information about creating a customized installation package (CIP).

A silent installation uses the installation wizard to install the product in silent mode, without the graphical user interface. Instead of displaying a wizard interface, the silent installation causes the installation program to read all of your responses from a file that you provide.

Use this procedure to perform a silent installation of the product.

## Procedure

1. Log on to the operating system.

i5/OS

**On i5/OS platforms:** Ensure that the user profile has \*ALLOBJ and \*SECADM special authorities.

2. Linux UNIX **On Linux and UNIX platforms:** After inserting the product media into the drive, some Linux and UNIX operating systems require you to mount the drive.
3. Copy the sample response file `responsefile.wbis.txt` from the WBI directory of the CIP to a place that you can easily identify on your system and save it with a new name, such as `myoptionsfile.txt`.
4. Edit the file using a flat file editor of your choice, on the target operating system, to customize it with the parameters for your system. Read the directions contained within the response file to choose appropriate values for all of the options you must set for your specific silent installation.

You can modify all of the parameters in the response file, but pay attention to the following parameters:

- **Required:** Make sure that you change the **-OPT silentInstallLicenseAcceptance** parameter to a value of "true": `-OPT silentInstallLicenseAcceptance="true"`. Leaving it with a value of "false" causes the installation to fail.
- Change the value of the **-OPT wpsInstallType** parameter to designate one of the following types of installation:
  - "typical": a full installation of WebSphere Process Server that allows you to optionally create a stand-alone server, deployment manager, or custom profile during installation. This is the default.
  - "client": a partial installation of WebSphere Process Server that allows you to run client applications that interact with a process server within the same cell.  
 To create an operational WebSphere Process Server client environment, don't select any optional features and don't create a profile as part of the installation. Doing so will cause the installation to fail. For an example of how to create a client installation, see the example response file.
  - "ndGuided": a full installation of WebSphere Process Server that guides you through setting up a deployment environment, creating a deployment manager based on a deployment environment pattern or defining a deployment environment that you have previously created.
- If you perform a "typical" installation, you must create a profile to have an operational WebSphere Process Server environment. You can create a profile silently by specifying certain values in your response file that will create a profile during the installation process. Change the value of the parameter **-OPT profileType** to one of the following values:
  - "deploymentManager": creates a profile with a deployment manager. For example:  
`-OPT profileType="deploymentManager"`
  - "standAlone": creates a profile with a stand-alone server. For example:  
`-OPT profileType="standAlone"`
  - "custom": creates a profile with an empty node, which you can configure after installation.  
`-OPT profileType="custom"`
  - "none": does not create a profile during installation. Use this value if you do not want to create a profile during the silent installation process. After installation, you must run the Profile Management Tool to create a profile.  
`-OPT profileType="none"`
- If you want to create a profile for an existing installation, comment out the `-OPT installType="installNew"` section of your response file, remove the



comments from the `-OPT createProfile` section of the response file, and change the value of the parameter `-OPT createProfile` to `"true"`. For example:

```
#-OPT installType="installNew"  
-OPT createProfile="true"
```

For more information about creating profiles silently, see “Creating profiles using the `manageprofiles` command” on page 203.

- If you designated a deployment environment installation (`-OPT wpsInstallType="ndGuided"`), you must designate additional parameters to define that installation. Change the value of the `-OPT ndGuidedInstallType` parameter to one of the following values:

- `"deploymentManager"`: guides you through the creation of a deployment manager in order to create a new deployment environment based on the pattern that you choose. For example:

```
-OPT ndGuidedInstallType="deploymentManager"
```

If you use the `"deploymentManager"` value, you must change several other values in the response file to further define the creation of the deployment manager server during the silent installation.

- `"additionalRoles"`: guides you through the creation of a custom profile on a deployment environment that you have already defined. You must be able to connect to the running deployment manager on that deployment environment. For example:

```
-OPT ndGuidedInstallType="additionalRoles"
```

Also, change the value of the parameter `-OPT profileType` to `"none"`.

For more information about deployment environments, see Introduction: Planning for WebSphere Process Server and Implementing a deployment environment.

- To silently install a CIP on an existing installation (rather than to create a new installation), set the `-OPT installType` parameter to `"installAndPatch"` or `"addFeature"`, and the `-OPT if_cip_modifyexistinginstall` to either `"maintenanceOnly"` (which installs only product binaries and does not perform any profile customizations) or `"customizationAndMaintenance"` (which performs profile customizations in addition to installing the product binaries). For more on profile customizations, see “Build Definition wizard: Profile customization panel” on page 588.

**Note:** You can always review the default parameters and values in the example response file `responsefile.wbis.txt` located in the WBI directory on the WebSphere Process Server media.

5. Save your changes in your copy of the response file.
6. Run the `install` command from either the *WebSphere Process Server* product media or from the temporary location where you have saved the contents of the electronic image from Passport Advantage to install WebSphere Process Server using your custom response file. The command examples assume that you have copied your response file into a temporary directory and renamed it as `myoptions.txt` before customizing the file.

- **Linux** **UNIX** **On Linux and UNIX platforms:** `install -options /tmp/WBI/myoptions.txt -silent`

- **Windows** **On Windows platforms:** `install.exe -options "C:\temp\WBI\myoptions.txt" -silent`

- **i5/OS On a System i server (from a Qshell):** `INSTALL -options /tmp/WBI/myoptions.txt -silent`

## Results

The installation wizard and (if you elect to create a profile during installation) the Profile Management Tool record installation events in various log files. See “Installation and profile creation log files” on page 669 for descriptions of these log files.

## Running a customized installation package interactively to add maintenance to an existing WebSphere Process Server installation: basic steps

There are several options for installing a customized installation package (CIP) that includes WebSphere Process Server and one or more maintenance packages. You can use the CIP Installation wizard to install features that are included in the CIP. The Installation wizard also installs maintenance packages that are included in the CIP. The steps that are common to each of the possible use-case scenarios are presented.

### Before you begin

You must log onto the system with appropriate permissions to install the custom install package. There must be at least one installation of WebSphere Process Server on the target system.

### About this task

When you have created your CIP it will be stored as a compressed file in the directory (*CIP\_directory*) that you indicated on the Build Information panel of the Build Definition wizard. The *CIP\_directory* has two subdirectories: WBI and custom.wbi.

Before you can install your WebSphere Process Server CIP, you must create a WebSphere Application Server Network Deployment CIP. The *WAS\_ND\_CIP\_directory* contains the following directories:

- WAS
- custom
- JDK

The following steps are common to each of the subsequent tasks, and must be undertaken before moving on to the specific installation scenario you have in mind.

### Procedure

1. Copy the WBI and custom.wbi to the WebSphere Application Server Network Deployment CIP directory *WAS\_ND\_CIP\_directory*. When you have completed this step, *WAS\_ND\_CIP\_directory* contains the following subdirectories:
  - custom.wbi
  - WBI
  - WAS
  - custom
  - JDK

If you have the WebSphere Process Server product media, and the version of the WebSphere Application Server Network Deployment CIP reported in the message about required maintenance level is lower than the version on the product media you can simply copy the WBI and custom.wbi directories to the WebSphere Application Server Network Deployment CIP directory of the install image. This overwrites the existing WBI directory.

2. Commence the installation of your WebSphere Process Server custom install package.

Start the installation directly with the install command.

a. Change to the *WAS\_ND\_CIP\_directory*/WBI directory

b. Issue the install command:

- `AIX HP-UX Linux Solaris ./install`
- `Windows install.exe`

After launching the CIP installation wizard from the command line, the wizard initializes and displays the Welcome panel.

Click **Next** to move on to the License agreement panel.

3. On the License agreement panel, read the license agreement and accept its terms.

Click **I accept both the IBM and the non-IBM terms** to agree to the license agreement and click **Next** to continue.

After you accept the licensing terms, the installation wizard checks for a supported operating system and prerequisite patches. If you encounter a problem such as not having the right prerequisite updates on your system, cancel the installation, make the required changes, and restart the installation.

Although the installation wizard checks for prerequisite operating system patches with the `prereqChecker` application, review the prerequisites on the supported hardware and software Web site if you have not already done so.

The Web site lists all supported operating systems and the operating system fixes and patches that you must install to have a compliant operating system.

Refer to the documentation for non-IBM prerequisite and corequisite products to learn how to migrate to their supported versions.

4. Complete the prerequisite check and move on to the Detect existing copy panel. Click **Next** when the system prerequisite check is complete.
5. Check for previous versions of the product.

The installation wizard checks for a previous installation at the same major product level.

If the wizard detects a previous installation, it displays the Existing installation panel. For this task it is assumed that a previous installation exists and that you are adding features with an incremental installation.

The CIP wizard detects all WebSphere Process Server installations. You can use a CIP to do cross product installation. However, you cannot use a CIP to add features to a different product installation. For example, a WebSphere Process Server CIP cannot be used to add features to an installation of WebSphere Enterprise Service Bus.

6. Choose to apply maintenance and add features to an existing copy of WebSphere Process Server.

Click **Apply maintenance and add features to an existing copy of WebSphere Process Server**, then select the existing installation from the list. System prerequisite checking is performed on the selected installation.

## What to do next

Completing the steps described in this task is insufficient to install the CIP. To complete your installation, choose the subtopic that matches your installation plans, and follow the steps described in that topic.

### Slip installation:

A slip installation involves moving an existing WebSphere Process Server installation to a higher maintenance level of WebSphere Process Server with or without additional features.

If you have an existing installation of WebSphere Process Server at a certain maintenance level, you can use a customized installation package (CIP), which contains an installation of WebSphere Process Server at a higher maintenance level, to move your installation to this higher maintenance level. Such an installation is referred to as a slip installation.

A slip installation can optionally include fix packs and additional features.

**i5/OS** Slip installation is not supported on a remote i5/OS system. In this case a local silent installation must be performed.

### Completing the installation of a CIP to augment an existing WebSphere Process Server installation:

When you have completed the core steps for augmentation of an existing installation, complete the process of augmentation by performing this task.

### Before you begin

This task is a continuation of the information provided in the topic “Running a CIP interactively to augment an existing WebSphere Process Server installation”. Do not commence this task until you have completed the prerequisite task.

### About this task

Perform the following steps immediately after completing the task: “Running a CIP interactively to augment an existing WebSphere Process Server installation”. The Features panel of the CIP installation wizard is on-screen.

### Procedure

1. Do not choose any additional features on the Features panel. Installation routes which include additional features are discussed elsewhere. Simply click **Next**.
2. Review the installation information on the Installation preview summary panel. If the summary information does not match with your needs, stop the installation process and start again.
3. Start the installation. If the information on the Installation preview summary panel is correct, start the installation by clicking **Next**.
4. Track the progress of the installation on the progress indicator.
5. When the installation finishes the Installation complete panel is displayed. Inspect the panel to ensure that the installation completed successfully.

## Results

A backup for the CIP will be created in the *install\_root/properties/versions/nif/* backup directory. You can use the update installer to slip-uninstall the CIP, to restore the system to its pre-slip-install state (for example, to a previous version of WebSphere Process Server).

### **Slip WebSphere Process Server installation - with no additional features:**

When you have completed the core steps for augmentation of an existing installation, complete the process of augmentation by completing this task.

### **Before you begin**

This task is a continuation of the information provided in the topic “Running a CIP interactively to augment an existing WebSphere Process Server installation”. Do not commence this task until you have completed the prerequisite task.

### **About this task**

Perform the following steps immediately after completing the task: “Running a CIP interactively to augment an existing WebSphere Process Server installation”. In the case where the CIP does not contain any additional features (compared to the features included in the existing installation), the Features panel of the CIP installation wizard is on-screen with all available features selected and disabled. **Install Maintenance Updates contained in this installation** is selected and disabled.

### **Procedure**

1. Click **Next** on the Features panel.
2. Review the installation information on the Installation preview summary panel. If the summary information does not match with your needs, stop the installation process and start again.
3. Start the installation. If the information on the Installation preview summary panel is correct, start the installation by clicking **Next**.
4. Track the progress of the installation on the progress indicator.
5. When the installation finishes the Installation complete panel is displayed. Inspect the panel to ensure that the installation completed successfully.

## Results

A backup for the CIP will be created in the *install\_root/properties/version/nif/* backup directory. You can use the update installer to slip-uninstall the CIP to restore the system to its pre-slip-install state (for example, to a previous version of WebSphere Process Server).

### **Slip WebSphere Process Server installation - with one or more additional features:**

When you have completed the core steps for augmentation of an existing installation, complete the process of augmentation by completing this task.

## Before you begin

This task is a continuation of the information provided in the topic “Running a CIP interactively to augment an existing WebSphere Process Server installation”. Do not commence this task until you have completed the prerequisite task.

## About this task

Perform the following steps immediately after completing the task: “Running a CIP interactively to augment an existing WebSphere Process Server installation”. The Features panel of the CIP installation wizard is on-screen.

## Procedure

1. Choose the additional features to install on the Features panel. Select the additional features that you want to be installed as part of the installation and click **Next**.
2. Review the installation information on the Installation preview summary panel. The features section of the summary will list the additional features and interim fixes that you are about to install. Features that are already installed are not listed. If the summary information does not match with your needs, stop the installation process and start again.
3. Start the installation. If the information on the Installation preview summary panel is correct, start the installation by clicking **Next**.
4. Track the process of the installation on the progress indicator.
5. When the installation finishes the Installation complete panel is displayed. Inspect the panel to ensure that the installation completed successfully.

## Results

A backup for the CIP will be created in the *installation\_root/properties/version/nif/backup* directory. You can use the update installer to slip-uninstall the CIP, to restore the system to its pre-slip-install state (e.g. to a previous version of WebSphere Process Server).

## Slip WebSphere Process Server installation - existing installation has interim fixes:

When you have completed the core steps for augmentation of an existing installation, complete the process of augmentation by completing this task.

## Before you begin

This task is a continuation of the information provided in the topic “Running a CIP interactively to augment an existing WebSphere Process Server installation”. Do not commence this task until you have completed the prerequisite task.

## About this task

Perform the following steps immediately after completing the task: “Running a CIP interactively to augment an existing WebSphere Process Server installation”. The Features panel of the CIP installation wizard is skipped when no additional features are included in the CIP. The Installation preview summary panel will be on screen.

## Procedure

1. Review the installation information on the Installation preview summary panel. A message at the top of the panel warns you that the interim fixes (listed) will be uninstalled when you install the CIP. Any of these interim fixes that are not included in the CIP, will need to be re-installed separately after the installation of the CIP is complete.
2. Start the installation. If the information on the Installation preview summary panel is correct, start the installation by clicking **Next**.
3. Track the process of the installation on the progress indicator. The uninstallation of the interim fixes is also included in the progress indicator.
4. When the installation finishes the Installation complete panel is displayed. Inspect the panel to ensure that the installation completed successfully.

## Results

A backup for the CIP will be created in the *installation\_root/properties/version/nif/update/* directory. You can use the update installer to slip-uninstall the CIP, to restore the system to its pre-slip-install state (e.g. to a previous version of WebSphere Process Server).

## Slip WebSphere Process Server installation - CIP is missing some features and cannot be updated:

When you have completed the core steps for augmentation of an existing installation, complete the process of augmentation by completing this task.

## Before you begin

This task is a continuation of the information provided in the topic “Running a CIP interactively to augment an existing WebSphere Process Server installation”. Do not commence this task until you have completed the prerequisite task.

## About this task

Perform the following steps immediately after completing the task: “Running a CIP interactively to augment an existing WebSphere Process Server installation”. If there are additional features included in the CIP, the Features panel of the CIP installation wizard will be on-screen. If there are no additional features, the first step is omitted.

## Procedure

1. If there are additional features to install, those features are displayed in the Features panel. If there are no additional features, the Features panel is not displayed. Each feature that is part of the CIP and also part of the original WebSphere Process Server installation is displayed with a check box that is disabled indicating that the feature will be installed. Any CIP feature that was not part of the original WebSphere Process Server installation, is displayed with an active check box. Select the feature if you want it to be installed, unselect the feature if you want to omit the feature from the installation. When finished, click **Next**.
2. Review the installation information on the Installation preview summary panel. A message at the top of the panel warns you that the interim fixes (listed) will be uninstalled when you install the CIP. Any of these interim fixes that are not included in the CIP, will need to be re-installed separately after the installation of the CIP is complete.

3. Start the installation. If the information on the Installation preview summary panel is correct, start the installation by clicking **Next**.
4. Track the process of the installation on the progress indicator. The uninstallation of the interim fixes is also included in the progress indicator.
5. When the installation finishes the Installation complete panel is displayed. Inspect the panel to ensure that the installation completed successfully.

## Results

A backup for the CIP will be created in the *installation\_root/properties/version/nif/update/* directory. You can use the update installer to slip-uninstall the CIP, to restore the system to its pre-slip-install state (e.g. to a previous version of WebSphere Process Server).

### Incremental installation:

An incremental installation involves adding or modifying features of an existing installation without replacing or modifying the underlying WebSphere Process Server installation.

An incremental installation involves using a customized installation package (CIP) to add features to the current WebSphere Process Server installation using a CIP which contains the same maintenance level of WebSphere Process Server.

The result of an incremental installation is to leave the maintenance version of the product unchanged while adding or upgrading other features of the installation.

### Incremental WebSphere Process Server installation - add features to an existing installation at the same maintenance level - Any interim fixes in the CIP are found on the existing installation:

When you have completed the core steps for augmentation of an existing installation, complete the process of augmentation by completing this task.

### Before you begin

This task is a continuation of the information provided in the topic “Running a CIP interactively to augment an existing WebSphere Process Server installation”. Do not commence this task until you have completed the prerequisite task.

### About this task

An incremental installation does not change the version of WebSphere Process Server, rather it adds fixes, features or maintenance packs. Perform the following steps immediately after completing the task: “Running a CIP interactively to augment an existing WebSphere Process Server installation”. The Features panel of the CIP installation wizard is on-screen.

### Procedure

1. Choose the additional features that you wish to install from the Features panel. Select the features that you wish to install as part of the CIP installation. Click **Next**.
2. Review the installation information on the Installation preview summary panel. If the summary information does not match with your needs, stop the installation process and start again.



3. Start the installation. If the information on the Installation preview summary panel is correct, start the installation by clicking **Next**.
4. Track the process of the installation on the progress indicator.
5. When the installation finishes the Installation complete panel is displayed. Inspect the panel to ensure that the installation completed successfully.

### Results

A backup for the CIP will be created in the *installation\_root/properties/version/nif/update/* directory. You can use the update installer to slip-uninstall the CIP, to restore the system to its pre-incremental-install state.

The WebSphere Process Server version remains the same, the interim fixes remain unchanged and any new features that you selected are installed.

### **Incremental WebSphere Process Server installation - add features to an existing installation at the same maintenance level - None of the interim fixes in the CIP are found on the existing installation:**

When you have completed the core steps for augmentation of an existing installation, complete the process of augmentation by completing this task.

### Before you begin

This task is a continuation of the information provided in the topic “Running a CIP interactively to augment an existing WebSphere Process Server installation”. Do not commence this task until you have completed the prerequisite task.

### About this task

An incremental installation does not change the version of WebSphere Process Server, rather it adds fixes, features or maintenance packs. Perform the following steps immediately after completing the task: “Running a CIP interactively to augment an existing WebSphere Process Server installation”. The Features panel of the CIP installation wizard is on-screen.

### Procedure

1. Choose the additional features that you wish to install from the Features panel. Select the features that you wish to install as part of the CIP installation. Click **Next**.
2. Review the installation information on the Installation preview summary panel. If the summary information does not match with your needs, stop the installation process and start again.
3. Start the installation. If the information on the Installation preview summary panel is correct, start the installation by clicking **Next**.
4. Track the process of the installation on the progress indicator.
5. When the installation finishes the Installation complete panel is displayed. Inspect the panel to ensure that the installation completed successfully.

### Results

A backup for the CIP will be created in the *installation\_root/properties/version/nif/update/* directory. You can use the update installer to slip-uninstall the CIP, to restore the system to its pre-incremental-install state.

The WebSphere Process Server version remains the same, the installed interim fixes are the union of interim fixes that were previously installed, and those included in the CIP. Additionally, any new features that you selected are installed.

**Incremental WebSphere Process Server installation - add features to an existing installation at the same maintenance level - Some, but not all, interim fixes in the CIP are found on the existing installation:**

When you have completed the core steps for augmentation of an existing installation, complete the process of augmentation by completing this task.

**Before you begin**

This task is a continuation of the information provided in the topic “Running a CIP interactively to augment an existing WebSphere Process Server installation”. Do not commence this task until you have completed the prerequisite task.

**About this task**

An incremental installation does not change the version of WebSphere Process Server, rather it adds fixes, features or maintenance packs. Perform the following steps immediately after completing the task: “Running a CIP interactively to augment an existing WebSphere Process Server installation”. The Features panel of the CIP installation wizard is on-screen.

**Procedure**

1. Do not choose any additional features on the Features panel. Installation routes which include additional features are discussed elsewhere. Simply click **Next**.
2. Review the installation information on the Installation preview summary panel. If the summary information does not match with your needs, stop the installation process and start again.
3. Start the installation. If the information on the Installation preview summary panel is correct, start the installation by clicking **Next**.
4. Track the process of the installation on the progress indicator.
5. When the installation finishes the Installation complete panel is displayed. Inspect the panel to ensure that the installation completed successfully.

**Results**

A backup for the CIP will be created in the *install\_root/properties/version/nif/update/* directory. You can use the update installer to slip-uninstall the CIP, to restore the system to its pre-incremental-install state.

The WebSphere Process Server version remains the same, the installed interim fixes are the union of interim fixes that were previously installed, and those included in the CIP. Additionally, any new features that you selected are installed.

**Trade-up installation**

You can use a customized installation package (CIP) to perform trade-up installation, from a lower-level product to a higher-level product.

## Before you begin

To perform this task you must have an existing installation of a lower-level product. You must also have a customized installation package containing a higher-level product image.

## About this task

A trade-up installation is from a lower-level product to the full version of WebSphere Process Server. The following table describes which trade-up paths are supported.

Table 162. Supported trade-up pathways.

Existing product	Trade-up product	Supported
Enterprise Service Bus	WebSphere Process Server	Yes
WebSphere Process Server Client	WebSphere Process Server	Yes

Trade-up installation is a one-step process, running the CIP moves the installation from the lower-level product to the higher level, and then brings the newly installed product up to the required maintenance level.

## Procedure

1. Commence the installation of your WebSphere Process Server customized install package.

Start the installation directly with the install command.

- a. Change to the *installation\_root* directory
- b. Issue the install command:

- **AIX** **HP-UX** **Linux** **Solaris** `./install`
- **Windows** `install.exe`

After launching the CIP installation wizard from the command line, the wizard initializes and displays the Welcome panel. Click **About this customized installation package** to display detailed information about the current customized installation package, such as the edition and version. Click **Next**.

2. On the License agreement panel, read the license agreement and accept its terms.

Click **I accept both the IBM and the non-IBM terms** to agree to the license agreement and click **Next** to continue.

After you accept the licensing terms, the installation wizard checks for a supported operating system and prerequisite patches. If you encounter a problem such as not having the right prerequisite updates on your system, cancel the installation, make the required changes, and restart the installation.

Although the installation wizard checks for prerequisite operating system patches with the `prereqChecker` application, review the prerequisites on the supported hardware and software Web site if you have not already done so.

The Web site lists all supported operating systems and the operating system fixes and patches that you must install to have a compliant operating system.

Refer to the documentation for non-IBM prerequisite and corequisite products to learn how to migrate to their supported versions.

3. Complete the prerequisite check and move on to the Detect existing copy panel. Click **Next** when the system prerequisite check is complete.
4. Depending on the trade-up you are performing (e.g., from which product you are trading up, or to what maintenance level of WebSphere Process Server you are trading up) you will receive various options on the Detect existing copy panel. Select the option to install a new copy of WebSphere Process Server.
5. On the Trade up panel, indicate the existing copy of the lower-level product that you intend to trade up.  
 The Trade up panel will only display fields for products that have been detected on the system. Click the **Use an existing copy of *product\_name*** where *product\_name* is the lower-level product from which you are trading up.  
 Next select the specific installation of the existing product from the list.  
 Click **Next**. After completing this step, the system will check that the product from which you are trading up has all the prerequisite features. Unless a problem is detected, the wizard will move on to the Features panel.
6. On the Features panel select any features that you want to be installed from the CIP or that are already installed on the lower product.  
 The default appearance of the Features panel will be for:
  - All features contained in the CIP which are not installed to be selected.
  - All features contained in the CIP which are installed to be selected and the check box is disabled.
  - All features that are not contained in the CIP which are installed to be displayed with the check box cleared.
 Do not change any options on this panel. Click **Next**.
7. Review the information on the Installation summary panel. If everything is correct click **Next** to commence the installation.
8. Monitor the installation on the progress indicator.

## Maintaining a customized installation package installation

After you have installed using a customized installation package (CIP), the system is maintained as if installation had been performed directly. You can use CIPs to apply maintenance patches or interim fixes to any installation of WebSphere Process Server.

### Before you begin

These topics describes how to maintain an installation of WebSphere Process Server that was created using the Installation Factory.

### About this task

There is no substantive difference between an installation of WebSphere Process Server created with a CIP and an installation created by another route. Therefore applying maintenance, refresh packs, fix packs and interim fixes is identical to the usual methods. See the related tasks for details. However, do note that there are specific steps to rolling back maintenance that was applied with a CIP.

Subsequent topics describe how to apply or roll back maintenance to a WebSphere Process Server installation created with a CIP.

## **Applying maintenance to a WebSphere Process Server installation created with the Installation Factory**

The steps required to install maintenance packages on a WebSphere Process Server installation that was created using a CIP are the same as for any other installation of WebSphere Process Server.

### **Before you begin**

You must use the Update Installer for WebSphere software to apply maintenance to a CIP installation.

### **About this task**

Details of how to apply maintenance to a WebSphere Process Server installation see the related task on Installing maintenance packages.

Details of how to apply maintenance to a WebSphere Process Server installation using a customized installation package, see the related task on Installing fix packs and refresh packs with customized installation packages.

## **Rolling back maintenance from a WebSphere Process Server installation that was installed with a customized installation package**

In general rolling back a maintenance package from a WebSphere Process Server installation that was created with a customized installation package (CIP) is the same as the procedure for other installations. However, there are specific differences which are described here.

### **Before you begin**

This task is appropriate if you have an installation of WebSphere Process Server that was created with a CIP, to which a maintenance package has been applied in one of a variety of ways. You must use the Update Installer for WebSphere software to roll back maintenance from a CIP installation.

### **About this task**

The core information for rolling back maintenance packages is contained in the related task: Uninstalling maintenance packages. Additional steps for uninstalling maintenance packages from WebSphere Process Server installations that were created with a CIP are described below.

- After you slip install a CIP onto an existing WebSphere Process Server installation you want to uninstall maintenance, without uninstalling the entire product. The CIP consists of a merged refresh pack, fix pack, and one or more interim fixes.
  1. Uninstall any interim fixes that were installed as part of the slip installation.
  2. Roll back the maintenance levels that were contained in the CIP. This is identical to uninstalling a single fix pack or refresh pack except that whatever maintenance had been rolled up into the CIP is rolled back in a single operation. This means that it is not possible to roll back just the fix pack portion of a CIP and leave the installation at the refresh pack level, both will be rolled back at once, leaving the installation in the same state it was in before the slip install was performed.
- After a slip installation you want to remove maintenance that was installed prior to the slip installation.

1. Roll back the slip installation.
  2. Roll back the maintenance package as described in the related task:  
Uninstalling maintenance packages.
- After adding an interim fix to a WebSphere Process Server installation that was created with a CIP. This procedure is independent of the method of WebSphere Process Server installation.
  - After adding an fix pack or refresh pack to a WebSphere Process Server installation that was created with a CIP. This procedure is independent of the method of WebSphere Process Server installation.

## Uninstalling a customized installation package installation

The process of uninstalling WebSphere Process Server from your system is the same regardless of how the original installation was performed.

### About this task

Regardless of the nature of your customized installation package installation (for example: full, slip, or incremental) the uninstallation process is identical to uninstalling the software for a standard installation. See related topics for details of how to perform an uninstallation.

---

## Working with integrated installation packages

A customized installation package (CIP) is a customized WebSphere Process Server installation image. An integrated installation package (IIP) is a larger package combining a stack of WebSphere software and even multiple CIPs. The IBM WebSphere Installation Factory creates CIPs and IIPs.

### About this task

Customers who need to install multiple installation packages in an automated and highly repeatable manner can create an IIP which aggregates those packages into a single installable package. As an example, you can have multiple servers on which you need to deploy WebSphere Process Server and some number of feature packs. Instead of having to install each of these products as an independent step on each server, you can create an IIP that will install all of them at once.

The Installation Factory user specifies which installation packages to include in the IIP, the order in which they should be installed, and various other details about the desired behavior of the IIP and each of its contained installation packages.

Each product you include in the IIP can be customized separately for greater flexibility. For example, you could run the WebSphere Process Server product install interactively and then run one or more feature pack installs silently to obtain a seamless install of the entire set of packages. There is also flexibility as to which contained installation packages actually get installed on any given invocation of the IIP; in other words you can choose not to install certain packages in the IIP.

One possible example of an IIP installation scenario is the following:

### Procedure

1. Install a CIP containing WebSphere Process Server

2. Install a feature pack (or, a CIP created with a feature pack and feature pack fixes)
3. Install another instance of WebSphere Process Server CIP in another directory on the machine

---

## Developing and installing integrated installation packages

An integrated installation package (IIP) is an aggregated installation package created with the IBM WebSphere Installation Factory that can include one or more generally available installation packages, one or more customized installation packages (CIPs), and other user-specified files and directories. An IIP is a composite installer which aggregates multiple product installers together under one package. The IIP invokes these *contributions* one after the other in a predefined sequence and in a coordinated manner to complete an end-to-end installation.

### Before you begin

Read through this topic and its related topics to prepare for creating and installing IIPs. Become familiar with IIP installation options before you start to use the installation tools. Review the Supported hardware and software before you start.

If you encounter a problem such as needing more disk space or more temporary space, or missing prerequisite packages on your system, cancel the installation, make the required changes, and restart the installation.

### About this task

This topic is an overview of creating and installing an IIP. Get started by downloading the Installation Factory and setting up your system environment to use the product. See “Installing the IBM WebSphere Installation Factory” on page 570 for more information.

The following procedure describes how to get started creating and installing an IIP.

#### Procedure

1. Use the Installation Factory to create an IIP.  
See “Creating a build definition and generating the IIP” on page 630 for more information.
2. Prepare your operating platform for installation.  
See “Preparing the operating system for WebSphere Process Server installation” on page 35.
3. Install the IIP.  
Choose one of the following scenarios to begin the installation:
  - Install the IIP using the wizard.  
See “Installing an IIP” on page 637.  
The installation wizard lets you select contributions to install and lets you customize the installation based on the available options selected during IIP creation.
  - Install the IIP silently.  
See “Installing an IIP silently” on page 658.  
You can install the IIP silently using command line options or a response file. For a complete end-to-end silent installation of an IIP you must also configure all contributions to install silently.

You can configure a mix of contribution installation modes. For example, you can choose to show the wizard during the WebSphere Process Server installation and then choose to install the Feature Pack for Web Services silently.

## Results

You can use an IIP to install an IBM WebSphere Process Server product stack by following this procedure. For example, you can create an IIP which aggregates process server and feature pack installers into one package.

## IIP overview

The IBM WebSphere Installation Factory is an Eclipse-based tool which creates installation packages for installing WebSphere software stack in a reliable and repeatable way, tailored to your specific needs.

An IIP is an installation package which can install an entire WebSphere software stack, such as an process server, a feature pack, and user files. An IIP can even contain several CIPs.

## Integrated installation packages

Customers who need to install multiple installation packages in an automated and highly repeatable manner can create an IIP which aggregates those packages into a single installable package. As an example, you can have multiple servers on which you need to deploy WebSphere Process Server and some number of feature packs. Instead of having to install each of these products as an independent step on each server, you can create an IIP that will install all of them in a defined sequence.

The Installation Factory user specifies which installation packages to include in the IIP, the order in which they should be installed, and various other details about the desired behavior of the IIP and each of its contained installation packages.

Each product you include in the IIP can be customized separately for greater flexibility. For example, you could run the WebSphere Process Server product install interactively and then run one or more feature pack installs silently to obtain a seamless install of the entire set of packages. There is also flexibility as to which contained installation packages actually get installed on any given invocation of the IIP; in other words you can choose not to install certain packages in the IIP.

One example of an IIP installation scenario is the following:

1. Install a CIP containing a WebSphere Process Server product
2. Install a feature pack (or, a CIP created with a feature pack and feature pack fixes)
3. Install another instance of the process server CIP in another directory on the workstation

## Contributions

An IIP consists of *contributions*, which are WebSphere products, feature packs, or sets of files. A given contribution can be invoked multiple times if desired. Each of these is referred to as an *invocation*. For example, you might add an invocation of the contribution for installing WebSphere Process Server multiple times in different directories on the same workstation.



Some examples of contributions are the following:

- A *Defined Installation Package* (DIP), like the generally available installation packages such as WebSphere Process Server or the Feature Pack for Web Services
- A CIP which you have previously created
- Any additional user files or directories, like readme or image files

**Note:** Regardless of contribution type, you are responsible for obtaining the software to create installation packages with the Installation Factory (for example, you must first have the WebSphere Process Server product image before including it in an Installation Factory package). The Installation Factory itself is not bundled with any of these packages and it is unable to automatically retrieve them.

### Defined Installation Packages

IBM has provided several pre-configured contribution types which allow the Installation Factory to provide enhanced support for adding them to the IIP and controlling their behavior at IIP runtime, which reduces user effort, the possibility of mistakes, and so on.

Information about DIPs is not actually built into the Installation Factory, but rather “plugged-in” using XML metadata and the Eclipse plug-in mechanism. The Installation Factory already has extensive metadata for install packages in order to support CIP creation, and this metadata is enhanced to support IIP creation. Without the use of DIPs, you would have to invoke the installation of each package with custom scripts in order for the IIP to be successful. The following contributions are supported at the time of this writing:

- IBM WebSphere Process Server 6.2
- IBM WebSphere Enterprise Server Bus 6.2
- IBM WebSphere Process Server Client 6.2
- IBM WebSphere Application Server 6.1
- IBM WebSphere Application Server Network Deployment 6.1
- IBM WebSphere Application Server Version 6.1 Feature Pack for Web Services
- IBM WebSphere Application Server Version 6.1 Feature Pack for EJB 3.0
- IBM WebSphere Application Server 6.1 Trial Version
- IBM WebSphere Application Server - Express™ 6.1
- IBM WebSphere Application Server - Express 6.1 Trial Version

### Installation Integration Bus

Installation packages and related tools can be easily included in the IIP by the user, and Installation Factory will automatically integrate this install package with others that might already exist in the IIP, saving time and effort. This integration between the contained installation packages is accomplished by passing information from one package to the next. The underlying infrastructure which enables this integration is referred to as the *Installation Integration Bus* (IIB, or just “Bus”). The design allows installation packages and other install-related commands to be plugged in, wired together, and executed via the Bus in a uniform manner, allowing otherwise separate installation packages to work together. You can use macro substitution to take advantage of this underlying infrastructure. See “IIP macro replacement” on page 628 for more information.

For example, when installing WebSphere Process Server and one or more feature packs using an IIP, the `-installLocation` option used for the process server can be

automatically reused as the default installation location for each of the feature packs with a macro (for example, \$RESV ) so you do not have to specify that location more than once. In many cases you will have to do nothing more than add the feature pack package into the IIP, and Installation Factory will do the rest in terms of integrating it with the other packages. The Bus enables this end-to-end flow of all included packages.

## IIP macro replacement

A very important feature of integrated installation packages (IIP) is the ability to use macros to help automate the installation of included installation packages.

This topic provides the following information about IIP macros:

- “Use of macros in an IIP”
- “\$RESV{<Invocation\_ID>:<Result\_value\_name>}”
- “\$OPTV{<Invocation\_ID>:<Option\_name>}” on page 629
- “\$OPTS{<Invocation\_ID>:<Option\_name>[;string]}” on page 629
- “\$LOC{[<Contribution\_ID>\_<Sub\_ID> | IIP]}” on page 630
- “\$JP{<Java property>} ” on page 630

### Use of macros in an IIP

You can use predefined macros to make the IIP more flexible and to automate how certain contributions are installed without having to specify everything in the build definition wizard during IIP creation. For example, you can install two different installation packages in the same location (or relative to the same location) without having to manually specify that location twice in the IIP build definition wizard. The installation location of the first package can be automatically assigned to the `-installLocation` option of the second package, thereby causing it to default to that location. Note that the user can change this value during install time if you allowed this during IIP creation. Because macros are not resolved until IIP installation, they can be used not only by the user who creates the IIP, but also by the user who invokes it. Both the build definition wizard and the IIP installation wizard will provide convenient ways for users to leverage macros without having to manually edit the option strings to create or modify macros directly

**Note:** Not all options supported by a contribution can be referenced in a macro. Only the `-installLocation` and the `-silent` options can be referenced in the `$RESV`, `$OPTV`, and `$OPTS` macros at this time.

You can use the following macros in your IIP:

#### **\$RESV{<Invocation\_ID>:<Result\_value\_name>}**

This takes the *result value* of the specified invocation and replaces the macro with that value, where `<Invocation_ID>` specifies which contribution invocation in the IIP provides the named result value. The invocation ID is needed to resolve any ambiguity that might occur if different contributions use the same result value names or if there are multiple invocations of the given contribution. For example, if an IIP contains the process server installation package (Invocation\_ID = 6.2.0-WS-WBI\_1-1) and the Feature Pack for Web Services install package, then it is likely you would want the feature pack to be automatically installed into the same place as the process server. This can be achieved by passing the following option into the feature pack installation program on the IIP installation command line:

```
-OPT installLocation=$RESV{6.2.0-WS-WBI_1-1:installLocation}
```

Since both the process server installer and the feature pack installer support the `installLocation` result value, this ensures that whatever installation location was used for the process server will be automatically passed into the feature pack installer. If, during IIP installation, the referenced invocation has been suppressed by the user (in other words, the user chose not to install that specific package) and the invocation containing the reference has not been suppressed, then an error is generated and the installation of the IIP is not allowed to continue because it would not be possible to resolve the macro. For example, if the process server has already been installed outside of the IIP, and you try to install a feature pack package with the IIP using a macro which resolves to a deselected process server package install location, the installation will fail. You must specify the install location for the feature pack without using this macro. The user must do one of four things to continue if a macro cannot be resolved:

- Change the macro to reference a different invocation which has not been suppressed.
- Enable the referenced invocation.
- Disable the invocation containing the reference.
- Remove the macro.

### **`$OPTV{<Invocation_ID>:<Option_name>}`**

This will take the value of the option with the given name, and replaces the macro with that value, where `<Invocation_ID>` specifies which contribution invocation in the IIP supports the named option. This is needed in order to resolve any ambiguity that might occur if different contributions use the same result value names or if there are multiple invocations of the given contribution. It is an error if, during IIP installation, the referenced option cannot be resolved because it was not actually specified on the referenced invocation. The IIP user must either change the referenced invocation to include the option, or change/remove the macro with the reference. It is an error during IIP creation to use this macro to reference an option that does not take a value, for example `-silent`. In this case the build definition wizard issues an error and the IIP cannot be built.

This example is very similar to the `$RESV` example with one important exception:

```
-OPT installLocation=$OPTV{6.2.0-WS-WBI_1-1:installLocation}
```

This takes whatever installation location was passed to the process server in the `-installLocation` option and passes it to the feature pack for its installation location. This will work fine if the process server was installed silently, but if it was installed in GUI mode, then the user could have modified the location in the installation wizard to something else. This macro would still resolve to the original value set during IIP creation. It is better to use the Result Value macro (`$RESV`) and not the Option Value macro (`$OPTV`) in this case.

### **`$OPTS{<Invocation_ID>:<Option_name>[;string]}`**

This takes the specification of the option with the given name and replaces the macro with that specification, or with *string* if it has been provided. The `<Invocation_ID>` specifies which contribution invocation in the IIP supports the named option. The option specification is a string that represents exactly how the option is specified on the command line, minus any value, for example `-OPT installLocation=`. This macro is mostly used for options that don't take any value, like `-silent`. The *string* part of the macro allows you to use a string value as the replacement of this macro instead using the referenced option specification directly. This supports those cases where two different contributions might have different

options for the same function, in this case silent installation. One of the contributions can use the macro to check if the other contribution was invoked silently, and if so it can then specify its own option for silent invocation using *string*.

Note that, unlike the \$OPTV macro, \$OPTS expands to the empty string if the referenced option was not specified on the referenced invocation – this is not an error situation. This is important to support things like the installation mode, where the absence of an option like `-silent` means that the installer will use the GUI mode. Using this macro to reference an option that does not have a specification will result in an error.

Options which take no values, such as `-silent`, can also be resolved using macros, for example:

```
$OPTS{6.2.0-WS-WBI_1-1:silent}
```

In this case, if the referenced option, `-silent`, has been specified on the invocation of the process server contribution 6.2.0-WS-WBI, then the macro will be replaced by the option specification `-silent`. If this option was not specified then the macro resolves to the empty string. This allows you to install a set of contributions consistently in silent mode or in GUI mode based on what was specified for one of those contributions. A warning will be issued if the option was not specified on the referenced contribution in case this reference is a user error.

### **\$LOC{[<Contribution\_ID>\_<Sub\_ID> | IIP]}**

This macro will resolve to the location of the given package invocation in the IIP, and the result is an absolute path. When a Contribution\_ID and Sub\_ID are specified, this resolves to the root location of the specified contribution within the IIP. For example, if you have a contribution for the base edition of the process server product for windows, then the root directory of that contribution would be *IIP\_home/contrib/6.2.0-WS-WBI/1/WinX32*. The following macro example resolves to this directory:

```
$LOC{6.2.0-WS-WBI_1}
```

If only IIP is specified, then this value resolves to the root directory, or *IIP\_home*, of the IIP:

```
$LOC{IIP}
```

### **\$JP{<Java property>}**

This macro will be replaced with the current value of the named Java property. This can be any property currently known to the Java runtime. For example, during the IIP build definition wizard you are asked to specify the target installation directory of your contribution invocations. By default the target installation directory for a non root user is the following:

```
$JP{user.home}/IBM/WebSphere/ProcServer
```

This appends `/IBM/WebSphere/ProcServer` to the current user's home directory to complete the directory path.

## **Creating a build definition and generating the IIP**

This topic describes how to create a build definition file and generate the integrated installation package (IIP) with the IBM WebSphere Installation Factory.

## Before you begin

You must first install the Installation Factory before you use it to create an installation package. See *Getting Started with the Installation Factory* for more information.

## About this task

To create an IIP, first create a build definition file which the Installation Factory later uses to generate the IIP. The build definition file describes exactly which packages and configurations are included in the IIP. You can do both steps on the local workstation, or you can choose to create the build definition locally, then pass the XML file to another workstation to generate the IIP, perhaps even on a different workstation or operating system. The remote workstation must first contain the Installation Factory and all products you want to include in the IIP in order to generate an IIP from a build definition file.

In some cases, you might not be able to use the Build definition wizard on the target operating system platform. You have three options in such a case:

- Use the wizard in disconnected mode on a supported workstation to create a build definition file for the target operating system on another workstation. Then copy the file to the target operating system and use the command line interface to generate the IIP.

**Note:** The optimal way to use the installation factory for a remote server is to work in connected mode and select the target operating system on the mode selection panel.

- You can create a build definition file and generate an IIP for the other platform if you are working on a similar platform. In other words, you can create and generate an IIP on any supported UNIX-style platform for any other supported UNIX-style platform, and you can create and generate an IIP on any supported Windows platform for any other supported Windows platform.
- Create the build definition XML document using a validating XML editor.

Copy one of the IIP sample build definition documents from the *IF\_home/samples/iip* directory to get started.

After making your changes, validate the build definition document with its XML schema (*IIPBuildDefinintion.xsd*) using a validating XML parser or editor. Then use the command line interface to start the processing engine and create the IIP.

Use the following procedure to create the build definition file and generate the IIP.

### Procedure

1. Download the product code from the download page for the IBM WebSphere Installation Factory and unpack the code.  
See the download page for a complete list of tested operating systems.
2. Consider which installation packages you want to include in the IIP. The Installation Factory does not contain any product installation images. You must provide the software to be installed by the Installation Factory.
3. Start the Installation Factory console with the graphical user interface (GUI) script.
  - **AIX** **HP-UX** **Linux** **Solaris** Use the *IF\_home/bin/ifgui.sh* script.
  - **Windows** Use the *IF\_home\bin\ifgui.bat* script.

4. Create a new IIP build definition or open an existing one.  
 Click **Create New Integrated Installation Package** to create a new IIP build definition.  
 Click **Open Build Definition** if you want to edit an existing build definition XML file.
5. Choose whether to run the wizard in connected or disconnected mode.
  - **Connected mode**  
 Select the check box for connected mode processing so that you can generate the IIP in addition to creating the build definition file on the local workstation. The build definition wizard will attempt to validate all directories, files, and installation packages in connected mode and must be able to access these resources locally.
  - **Disconnected mode**  
 Select the check box for disconnected mode processing to save the build definition only and generate the IIP later. Use the wizard in disconnected mode on a supported workstation to create a build definition file for a supported operating system on another workstation. Then copy the build definition XML file to the target operating system and use the `ifcli` command to start the processing engine and generate the IIP. The Build Definition wizard cannot verify the installation image, the maintenance packages, or any other files or scripts that you enter in disconnected mode. You can also generate an IIP for a target platform with a similar platform, in other words generate an IIP on a Windows platform for another Windows platform, or a UNIX-style platform for another UNIX-style platform.  
 The paths for all products, directories, and files you specify in the wizard must be relative to the workstation on which the IIP will be created. For example, assume that you run the console on a Red Hat Enterprise Linux 4 system that cannot access a target AIX system. The Build Definition wizard cannot browse file locations on the target system. However, you can type the directory path of the AIX location for the Network Deployment installation image and other elements of the IIP.
6. Provide all required parameters to identify the package information, the output location for the build definition file, the output location for the IIP, products, installation images, additional files and directories, and authorship information. See the help panel documents for information on each step of the IIP creation process:

**Restriction:** Creating IIPs using non-English locale-specific characters in the directory path is not supported. Restrict the characters that you use in directory names to printable US ASCII characters.

Panel	Description
“IIP mode selection” on page 641	Specify whether to work in connected or disconnected mode, and specify the target operating system for the IIP.
“IIP package identification” on page 643	Specify a universally unique identifier for the IIP.
“IIP build information” on page 644	Specify the name and location of the build definition file and the IIP.
“IIP integrated installation wizard settings” on page 644	Use this panel to choose whether the IIP installation wizard is displayed to the IIP user during installation, and whether this setting can be overridden.

Panel	Description
“IIP construct the integrated installation package” on page 645	<p>Add and modify installation packages for the IIP. This panel also contains the following panels:</p> <ul style="list-style-type: none"> <li>• “IIP add installation package” on page 647 <ul style="list-style-type: none"> <li>Add an installation package to the IIP.</li> <li>– “IIP installation package information” on page 648 <ul style="list-style-type: none"> <li>Review the properties for the currently selected installation package in your IIP.</li> </ul> </li> <li>– “IIP modify installation package properties” on page 649 <ul style="list-style-type: none"> <li>Specify the directory path to the installation package files for the selected installation package.</li> </ul> </li> </ul> </li> <li>• “IIP installation package invocation properties” on page 650 <ul style="list-style-type: none"> <li>Specify the properties for the currently selected contribution invocation in your IIP.</li> <li>– “IIP modify default installation directory path” on page 653 <ul style="list-style-type: none"> <li>Specify the target installation directory path for the selected installation package.</li> </ul> </li> <li>– “IIP modify default silent installation response file” on page 654 <ul style="list-style-type: none"> <li>Specify the silent installation response file for the selected installation package.</li> </ul> </li> </ul> </li> </ul>
“IIP additional files” on page 655	Add files and directories to the IIP.
“IIP authorship” on page 656	Specify an organization and description for the IIP.
“IIP preview” on page 656	Use this summary panel to review all of your selections for the IIP.

7. On the Integrated Installation Package Preview panel, select whether to save the build definition file only or to save the build definition file and generate the IIP locally. Click **Finish** to exit the Build definition wizard.

If you selected to build the definition file only, copy the build definition XML file to the target workstation. Run the ifcli command against the build definition file to generate your IIP. See “The ifcli command” on page 603 for more information.

The amount of time required to generate the IIP depends on the number and type of products that you include in the package.
8. The Installation Factory logs a completion message in the *IF\_home/logs/log.txt* file when the processing engine is finished.

## Example

The following is an example of creating a build definition file and generating an IIP on a Windows system which contains an process server contribution and a feature pack contribution. We will create the IIP on behalf of the fictional “Plants by WebSphere” company referenced in one of the process server sample applications.

1. Launch the *IF\_home\bin\ifgui.bat* script.
2. On the IBM installation Factory panel, select **Create a New Integrated Installation Package**.

3. The Build definition wizard launches and the Mode selection panel is displayed. Since we are building an IIP for creation and installation on this workstation, select **Connected Mode**. Note that after this IIP is created, you can also install on any workstation with the same operating system and platform as the local system. Under Platforms, select your current platform. Click **Next**.
4. On the Package identification panel, enter an identifier: `com.plantsByWebsphere`. The version can remain 1.0.0.0. Click **Next**.
5. The Build information panel is displayed. Enter a file name and location of the build definition XML file you are creating. Also, choose a directory where the IIP will be generated. Make sure that you have enough space in the target directory if you are going to generate the IIP in addition to building the build definition. You may see an error indicating a non-empty directory if the default IIP directory is not empty and the **Warn if the target location** check box is selected. Click **Next**.
6. On the Integrated installation wizard settings panel, leave both installation wizard settings selected. For maximum flexibility during install time we will allow users to override our setting which will display the IIP wizard at startup. Click **Next**.
7. The Construct the integrated installation package panel is displayed. This is the main panel where you will select, add, and modify the properties of the packages you want to include in the IIP. Since we want to create a package which includes the IBM WebSphere Application Server Network Deployment product, a feature pack, and the WebSphere Process Server version 6.2, we will begin with the Network Deployment product:
  - a. Select **IBM WebSphere Application Server Network Deployment 6.1** in the Supported installation packages and tools field. Click **Add Installer**.
  - b. On the Add installation package panel, you will see the name of the package, its identifier, and the operating system and architecture of the platform for which we are building the IIP. We need to provide the product code for Network Deployment on our specified platform. Click **Modify**.
  - c. Enter the directory path of the root directory of your Network Deployment product image, or click **Browse** to browse for the image. Since we're in connected mode, you can click **Retrieve Package Size** to estimate the size of that package. Click **OK**.
  - d. You are returned to the Add installation packages panel. You can see that the Directory path to the package and the Package size fields are filled out. Click **OK**.
  - e. You are returned to the Construct the integrated installation package panel. You can now see your package listed in the Installation packages used in this IIP field, and an invocation of that package has been created and listed in the Installation package invocations field. Make sure your package invocation is selected and click the **Modify** button next to the Installation package invocations field.
  - f. The Installation package invocation properties panel is displayed. Here is where you will set all of the installation properties of your package invocation.
    - 1) Change the display name and the description for the invocation. The user installing the IIP will see this information displayed with the package invocation. You might customize these fields to reflect your company's implementation of this package.



- 2) The **Make this installation invocation the primary installation invocation** check box is selected. Do not change this value because the feature pack package you will add later will use the information from this package for its defaults, including the target installation directory. In fact, this setting ensures that every other package invocation you add after this package will use certain values you specify for this package unless you change them manually.
  - 3) Deselect the **Users can suppress the installation of this package** check box. Since this is a relatively simple example with only three included packages, we want users to install all three packages.
  - 4) Do not change the **Default installation mode** default values. The installation wizard for Network Deployment will be displayed during installation.
  - 5) Set the installation path for this package from the Default installation directory path tab. You can set the path for both Administrator and non administrator user types. Click **Modify** to open the Modify default installation directory path panel and enter the path where this package will be installed. Click **OK** to return to the current panel.
  - 6) Click the Response files tab. Since we are not installing this package silently we can skip over the settings for this section.
  - 7) Click the Exit code actions tab. These are the actions which will be taken when the package generates these exit codes. Change the action for **Installation is a partial success** to **Ask user whether to stop or continue the installation**. We want the user to decide whether the partial success is acceptable, depending on what they see in the product logs or other information. The other two exit code actions are set to stop the installation by default, which is acceptable behavior in those two cases. Click **OK** to exit the Installation package invocation properties panel.
8. Add the feature pack to the IIP.
- a. Select **IBM WebSphere Application Server Version 6.1 Feature Pack for Web Services** from the Supported packages and tools list and follow steps a - d in the Network Deployment section, changing only the product directory path.
  - b. You are returned to the Construct the integrated installation package panel. You can now see your feature pack package listed in the Installation packages used in this IIP field, and an invocation of that package has been created and listed in the Installation package invocations field. Make sure the feature pack invocation is selected and click the **Modify** button next to the Installation package invocations field.
    - 1) Change the display name and the description for the invocation. The user installing the IIP will see this information displayed with the feature pack invocation. Customize these names to reflect your company or organization.
    - 2) Note that the **Make this installation invocation the primary installation invocation** check box is not selected by default. This is the behavior we want, since the feature pack installs on top of the Network Deployment product and will inherit the Network Deployment default values.
    - 3) Deselect the **Users can suppress the installation of this package** check box. Since this is a relatively simple example with only three included packages, we want users to install all three packages.

- 4) Do not change the **Default installation mode** default values. The installation wizard for the feature pack will be displayed during installation. However, installing the feature pack silently would make it appear to the user that the entire Plants by WebSphere IIP is installed seamlessly in one operation even though two packages are being installed. Note that if you choose silent installation here, then you must specify a response file or the IIP installer must specify one during installation.
  - 5) Set the installation path for this package from the Default installation directory path tab. Note that since we set the Network Deployment package as the primary installation invocation our installation path value for the feature pack has been set to `$RESV{6.1.0-WS-WASND_1-1:installLocation}`. This is a macro which indicates that the *Result Value* of the `installLocation` option for the Network Deployment package will be used here. See “IIP macro replacement” on page 628 for more information on macros and their use.
  - 6) Click the Response files tab. Since we are not installing this package silently we can skip over the settings for this section. If you want to install this package invocation silently, specify a response file.
  - 7) Click the Exit code actions tab. These are the actions which will be taken when the package generates these exit codes. Change the action for **Installation is a partial success** to **Ask user whether to stop or continue the installation**. We want the user to decide whether the partial success is acceptable, depending on what they see in the product logs or other information. The other two exit code actions are set to stop the installation by default, which is acceptable behavior in those two cases. Click **OK** to exit the Installation package invocation properties panel.
9. Next, add the WebSphere Process Server version 6.2 to the IIP.
- a. Select **IBM WebSphere Process Server 6.2** from the Supported packages and tools list and follow steps a - d in the Network Deployment section, changing only the product directory path.
  - b. You are returned to the Construct the integrated installation package panel. You can now see your feature pack package listed in the Installation packages used in this IIP field, and an invocation of that package has been created and listed in the Installation package invocations field. Make sure the WebSphere Process Server invocation is selected and click the **Modify** button next to the Installation package invocations field.
    - 1) Change the display name and the description for the invocation. The user installing the IIP will see this information displayed with the WebSphere Process Server invocation. Customize these names to reflect your company or organization.
    - 2) Note that the **Make this installation invocation the primary installation invocation** check box is not selected by default. This is the behavior we want, since the WebSphere Process Server installs on top of the Network Deployment product and will inherit the Network Deployment default values.
    - 3) Deselect the **Users can suppress the installation of this package** check box. Since this is a relatively simple example with only three included packages, we want users to install all three packages.
    - 4) Do not change the **Default installation mode** default values. The installation wizard for the WebSphere Process Server will be displayed

during installation. Note that if you choose silent installation here, then you must specify a response file or the IIP installer must specify one during installation.

- 5) Set the installation path for this package from the Default installation directory path tab. Note that since we set the Network Deployment package as the primary installation invocation our installation path value for the feature pack has been set to `$RESV{6.1.0-WS-WASND_1-1:installLocation}`. This is a macro which indicates that the *Result Value* of the `installLocation` option for the Network Deployment package will be used here. See “IIP macro replacement” on page 628 for more information on macros and their use.
  - 6) Click the Response files tab. Since we are not installing this package silently we can skip over the settings for this section. If you want to install this package invocation silently, specify a response file.
  - 7) Click the Exit code actions tab. These are the actions which will be taken when the package generates these exit codes. Change the action for **Installation is a partial success** to **Ask user whether to stop or continue the installation**. We want the user to decide whether the partial success is acceptable, depending on what they see in the product logs or other information. The other two exit code actions are set to stop the installation by default, which is acceptable behavior in those two cases. Click **OK** to exit the Installation package invocation properties panel.
10. Review the properties specified for your two package invocations in the installation package invocations table. Click **Next**.
  11. The Additional files and directories panel is displayed. You can specify any files or directories to include with the IIP. For example, you could include a readme file in addition to any images or other material you wanted to include in the IIP. You cannot run any scripts using this feature. If you want to add scripts to run during the installation, then you can build a Process Server *customized installation package* (CIP) with application and profile customizations and use that in a package invocation instead of just using the generally available Process Server product image. Click **Next**.
  12. On the Authorship panel, enter your Organization name, for example, “Plants by WebSphere” and a description. This information can be viewed by the IIP installer by clicking the About button in the installation wizard. Click **Next**.
  13. The Integrated installation package preview panel is displayed. You can select to save the XML file you have built, or save the file and generate the IIP. Since the IIP was built and validated in connected mode, choose to save the file and generate the IIP. Click **Finish**.

## What to do next

You can now install the IIP which you have created. See “Installing an IIP” for more information or “Installing an IIP silently” on page 658 if you want to install silently.

## Installing an IIP

Install an integrated installation package (IIP) with the installation wizard

## Before you begin

Before you use the installation tools, read this topic to prepare for installation and to learn about installation options. Also read the hardware and software requirements on the Supported hardware and software Web site to get started.

The installer ID can be a non-root user ID. However, some installation procedures might require the installer ID to be the root user. Please consider all of the included contributions as they relate to user type. For example, if you are using the root ID you may need to pass non-root user contribution options into a contribution you will need to use `-iipUserType=nonroot`.

## About this task

You must use the Installation Factory to create an IIP before you can install the IIP. See “Developing and installing integrated installation packages” on page 625 for more information about creating an IIP. To install an IIP silently see “Installing an IIP silently” on page 658.

The installation wizard installs each contribution in the order which was defined by the user during IIP creation. Although the IIP installer does not perform any prerequisite checking, each contribution installer will perform its own checking and will fail if the workstation has not met the system requirements for that product.

## Procedure

1. Plan your installation.

See Introduction: Planning for WebSphere Process Server.

2. Prepare your operating platform for installation.

You must prepare your operating system to install all of the various products which are in the IIP or a contribution might fail. Review the prerequisites for each product before installing the IIP. Please see System Requirements for WebSphere Application Server V6.1 for more information on prerequisites for the application server products.

Mount the drive if necessary.

3. Insert the CD or DVD with the IIP into the disc drive, or access the directory where the IIP is located. If the IIP is on disc, you must use the `-iipLogFile` parameter to redirect the log location because the installer will not be able to write a log to the media. See “Installing an IIP silently” on page 658 for the available installation command line and response file parameters.

**Linux** Mount the drive if necessary.

4. Start the installation directly with the `install` command.

- **AIX** **HP-UX** **Linux** **Solaris** `IIP_home/bin/install.sh`
- **Windows** `IIP_home\bin\install.exe`

**Vista**

If you launch the installation using standard user privileges, you are presented with an elevation prompt for Administrator privileges before you are allowed to continue, regardless of whether you are an administrator user. You can avoid this prompt by running the installation in the following way:

- Right-click `install.exe`.

- Click **Run As Administrator**.

If you are a non-administrator user, you may have another step if you are prompted for a user ID and password.

- Support for WebSphere Application Server Version 6.1 on the Windows Vista operating system began with WebSphere Application Server Version 6.1.0.9.

The Windows Vista operating system is supported as a 32-bit platform for WebSphere Application Server development and testing, but it is not supported for application server production use. Application clients are supported for development, testing, and production use.

See WebSphere Application Server detailed system requirements and WebSphere Application Server support for the Microsoft Windows Vista operating system for more information.

5. The installer wizard initializes and the Welcome panel is displayed.

Click **About** to see information about the author, organization, version, and all included packages. Click **Next**.

6. The Installation selection panel is displayed.

This panel lists all of the contribution invocations in the IIP, and their properties, in the order that they will be invoked. You may only change certain properties of each contribution depending on whether the IIP creator decided to allow those user changes at runtime. The Description field beneath the contributions table is read-only and will change depending on which contribution is selected.

- **Installation name**

Specifies the installation name of the selected package. This is read only.

- **Status**

Specifies whether the package is selected to be installed or is deselected before installation based on whether the check box at the beginning of the row has been selected. Deselected packages are skipped by the IIP install wizard during installation. If you remove a package which is a prerequisite for another package then you are unable to install the next package. For example, if you deselect the application server package, then you are unable to install a feature pack if you have no existing application server on the workstation in the target directory.

This field also indicates the installation status of the package during and after installation. At the end of each installation, the status field shows whether the installation was successful. If it was not successful, the IIP will run the exit code action which you or the IIP creator specified for that package. The available status codes are the following:

- **Success**

The package installed successfully.

- **Fail**

The package failed to install.

- **Partial Success**

The package installed successfully, but certain post-installation scripts failed to complete successfully.

- **CanceledByUser**

The package installer was canceled by the user.

- **Unknown**

The package installer failed to complete successfully with unknown errors.

- **Installation mode**  
Specifies whether the selected installation package installs interactively with a wizard or silently using the specified response file.
- **Installation directory**  
Specifies the target installation directory for the selected installation package.
- **Response file directory path and file name**  
Specifies the response file location for the selected installation package. A response file must be specified if you are installing the selected package silently.

Select an invocation and click **Modify** to edit the properties which are available to you. Once you have modified all of the necessary options, click **Install** to begin the installation.

7. The installation begins. You can track the status of each contribution with the **Installation progress** bar at the bottom of the panel. At the end of each installation, the status field shows whether the installation was successful. There is also a progress bar which shows the status of the overall IIP installation.

If a contribution fails to install, then the IIP installer will perform one of three actions which you or the IIP creator specified for that contribution invocation that are associated with that exit code:

Table 163. Exit code actions

Action	Description
Ask user whether to stop or to continue the installation	Control is returned to the IIP installer wizard and you are prompted to perform some action. For example, you can change the selection of remaining contributions to install, stop installing, or continue installing without changing the current package installation.
Continue installing the integrated installation package	The exit code will be ignored and the IIP installation process will continue to the next installation package invocation.
Stop installing the integrated installation package	The package installation process will be stopped and control is returned to the IIP installer.

A contribution installation that is a partial success or has been cancelled by the user will return control to the IIP installer which will perform one of three actions associated with the exit code in Table 1. The default is **Stop installing the integrated installation package** unless specified otherwise during IIP creation.

If you click **Cancel** on the IIP installation wizard at any time during the installation, the current package will continue installing until it is completed but the remaining contributions will not be installed. You can modify the remaining contributions and continue the installation or you can choose to exit the installation wizard. If you click **Cancel** before the installation of any packages, the installer will exit the wizard after prompting you with a confirmation dialog window.

8. Click the **View Log** button next to the packages list to view the log for the selected package. You can also choose to browse for the log file and view it through a text editor of your choice. Please consult that product's documentation for log file locations.

You can view the overall IIP log file by clicking the **View Log** button next to the installation status section. You can also view the log through a text editor of your choice by opening it directly:

- **AIX** **HP-UX** **Linux** **Solaris** `IIP_home/iip/logs`
- **Windows** `IIP_home\iip\logs`

9. Click **Finish** to exit the installation wizard.

## Results

You have installed an integrated installation package.

## What to do next

**Note:** If an included contribution fails to install, you might need to edit that contribution's response file, which is different from the overall IIP response file. By default, contribution response files are located in `IIP_home/ResponseFiles`.

**Note:** During IIP installation, workspace files that might contain crucial logging information from Eclipse are created in the following directory:

- **Windows** `%USERPROFILE%\com.ibm.ws.install.factory.iip`
- **AIX** **HP-UX** **Linux** **Solaris** `$HOME/.com.ibm.ws.install.factory.iip`

You might want to manually delete these files periodically to free up disk space.

## IIP Build Definition wizard panels

Use the Build Definition wizard panels to identify each component and characteristic of the integrated installation package (IIP). An IIP is an aggregated installation package created with the IBM WebSphere Installation Factory that can include one or more generally available installation packages, one or more customized installation packages (CIPs), and other user-specified files and directories. The IIP then invokes these contributions one after the other in order to complete an end-to-end installation.

Use the following panels to identify components to include in the IIP:

1. "IIP mode selection"
2. "IIP package identification" on page 643
3. "IIP build information" on page 644
4. "IIP integrated installation wizard settings" on page 644
5. "IIP construct the integrated installation package" on page 645
  - "IIP add installation package" on page 647
    - "IIP installation package information" on page 648
    - "IIP modify installation package properties" on page 649
  - "IIP installation package invocation properties" on page 650
    - "IIP modify default installation directory path" on page 653
    - "IIP modify default silent installation response file" on page 654
6. "IIP additional files" on page 655
7. "IIP authorship" on page 656
8. "IIP preview" on page 656

**IIP mode selection:**

Use this panel to specify whether to work in connected or disconnected mode, and to specify the target operating system for the integrated installation package (IIP).

When the Build Definition wizard has access to the product installation image and other components required to create the IIP, then you can use it in connected mode. In this mode, the Build Definition wizard can validate the files that are provided as input and optionally generate the IIP in addition to creating the build definition file. If the product installation image and other components are not accessible because they are on a separate workstation, then you can only use the Build Definition wizard in disconnected mode. In disconnected mode, the Build Definition wizard can be used to create a build definition file for a target platform but it is not able to validate any of the input or generate a IIP. You can copy the build definition file to the target workstation and use it as input to the `ifcli` command to generate the IIP, at which time all of the input that was provided in the Build Definition wizard is validated.

*Modes:*

Specifies the mode in which you are working with the build definition file. The mode affects component validation.

### **Connected mode**

Select connected mode to work with a build definition file on this computer, and to optionally create a customized installation package. Connected mode requires direct access to the product installation image and any optional assets you specified, which must match the operating system and architecture of this computer.

When running in connected mode the Build Definition wizard can validate connected installation images and other components while creating the build definition file because everything is on the same workstation.

### **Disconnected mode**

Select disconnected mode to work with a build definition file for use on another computer. The build definition file is saved to a location that is relative to this computer. Specify all other directory paths and file names that are relative to the computer where the processing engine generates an IIP.

For example, suppose that the product installation image is on the target workstation in the `/tmp/IBM/WPSimage` directory. Specify the location in terms of the target workstation where the processing engine must find the product image to include in the IIP.

In disconnected mode the Build Definition wizard does not attempt to access components and cannot verify the components. In such a case, the Installation Factory relies on the processing engine to verify all components. The processing engine verifies each component as it includes the component in the IIP.

*Platforms:*

Specifies the platform for which to build the IIP.

The available platforms depend on whether you choose connected mode or disconnected mode. In connected mode you can only choose from those installers



that are supported on your current platform. In disconnected mode, you might choose from the entire list of supported platforms. Choose the operating system and hardware platform where you intend to run the IIP.

The command-line invocation tool ifcli runs on 32-bit kernels and 64-bit kernels.

There are different lists of supported platforms for running the Installation Factory GUI (ifgui) and the ifcli tools.

See WebSphere Process Server for a current list of all supported platforms for the Installation Factory.

### **IIP package identification:**

Use the Package identification panel to specify a universally unique identifier for the integrated installation package (IIP).

#### *Identifier:*

Specifies a unique identifier for your IIP.

Type a descriptor. For example, if you work in a test environment, you might use com.ibm.toronto.test.wps to identify test IIPs that you create. Suppose that you work in IT for the sports information department at a local university. You might use edu.abc.sid.wps as an identifier for IIPs that you create to install WebSphere Process Server updates on workstations used by the media.

The package identifier is designed to be universally unique. You can install multiple IIPs on a single installation. A unique reverse domain notation with a version number is recommended.

Click **Next**.

#### *Version:*

Specifies a version number to help identify IIPs that you create

For example, the version field is populated with 1.0.0.0. You might want to start with that value and increment later IIP versions. The version number of the IIP does not have to reflect the version number of the product.

#### *Full package identifier:*

Specifies the concatenation of the previous two fields and is read-only.

The Installation Factory uses this unique identifier as the name of a directory that holds the customized installation package. For example, the full package identifier might be edu.abc.sid.wps\_1.0.0.0. The full package identifier must comply with the following guidelines:

- Contain 30 or fewer characters on Windows platforms
- Start and end with alphabetic characters (A-Z, a-z) or numbers (0-9) only
- Contain alphabetic characters (A-Z, a-z), numbers (0-9), periods (.) or underscores (\_) only
- Not contain spaces or these characters: ~ ` ! @ # \$ % ^ & ( ) { } [ ] | \ / : ; , ? ' " < = > + \*

### **IIP build information:**

Use this panel to specify the name and location of the build definition file and the integrated installation package (IIP).

The Build Definition wizard creates the XML build definition file, which specifies the location for outputting the IIP. You can specify the name and location of both files. The build definition file is always saved to a directory path on the Build Definition wizard workstation.

*Build definition directory path and file name:*

Specifies the build definition directory path and file name.

You can think of the build definition file as a response file for the processing engine. The XML file provides the information that the processing engine needs to locate all of the components for the IIP. You can create a new build definition XML file or overwrite an existing one. Enter the directory path and file name, or click **Browse** to search for the directory and file.

*IIP build directory path:*

Specifies the IIP build directory path.

The Installation Factory creates the IIP and stores the IIP in the directory name that you specify. Name the directory where you want to create the IIP in the Integrated Installation Package field.

Enter the desired directory path and file name, or click **Browse** to select the directory

**Windows** The number of characters in the IIP build directory has a limited length on Windows operating systems. The Installation Factory will calculate the maximum allowed directory length on Windows. If a component in the IIP results in a longer directory length, then you will be unable to create an IIP without making changes to that component. For example, if the inclusion of a customized installation package (CIP) in the IIP results in a longer directory length than Windows allows, you might need to regenerate that CIP using a shorter identifier.

The processing engine reads the IIP location from the build definition file to determine where to store the IIP. Build definition and IIP validation is performed when you click **Next**. If the specified file already exists, then you are prompted to overwrite the current contents.

Select **Warn if the target location is not empty** to prevent any accidental replacement of existing IIP files that you might have saved in the target directory.

### **IIP integrated installation wizard settings:**

Use this panel to choose whether the integrated installation package (IIP) installation wizard is displayed to the IIP user during installation.

You can also choose whether the IIP user can override the option to display the IIP wizard. Setting the overall IIP installation to silent may be useful if a silently installed IIP is part of a larger automated installation process.

**Note:** Even if the IIP wizard is not displayed, the wizards of the individual contributions might still be displayed depending on how each contribution is configured on the Construct the integrated install package panel. If you want a true end to end silent installation you must set the installation mode of all included contributions to silent.

Select the **Display the IIP installation wizard at startup** check box if wish to allow the IIP user to use the IIP installation wizard, otherwise the wizard will not be displayed.

Select the **Allow users to override whether to display the IIP installation wizard** to give the IIP user the option to override the wizard display option.

### **IIP construct the integrated installation package:**

Use this panel to add and modify installation packages for the integrated installation package (IIP).

An IIP is comprised of *contributions*, which are installable packages like WebSphere Process Server or the Feature Pack for Web Services. You must choose from a list of *defined install packages* (DIPs), which are contributions whose properties, for example, installation exit codes, are already known by the build definition wizard. During creation and installation, the IIP can expect and handle various events because of this internal logic.

When a contribution is added to the IIP, its files are copied from the specified location into the target IIP build location. In addition to the generally available version of an install package, a customized installation package (CIP) that was created with the Installation Factory can also be selected as a contribution to the IIP. Multiple CIPs for a given contribution can be added as long as they have different package identifiers and versions. Each CIP is assigned a unique contribution ID when it is added to the IIP since it is considered a variation of a contribution.

*Supported installation packages and tools:*

Specifies the supported defined installation packages that you can include in the IIP.

### **Add Installer**

Click this button to select a supported installation package to add to your IIP. The Add installation package panel will be displayed. You can also view the information for each package, such as supported platforms, supported installation modes, and so on. This can be a generally available product like the process server, or an existing CIP that was created earlier.

*Installation packages used in this IIP:*

Specifies the packages that you have selected from the supported installation packages list.

### **Product name**

Specifies the display name of an installation package that is used in log entries, messages, and in other places. This field is read only.

## Package identifier

Specifies a contribution ID which uniquely identifies the installation package. This is predefined for DIPs and cannot be modified. For example, the contribution ID of WebSphere Process Server 6.2 product is 6.2.0-WS-WBI. The first contribution of this package added will be 6.2.0-WS-WBI\_1 This field is read only.

Select one of the following options to work with available installation packages:

Button	Resulting action
<b>Modify</b>	Allows you to modify the properties of the selected installation package.
<b>Remove</b>	Removes the selected installation package. This will also remove all invocations related to this package.
<b>Add invocation</b>	Adds an invocation of this package to the IIP and to displays the Installation package invocation properties panel. You can change all available properties for this invocation using this button. The resulting installation package invocation will be displayed in the Installation package invocations table.

### *Installation package invocations:*

Specifies all installation package invocations in the IIP.

You can install a given contribution multiple times. Each of these is referred to as an *invocation*. For example, you might want to install WebSphere Process Server multiple times using different target directories on the same workstation. In this case, one contribution is invoked multiple times.

See the following list of properties for each installation package invocation. Click **Modify** to display the Installation package invocation properties panel and to edit these values. See that panel's help document for more information on these properties:

Property	Value
Primary invocation	Specifies whether the invocation is the primary invocation in the IIP.
Invocation identifier	Specifies a unique ID for this package invocation based on the contribution ID and a generated number, for example 6.2.0-WS-WBI_1-1. You cannot modify this value.
Display name	Specifies the name of the installation package.
Allow suppression	Specifies whether the IIP installer can skip the installation of this package.
Install by default	Specifies whether the package will be installed by default.
Default installation mode	Specifies whether the installation will be silent or interactive.
Installation mode override	Specifies whether the IIP installer can override the default installation mode.
Installation path override	Specifies whether the IIP installer can override the target installation directory.

Property	Value
Response file override	Specifies whether the IIP installer can specify a different response file during installation.
Exit code override	Specifies whether the IIP installer can override the exit code actions.
Cancel action	Specifies action to take if the installation is cancelled.
Partial success action	Specifies action to take if the installation is partially successful.
Failure action	Specifies action to take if the package fails to install successfully.

Select one of the following options to work with installation package invocations:

<b>Button</b>	<b>Resulting action</b>
<b>Modify</b>	Edits the properties of the selected package invocation. The installation package invocation properties panel will be displayed
<b>Remove</b>	Removes the selected installation package invocation.
<b>Remove All</b>	Removes all installation package invocations in the table. If you remove all installation package invocations, the resulting IIP will be invalid. An IIP must contain at least one package invocation.
<b>Move Up</b>	Moves the selected installation package invocation higher in the list to make that package install before lower invocations in the list. A warning will be displayed if package is moved before a prerequisite package.
<b>Move Down</b>	Moves the selected installation package invocation lower in the list to make that package install after higher invocations in the list. A warning will be displayed if a prerequisite package is moved after another package which requires it.

*IIP add installation package:*

Use this panel to add an installation package to the integrated installation package (IIP).

This panel is displayed when you click the **Add Installer** button on the Construct the integrated installation package panel, or if you click the **Modify** button next to the Installation Packages used in this IIP table on that same panel. You can select to add a package from a predefined list of supported installation package types.

*Installation package:*

Specifies the name of the installation package. This field is read only.

*Package identifier:*

Specifies a contribution ID which uniquely identifies the selected installation package. For example, the contribution ID of WebSphere Process Server 6.2 product is 6.2.0-WS-WBI. The first invocation of this package added will be 6.2.0-WS-WBI\_1. This field is read only.

Click **View Installation Package Information** to view the predefined properties for the selected installation package.

*Installation package properties:*

Specifies various properties of the selected installation package.

The following values are listed:

- **Operating System**

Specifies the operating system for the selected package. If you are working in connected mode, the operating system of the local machine is listed.

- **Architecture**

Specifies the processor architecture for the selected package. If you are working in connected mode, the architecture of the local machine is listed.

- **Directory path to package**

Specifies the full directory path to the selected package code. This field is empty until you click the **Modify** button to specify the directory path. If you are working in connected mode, then you can click **Browse** to browse for the package.

- **Package size**

Specifies the size of the installation package in megabytes. If you are working in disconnected mode, then this field will be empty.

Click **Modify** to specify the directory path to the package. You must specify a directory path to the product code for the installation package you have selected on this panel. If you are adding an installer in connected mode, you must point to a path containing a valid installer on the file system.

*IIP installation package information:*

Use this panel to review the properties for the currently selected installation package in your integrated installation package (IIP).

This panel is displayed when you click the **View Installation Package Information** button on the Add installation panel. This panel contains all of the predefined properties for the selected installation package. This panel is informational and is read only. It lists all characteristics of the contribution type selected rather than any specific configurable action required for the contribution itself.

*Installation package:*

Specifies the name of the installation package.

*Package identifier:*

Specifies a contribution ID which uniquely identifies the selected installation package. For example, the contribution ID of IBM WebSphere Process Server 6.2

product is 6.2.0-WS-WBI. The first package added will be 6.2.0-WS-WBI\_1. The number generated at the end of this ID may not always be sequential. This field is read only.

*Supported platforms:*

Specifies the platforms supported by the selected installation package. These platforms are the same as the list of supported platforms you can find on that product's detailed system requirements web page.

These are platforms that are supported by the product, but not necessarily for the selected product code. For example, if you have selected the Windows version of the IBM WebSphere Process Server 6.2 product for the Process Server package on the previous Add installation packages panel, you cannot install the package on Linux platforms. You must include the Linux version of the Process Server code to install that package on a Linux platform.

*Supported installation modes:*

Specifies the available installation modes for the selected installation package.

Specifies available installation modes for the selected installation package. Most defined installation packages have silent and interactive modes, in other words, the command-line interface and the installation wizard.

*Results values:*

Specifies various available location parameters for the selected installation package, such as the target installation directory and the logs directory.

*Exit codes:*

Specifies the exit codes available for the selected installation package. You can supply user actions for various exit codes later in the Installation package invocation properties panel.

*IIP modify installation package properties:*

Use this panel to provide the directory path to the installation package files for the selected installation package.

This panel is displayed when you click the **Modify** button on the Add installation package panel. Specify a directory path for the installation package files on this panel.

**Installation Package**

Specifies the name of the selected installation package. This field is read only.

**Platform**

Specifies the platform for the selected package. If you are working in connected mode, then the platform of the local workstation is listed. If you are working in disconnected mode, then the platform of the target system is listed. This field is read only.

## Architecture

Specifies the processor architecture for the selected package. If you are working in connected mode, the architecture of the local workstation is listed. If you are working in disconnected mode, then the architecture of the target system is listed. This field is read only.

## Directory path to the installation package file

Specifies the full directory path to the selected package code. Enter the root directory path of the generally available product image or the product CIP. If you are working in connected mode, enter the directory or click **Browse** to browse for the directory path on the local system. If you are working in disconnected mode, then enter the path to the package code relative to the target system.

## Disk space requirements

Click the **Retrieve Package Size** button to calculate an estimate of the size of the installation package in megabytes. This function is only available if you are working in connected mode.

*IIP installation package invocation properties:*

Use this panel to specify the properties for the currently selected contribution invocation in your integrated installation package (IIP).

This panel contains all of the properties for a new installation package invocation, or the properties for the currently selected installation package invocation in the Construct the integrated installation packages panel. You can control how the package information is displayed, how the package will be installed, and whether the IIP installer can override your properties.

## Display name for this invocation

Specifies the name of the installation invocation which is displayed during IIP installation. The default value is the generic name of the contribution.

## Description of this invocation

Specifies a description of the installation invocation which is displayed during IIP installation. The default value is the generic name of the contribution.

## Invocation identifier

Specifies a unique ID that you cannot modify for every invocation of a contribution. The contribution ID is combined with a generated number, the SubID, to form an invocation ID which is unique within this IIP. For example, the invocation identifier of the first invocation of the Process Server product might be 6.2.0-WS-WBI\_1-1. If the same installer package is used to install into a different directory, then the invocation identifier might be 6.2.0-WS-WBI\_1-2.

Using the contribution ID helps separate contribution packages according to offering, edition, and version. The SubId further helps separate different “variations” of the contribution such as CIPs.

## Make this installation invocation the primary installation invocation



When creating the IIP, you can designate one of the contribution invocations as the *primary* contribution invocation. This allows the `-iipOptionSet` option to be omitted for that particular contribution during command-line installation so that invocation of the overall IIP can be virtually identical to invocation of that contribution in terms of the option names and syntax. Any options specified on the command line during installation which are not preceded by the `-iipOptionSet` option are assumed to belong to the primary contribution. This means that options intended for the primary contribution must be specified first, before those intended for any other contribution. In some cases the IIP user might not need to pass in any other options to the other contributions if the default values for those options are satisfactory or if you have exploited macro replacement to control the flow of options from one contribution to another. See *Installing an IIP* and *Installing an IIP silently*.

*Installation suppression options:*

Specifies whether the user can skip the installation of this package and whether the package is installed by default.

#### **Users can suppress the installation of this package**

Select this check box to allow the IIP installer to skip the installation of this package. Clear this check box if you do not want the IIP installer to skip the installation of this package.

#### **Select this package for installation by default**

Select this check box to include this package for installation by default. If you clear this check box, then the package invocation will be displayed but not selected for installation.

*Default installation mode:*

Specifies whether the package is installed using an interactive wizard or silently, and whether the user can override the selected mode of installation.

Select the **Interactive wizard** radio button to display the installation wizard for this package invocation during IIP installation. Select the **Silent installation** radio button to install this package silently. Consider this choice along with what you have chosen for the overall IIP installation mode in the Integrated installation wizard settings panel. For example, if you have chosen to install the IIP silently, but you have selected the **Interactive wizard** radio button, then this package invocation's installation wizard will still be displayed. The default installation mode is interactive.

**Note:** If you select silent installation but do not select a response file, then you will see a warning message when you return to the Construct an integrated installation package panel. Please provide a response file or select to allow the IIP installer to provide a response file during installation for that package.

If you want the IIP installer to be able to override the this installation mode, then select the **Users can override the default installation mode** check box.

*Default installation directory paths:*

Specifies the default installation directory path for this installation package invocation.

You can specify the installation directory path based on the listed supported platforms and user types available for that package. For example, you can specify an installation path for a user with administrator rights and another path for non administrator users. Click **Modify** to change the value of the installation directory path for the selected architecture and user type. The directory path you enter here will be used by default by the installation wizard.

If you want the IIP installer to be able to change the value of the target installation directory during installation, then select the **Users can modify the installation directory path during installation** check box. This check box is selected by default.

*Response files:*

Specifies the location of the silent installation response file that will be used during silent installation.

You can specify the response file based on the listed supported platforms and user types available for that package. For example, you can specify a response file for a user with administrator rights and another response file for non administrator users. Click **Modify** to enter silent installation response file for the selected architecture and user type. A response file is required if silent installation is selected.

If you want the IIP installer to be able to specify a different response file during installation, then select the **Users can specify a different response file during installation** check box.

*Exit code actions:*

Specifies actions to take depending on the exit codes generated by contributions during package installation.

There are three main installation exit codes recognized by the IIP installer which will allow users to control the remaining IIP contribution installations.

- **Installation cancelled by user**

The user cancels the installation of the selected package invocation, either in the wizard or from the package command line.

- **Installation is a partial success**

The installation of the selected package invocation was successful but certain post-installation actions failed. This can be a recoverable situation or the package might need to be reinstalled.

- **Installation failed**

The installation of the selected package invocation failed.

You can specify one of the following actions to take for each exit code generated by the package:

- **Ask user whether to stop or to continue the installation**

Control is returned to the IIP installer wizard and you are prompted to perform some action. For example, you can change the selection of remaining contributions to install, stop installing, or continue installing without changing the current package installation.

- **Continue installing the integrated installation package**

The exit code will be ignored and the IIP installation process will continue to the next installation package invocation.

- **Stop installing the integrated installation package**

The IIP installation process will be stopped.

If you want the IIP installer to be able to change the exit code actions during installation, then select the **Users can modify the exit code actions during installation** check box.

*IIP modify default installation directory path:*

Use this panel to provide the target installation directory path for the selected installation package.

This panel is displayed when you click the **Modify** button on the Default installation directory paths tab on the Installation package invocation properties panel.

### **Platform**

Specifies the platform for the selected package. If you are working in connected mode, then the platform of the local workstation is listed. If you are working in disconnected mode, then the platform of the target system is listed. This field is read only.

### **Architecture**

Specifies the processor architecture for the selected package. If you are working in connected mode, then the architecture of the local workstation is listed. If you are working in disconnected mode, then the architecture of the target system is listed. This field is read only.

### **User type**

Specifies the type of user who will install the selected package. The choices are Root and Non root, or Administrator and Non administrator for Windows platforms.

### **Default installation directory path**

Specifies the target installation directory path. You can accept the default values or manually enter a directory. If you are working in connected mode, then enter the directory or click **Browse** to browse for the directory path on the local system. If you are working in disconnected mode, then enter the path to the directory relative to the target system.

The default values for the installation directory are based on the target platform and user type. Note that the target system can restrict where a Non root or Non administrator can install software. You can specify directories for both user types.

You can also use the `$RESV{invocationID:installLocation}` macro value to use the installation directory of another contribution for your feature pack contribution. For example, if you want the feature pack to be installed into the same location as your Process Server contribution, the following macro can be used as install

location for the feature pack: \$RESV{6.2.0-WS-WPS\_1-1:installLocation} where 6.2.0-WS-WPS\_1-1 is the invocation identifier of the Process Server package.

Please see the following table for examples of the Windows and Linux defaults:

*Table 164. Default installation directory path values*

Operating system	Architecture	User type	Installation directory path
Microsoft Windows	Intel IA32	Non administrator	C:\Program Files\IBM\WebSphere\ProcServer
Microsoft Windows	Intel IA32	Administrator	C:\Program Files\IBM\WebSphere\ProcServer
Linux	Intel IA32	Non root	<i>\$JP{user.home}/IBM/WebSphere/ProcServer</i>  The installation directory is constructed using a macro which will use the current user's home directory as designated by the target installation workstation. The <i>\$JP</i> macro indicates that the <i>user.home</i> Java property will be used to resolve the current user's home directory.
Linux	Intel IA32	Root	/opt/IBM/WebSphere/ProcServer

*IIP modify default silent installation response file:*

Use this panel to provide the silent installation response file for the selected installation package.

This panel is displayed when you click the **Modify** button on the Response files tab on the Installation package invocation properties panel.

### **Platform**

Specifies the platform for the selected package. If you are working in connected mode, then the platform of the local workstation is listed. If you are working in disconnected mode, then the platform of the target system is listed. This field is read only.

### **Architecture**

Specifies the processor architecture for the selected package. If you are working in connected mode, then the architecture of the local workstation is listed. If you are working in disconnected mode, then the architecture of the target system is listed. This field is read only.

### **User type**

Specifies the type of user who will install the selected package. The choices are Root and Non root, or Administrator and Non administrator for Windows platforms. You can specify response files for both user types.

### **Directory path and file name of the silent installation response file**

Specifies the silent installation response file path and file name. If you are working in connected mode, then enter the directory path and file name or click **Browse** to browse for the file. If you are working in disconnected mode, then enter the directory path and file name relative to the target system.

### **Response files are stored in a directory relative to the IIP root directory**

Specifies where the response file is copied in the IIP relative to the root directory of the IIP.

### **IIP additional files:**

Use this panel to add files and directories to the integrated installation package (IIP).

For example, you can include a readme file or other additional information in addition to the installation packages in the IIP. The Installation Factory engine copies these files into the IIP when it is generated. However, no additional processing will be done at installation time. This behavior is in contrast to the behavior of customized installation packages (CIPs) which can run included scripts. If you want to run scripts in the package, then you must first include them in a CIP, and then include that CIP in the IIP.

If you are working in disconnected mode you cannot browse for files or directories and instead must specify the paths manually.

### **Add Files**

Specifies files that you want to add to the IIP.

### **Add Directories**

Specifies directories that you want to add to the IIP. Select **Include subdirectories** to include all subdirectories.

### **Modify**

Select an entry and click **Modify** to change the file path and file name or the directory path and directory name.

### **Remove**

Removes selected files and directories from the IIP.

**File name**

Specifies the file name.

**Directory path**

Specifies the directory where the file resides.

**IIP authorship:**

Use this panel to specify an organization and description for the integrated installation package (IIP).

You can specify organization and description information in the IIP which the user can view in the IIP installation wizard on the Welcome panel. If you click **About** from the Welcome panel, then a panel is displayed that contains all of the information you entered during the creation of the build definition file, including identifier, version, organization, and description. The package identifier information was gathered near the beginning of the Build Definition wizard on the Package identification panel.

**Organization**

Specifies the name of your organization.

**Description**

Specifies a description of the IIP.

**IIP preview:**

The Build Definition wizard provides a summary panel for you review all of your selections.

If you run the Build Definition wizard in connected mode, then you can also start the processing engine to build the integrated installation package (IIP). If you run the Build Definition wizard in disconnected mode, then copy the build definition file to the target system before using the ifcli command to start the processing engine.

*Build definition file:*

The Build Definition wizard produces the XML build definition file for input to the processing engine. The processing engine uses the build definition file to locate all of the components that it includes in the IIP.

Select the **Save build definition file and generate integrated installation package** radio button if you are in connected mode and the Build Definition wizard and the processing engine are running on the same workstation. Otherwise, select the **Save the build definition file only** radio button to save the file if you intend to use the build definition file on another workstation.

**Note:** If you did not specify any contributions in the build definition wizard, then the **Save build definition file and generate integrated installation package** option will be disabled.

## Estimate Size and Available Space

Click **Estimate Size and Available Space** to get an estimate of the size of the IIP that is generated. This option is only available in connected mode.

Click **Finish** to save the build definition file in disconnected mode or to save the file and start building the IIP when you are running in connected mode.

A status indicator is displayed at the end of the panel. When processing completes, a completion message is displayed and the Installation Factory console returns.

*Disconnected mode processing:*

The **Save build definition file and generate integrated installation package** radio button is inactive if you are in disconnected mode.

The IIP preview panel shows the location of the build definition file. Click **Finish** to save the build definition file and return to the Installation Factory console.

Copy the build definition file to the system that has the processing engine. Start the processing engine with the `install_factory_root/bin/ifcli` script.

The processing engine reads the build definition file and creates the IIP.

## IIP modify installer properties

Use this panel to edit the installation properties of the selected installation package.

This panel is displayed when you click the **Modify** button for a selected installation package on the Installation selection panel.

**Restriction:** You can only modify those properties which the IIP creator designated as editable during IIP creation.

### Installation package name:

Specifies the display name of the installation package. This field is read only.

### Default installation mode:

Specifies whether the installation package installs silently or launches its installation wizard. If you select silent installation, then you must specify a response file in the **Response file directory path and file name** field.

### Installation directory path:

Specifies the target installation directory path for the selected installation package. Enter the directory or click **Browse** to browse for the directory path on the local system. You can use macro values in addition to manually specifying the entire path.

You can use the `$RESV{invocationID:installLocation}` macro value to use the installation directory of another contribution for your feature pack contribution. For example, if you want the feature pack to be installed into the same location as your Process Server contribution, the following macro can be used as install

location for the feature pack: \$RESV{6.2.0-WS-WBI\_1-1:installLocation} where 6.2.0-WS-WBI\_1-1 is the invocation identifier of the Process Server package.

**Response file directory path and file name:**

Specifies the response file location for the selected installation package. Enter the directory path and file name or click **Browse** to browse for the file on the local system. You can use macro values in addition to manually specifying the entire path. See IIP macro replacement for more information.

If a response file location was not provided by the IIP creator during IIP creation, then the default value will be *\$LOC{IIP}*, which is a macro which resolves to the root directory of the IIP. You can specify a directory path using this value, or specify an absolute path.

**Exit code actions:**

Specifies actions to take depending on the exit codes generated during package installation.

There are three main installation exit codes recognized by the IIP installer which will allow users to control the remaining IIP contribution installations.

- **Installation cancelled by user**

The user cancels the installation of the selected package invocation, either in the wizard or from the package command line.

- **Installation is a partial success**

The installation of the selected package invocation was successful but certain post-installation actions failed. This can be a recoverable situation or the package might need to be reinstalled.

- **Installation failed**

The installation of the selected package invocation failed.

You can specify one of the following actions to take for each exit code generated by the package:

- **Ask user whether to stop or to continue the installation**

Control is returned to the IIP installer wizard and you are prompted to perform some action. For example, you can change the selection of remaining contributions to install, stop installing, or continue installing without changing the current package installation.

- **Continue installing the integrated installation package**

The exit code will be ignored and the IIP installation process will continue to the next installation package invocation.

- **Stop installing the integrated installation package**

The IIP installation process will be stopped.

### **Installing an IIP silently**

Installing an integrated installation package (IIP) silently refers to installing the IIP from the command line without the use of the IIP installation wizard. Included installation contributions might not install silently based on contribution settings.



## Before you begin

You must use the Installation Factory to create an IIP before you can install the IIP. See “Developing and installing integrated installation packages” on page 625 for more information about creating an IIP.

The IIP installation wizard can be suppressed altogether so that it does not display when the IIP is run. The contribution invocations will be invoked using the built-in options that were specified by the installation factory user when the IIP was created, or using options specified on the IIP command line which will override the built-in ones (assuming the IIP creator did not disallow them to be overridden). It is important to note that although the IIP wizard will not display, each contribution in the IIP may or may not display independently based on the options you selected during IIP creation. In this case a true silent installation of an IIP means that there is neither an IIP installation wizard nor any contribution installation wizards.

## About this task

Use this procedure to perform a silent installation of the product.

### Procedure

1. If you want an end-to-end silent installation, make sure that you have configured all of your contributions to run silently.

See “Creating a build definition and generating the IIP” on page 630 for details on how to configure the various installation options of a contribution. You may also generate an IIP so that it installs in a mixed mode, with some contributions installing through their wizards and some installing silently. For example, you can install a feature pack contribution silently and include a contribution to install WebSphere Process Server to be installed through the wizard.

2. You can install the IIP silently using the `install` command located at:

- **AIX** **HP-UX** **Linux** **Solaris** `IIP_home/bin/install.sh`
- **Windows** `IIP_home\bin\install.exe`

**Note:** **Vista** If you launch the installation using standard user privileges on Microsoft Windows Vista, you are presented with an elevation prompt for Administrator privileges before you are allowed to continue, regardless of whether you are an administrator user. You can avoid this prompt by running the installation in the following way:

- Right-click `install.exe`.
- Click **Run As Administrator**.

If you are a non-administrator user, you may have another step if you are prompted for a user ID and password.

Note that a contribution can be invoked with a combination of options specified directly on its command line as well as options specified in a response file. See “IIP modify default silent installation response file” on page 654 for more information. However, any contribution options passed to the command line will cause the IIP installer to ignore *all* options specified in a specific contribution’s response file. For example, during IIP creation you can specify the installation location for a contribution and the user installing the IIP can also specify it in a response file. The installation location specified directly on the command line will override the one set during IIP creation when the

contribution is invoked and processes its options. In addition, any other options specified for that contribution during IIP creation will be subsequently ignored. The following options are available during installation. All options values containing spaces must be surrounded by single quotes. The options that can only be used on the command line have been noted.

Table 165. IIP installation options

Option	Value	Description	Example
-help  Windows -?		Displays all available parameters for the IIP install command. This option can only be used on the command line.	-help
-iipResponseFile	<path to IIP response file>	Specifies location of the response file. Any option that can be specified on the command line when invoking the IIP can also be specified in an IIP response file (except the -iipResponseFile option itself). This includes the top-level IIP options described in this section as well as contribution-specific options. The order of the options in the response file is significant. Top-level options supported directly by the IIP UI must be first, and the options for the "primary" contribution (if any) must be second. Options for other contributions (if any) must follow, separated by -iipOptionSet options. Any line in the response file that begins with a number sign (#) is considered a comment and will be ignored.  See "IIP modify default silent installation response file" on page 654 for more information on the sample response file and its use. This option can only be used on the command line.	-iipResponseFile=D:\myIIPResponsefile.
-iipLogfile	<path to log file>	Specifies the directory path and name of the IIP log file	-iipLogfile=C:\mylog.txt
-iipLogLevel	<ul style="list-style-type: none"> <li>• all</li> <li>• config</li> <li>• info</li> <li>• error</li> <li>• warning</li> <li>• severe</li> <li>• off</li> </ul>	Specifies the verbosity of the log file. The default value is info.	-iipLogLevel=info

Table 165. IIP installation options (continued)

Option	Value	Description	Example
-iipTracefile	<path to trace file>	Specifies the directory path and name of the trace file	-iipTracefile=C:\mytrace.xml
-iipTracelevel	<ul style="list-style-type: none"> <li>• all</li> <li>• fine</li> <li>• finer</li> <li>• finest</li> <li>• off</li> </ul>	Specifies the verbosity of the trace file. The default value is off.	-iipTracelevel=fine
-iipNoGUI		<p>Run the IIP without showing the IIP GUI. When the IIP is created, the IF user can specify that the IIP GUI should be displayed by default. This option can be specified by the IIP user to override that default.</p> <p>However, the IF user can also specify that this cannot be overridden, in which case using this option will result in an error. This option is intentionally not named "-silent" since it does not control whether or not the contributions in the IIP run in silent mode – that depends on the options specified for those contribution invocations. Using the name "-iipNoGUI" helps reinforce this.</p>	-iipNoGUI
-iipShowGUI		<p>Show the IIP GUI when the IIP is invoked. When the IIP is created, the IF user can specify that the IIP GUI should not be displayed by default. This option can be specified by the IIP user to override that default.</p> <p>However, the IF user can also specify that this cannot be overridden, in which case using this option will result in an error.</p> <p><b>Note:</b> Using this option will result in an error on an operating system where the GUI installer is not supported.</p>	-iipShowGUI
-iipUserType	<root or nonroot>	Specifies whether user is <i>root</i> or <i>nonroot</i> . This is an important setting since the IIP creator can different option values to pass to the contribution based on the IIP installer user type. The default value is root.	-iipUserType=nonroot

Table 165. IIP installation options (continued)

Option	Value	Description	Example
-iipOptionSet	<Invocation_ID>	Refers to a specific contribution invocation. All subsequent options are assumed to be intended for the specified contribution, until another -iipOptionSet option is specified.  Any options specified at IIP installation which are not preceded by the -iipOptionSet option are assumed to belong to the <i>primary contribution invocation</i> . The invocation of the IIP will be virtually identical to the primary contribution invocation in terms of the option names and syntax. <b>Note:</b> All contribution options will be ignored if the IIP is installed in GUI mode.	-iipOptionSet=6.2.0-WS-WBI_1-1 -OPT installLocation=C:\myLocation
-iipDisable	<Invocation_ID1, Invocation_ID2,...>	Do not install the specified contributions during IIP installation. When the IIP is created, the user can specify which contributions should be suppressed by default when the IIP is installed, and whether this can be overridden. Using this option during installation will result in an error if the IIP creator specified that suppression cannot be overridden. The IDs are comma-delimited.	-iipDisable=6.2.0-WS-WBI_1-1, 6.2.0-WS-WBI_1-2

- After the installation, you can review the log and/or trace files for the IIP and also for each individual contribution. Please see that product's documentation for more logging information.

The IIP log and trace files will default to the below location unless you specified another path using the -iipLogFile or -iipTrace parameters.

- AIX** **HP-UX** **Linux** **Solaris** *IIP\_home/iip/logs*
- Windows** *IIP\_home\iip\logs*

## Results

You have silently installed an integrated installation package.

## Example

The following is an example of a silent installation of a WebSphere Process Server Version 6.2 package. The IIP installer will launch silently using the specified response file, and install the process server contribution silently into the specified

directory. The sample response file might have been edited to include different log and trace locations as well as other parameters. Note that since the installation location was specified for the contribution, all other options previously specified for the contribution will be ignored.

```
install -iipNoGUI -iipOptionSet=6.2.0-WS-WBI_1-1 -OPT installLocation=  
C:\Program Files\IBM\WebSphere\ProcServer -options D:\WPS\responseFile.txt -silent
```

### What to do next

**Note:** If an included contribution fails to install, you might need to edit that contribution's response file, which is different from the overall IIP response file. By default, contribution response files are located in *IIP\_home/ResponseFiles*.

**Note:** During IIP installation, workspace files that might contain crucial logging information from Eclipse are created in the following directory:

- **Windows** %USERPROFILE%\com.ibm.ws.install.factory.iip
- **AIX** **HP-UX** **Linux** **Solaris** \$HOME/.com.ibm.ws.install.factory.iip

You might want to manually delete these files periodically to free up disk space.

---

## Uninstalling the Installation Factory tool

To uninstall the Installation Factory tool from your system simply delete the folders where the Installation Factory was placed.

### About this task

If you want to uninstall the Installation Factory from your system you can do so by removing the folders which contain the Installation Factory from your operating system.

#### Procedure

1. Back up any build definitions and customized installation packages that you have created that you might want to use in the future.
2. Remove the directories where the Installation Factory is housed. The tool is located in the directory into which you extracted the Installation Factory originally.

**Note:** You should backup any files (for instance build definition files) that you created before uninstalling the Installation Factory.



---

## Chapter 15. Troubleshooting installation and configuration

You can diagnose problems when the installation and configuration of WebSphere Process Server is unsuccessful.

### About this task

The installer program records the following indicators at the end of the primary log file:

- INSTCONFSUCCESS: installation was successful
- INSTCONFPARTIALSUCCESS: installation was partly successful. Some installation actions failed but can be retried.
- INSTCONFFAILED: installation was not successful. Recovery is not possible.

The primary log file, `log.txt`, is located in `install_root/logs/wbi/install/log.txt` on i5/OS, Linux, and UNIX platforms or `install_root\logs\wbi\install\log.txt` on Windows platforms, where `install_root` represents the product installation directory.

If the result is `INSTCONFPARTIALSUCCESS` or `INSTCONFFAILED`, continue analyzing the problem by following these steps. (For details on uninstalling any installed portions before reinstalling, see *Preparing for reinstallation after a failed uninstallation.*)

### Procedure

1. Read any error messages from the installation process.

See the following topic for an explanation: *Error messages: installation and profile creation and augmentation*. If the message corresponds to any of those described, correct the problem, clean up any installed portions, and try to reinstall.

2. Determine which product caused the partial success or failure. Review the `install_error.log` file located in the `install_root/logs/wbi/install` directory on Linux, UNIX, and i5/OS platforms or the `install_root\logs\wbi\install\` directory on Windows platforms. This file logs errors, warnings, and installation results extracted from the log files for installation of WebSphere Application Server Network Deployment, WebSphere Feature Pack for Web Services, and WebSphere Process Server. If profile creation failed or was partially successful during an installation, the results are extracted from the profile log files and included in this file as well.

**Tip:** If no files exist in the `install_root/logs/wbi/install` directory, installation failed early in the process. See the log files in `user_home/wbilogs` instead.

Perform one of the following tasks depending on which product did not install properly:

- If WebSphere Application Server Network Deployment did not install properly, go to step 3 on page 666.
- If WebSphere Feature Pack for Web Services did not install properly (and WebSphere Application Server Network Deployment did), go to step 4 on page 666.
- If WebSphere Process Server did not install properly (and WebSphere Application Server Network Deployment and WebSphere Feature Pack for Web Services did), go to step 5 on page 666.

3. If the installation of WebSphere Application Server Network Deployment was not successful, review the `install_error.log` file for errors. If this file does not provide enough information to correct the problem, check Troubleshooting installation in the WebSphere Application Server Network Deployment information center and use the information found there to correct the problem before attempting to reinstall WebSphere Process Server.

**Tip:** If a problem occurs during an installation of WebSphere Application Server Network Deployment as part of a WebSphere Process Server installation, the installation process will not continue and an error message will be displayed.

4. If the installation of WebSphere Feature Pack for Web Services was not successful (and installation of WebSphere Application Server Network Deployment was), review the `install_error.log` file for errors. If this file does not provide enough information to correct the problem, check Troubleshooting Web server plug-ins installation and removal in the WebSphere Application Server Network Deployment information center and use the information found there to correct the problem before attempting to reinstall WebSphere Process Server.

**Tip:** If a problem occurs during an installation of WebSphere Feature Pack for Web Services as part of a WebSphere Process Server installation, the installation process will not continue and an error message will be displayed.

5. If the installation of WebSphere Process Server was not successful (and installation of WebSphere Application Server Network Deployment and WebSphere Feature Pack for Web Services were), review the `install_error.log` file for errors. If this file does not provide enough information to correct the problem, check other WebSphere Process Server installation log files. For information about the names, locations, and descriptions of these log files, see Installation and profile creation log files. Check the log files in this sequence:

**i5/OS On i5/OS platforms:**

- a. log files in the `install_root/logs/wbi/install` directory
- b. log files in the `user_home/wbilogs` directory if no files are found in `install_root/logs/wbi/install`
- c. `user_data_root/profileRegistry/logs/manageprofiles/profile_name_create_error.log`
- d. `user_data_root/profileRegistry/logs/manageprofiles/profile_name_create.log` and `user_data_root/profileRegistry/logs/manageprofiles/pmt.log`
- e. `install_root/logs/wbi/installconfig.log` (indicates configuration problems that can prevent the product from working correctly). For more information about diagnosing failed configuration scripts, see “Diagnosing a failing Ant configuration script” on page 677.
- f. Any additional log or trace files generated by installation actions. Look in `install_root/logs/wbi/install` for trace files generated during the installation process. Look in `user_data_root/profileRegistry/logs/manageprofiles/profile_name` for those generated by profile creation or augmentation. (For more information about `install_root` and `user_data_root` locations, see “Default installation directories for the product, profiles, and tools” on page 539.) These files are primarily intended for use by IBM technical support.

**Linux UNIX On Linux and UNIX platforms:**

- a. log files in the `install_root/logs/wbi/install` directory



- b. log files in the *user\_home/wbilogs* directory if no files are found in *install\_root/logs/wbi/install*
- c. *install\_root/logs/manageprofiles/profile\_name\_create\_error.log*
- d. *install\_root/logs/manageprofiles/profile\_name\_create.log* and *install\_root/logs/manageprofiles/pmt.log*
- e. *install\_root/logs/wbi/installconfig.log* (indicates configuration problems that can prevent the product from working correctly). For more information about diagnosing failed configuration scripts, see “Diagnosing a failing Ant configuration script” on page 677.
- f. Any additional log or trace files generated by installation actions. Look in *install\_root/logs/wbi/install* for trace files generated during the installation process. Look in *install\_root/logs/manageprofiles/profile\_name* for those generated by profile creation or augmentation. (For more information about *install\_root* and *profile\_root* locations, see “Default installation directories for the product, profiles, and tools” on page 539.) These files are primarily intended for use by IBM technical support.

**Windows On Windows platforms:**

- a. log files in the *install\_root\logs\wbi\install* directory
  - b. log files in the *user\_home\wbilogs* directory if no files are found in *install\_root\logs\wbi\install*
  - c. *install\_root\logs\manageprofiles\profile\_name\_create\_error.log*
  - d. *install\_root\logs\manageprofiles\profile\_name\_create.log* and *install\_root\logs\manageprofiles\pmt.log*
  - e. *install\_root\logs\wbi\installconfig.log* (indicates configuration problems that can prevent the product from working correctly). For more information about diagnosing failed configuration scripts, see “Diagnosing a failing Ant configuration script” on page 677.
  - f. Any additional log or trace files generated by installation actions. Look in *install\_root\logs\wbi\install* for trace files generated during the installation process. Look in *install\_root\logs\manageprofiles\profile\_name* for those generated by profile creation or augmentation. (For more information about *install\_root* and *profile\_root* locations, see “Default installation directories for the product, profiles, and tools” on page 539.) These files are primarily intended for use by IBM technical support.
6. If the error logs do not contain enough information to determine the cause of the problem, uninstall the product, clean up any log files or other artifacts that are left behind, turn on tracing, and reinstall.

- Report the stdout and stderr logs to the console window by adding the **-is:javaconsole** parameter to the install command:

– **i5/OS On i5/OS platforms:**

```
install -is:javaconsole
```

Capture the stream to a file with the following commands:

```
install -is:javaconsole > captureFileName.txt 2>&1
```

– **Linux UNIX On Linux and UNIX platforms:**

```
install -is:javaconsole
```

Capture the stream to a file with the following commands:

```
install -is:javaconsole > captureFileName.txt 2>&1
```

– **Windows On Windows platforms:**

```
install.exe -is:javaconsole
```

Capture the stream to a file with the following commands:

```
install.exe -is:javaconsole > drive:\captureFileName.txt
```

- Capture additional information to a log of your choice with the `-is:log file_name` option.
7. If you have successfully created a server profile, use the First steps console or the command-line method to start the server.
  8. Verify that the server starts and loads properly by looking for a running Java process and the *Open for e-business* message in the SystemOut.log and SystemErr.log files.

If no Java process exists or if the message is not displayed, examine the same logs for any miscellaneous errors. Correct any errors and try again.

You can find the SystemOut.log and SystemErr.log files in the following platform-specific directories:

    - **i5/OS** **On i5/OS platforms:** `profile_root/logs/servername`
    - **Linux** **UNIX** **On Linux and UNIX platforms:** `profile_root/logs/servername`
    - **Windows** **On Windows platforms:** `profile_root\logs\servername`
  9. Use the First steps console or the command-line method to stop the server, if it is running.
  10. To troubleshoot a WebSphere Process Server deployment environment, see Chapter 9, “Verifying your deployment environment,” on page 493.
  11. If you want to use a Snoop Servlet to verify the ability of the Web server to retrieve an application from WebSphere Process Server, see the step “Start the Snoop servlet to verify the ability of the Web server to retrieve an application from the Application Server” in Troubleshooting installation in the WebSphere Application Server Network Deployment documentation.
  12. Start the administrative console. For more information, see Starting and stopping the administrative console.
  13. To resolve any IP address caching problems, see the step “Resolve any IP address caching problems” in Troubleshooting installation in the WebSphere Application Server Network Deployment documentation.

## What to do next

On the product support Web site, you can review current information about resolutions to known problems, and you can read documents that can save you time gathering the information that you need to resolve a problem. Before opening a PMR, see the IBM WebSphere Process Server support page.

---

## Messages: installation and profile creation

Some of the most commonly found error messages encountered when installing and configuring can be addressed with actions that resolve the underlying problems.

**Note:** **Linux** **UNIX** **Windows** The following WebSphere Process Server installation and configuration errors appear on Linux, UNIX, and Windows platforms.

**Tip:** For information about messages that might be generated by the installation of WebSphere Application Server Network Deployment, refer to the Business Process Management messages topic.

What kind of problem are you having while installing WebSphere Process Server?

- “Supported IBM JDK was not found. The IBM JDK shipped with this product must be located at *install\_root*/JDK. Please correct this problem and try again.”
- “Warning: Cannot convert string "<type\_name>" to type FontStruct”

If you do not see an error message that resembles yours, or if the information provided does not solve your problem, contact WebSphere Process Server support at IBM for further assistance.

## Supported IBM JDK was not found. The IBM JDK shipped with this product must be located at *install\_root*/JDK. Please correct this problem and try again.

If you use symbolic links to point to the IBM Java Development Kit (JDK) shipped with the product, or to a JDK found in the PATH environment variable on your system, IBM SDK for Java validation might fail, resulting in a failed installation. This problem is caused by the way IBM SDK for Java validation code detects whether the JDK shipped with the product is the current JDK used for installation.

To resolve this problem, do not use symbolic links in JVMs supplied with the installation image of WebSphere Process Server and remove symbolic links from all JVMs that appear in your system’s PATH environment variable.

## Warning: Cannot convert string "<type\_name>" to type FontStruct

If you install the Web server plug-ins for WebSphere Application Server, you also install the ikeyman utility. The ikeyman utility is part of the Global Services Kit 7 (GSKit7).

**Linux** If you issue the ikeyman.sh script on a Linux system, you might see the following message:

```
Warning: Cannot convert string
"-monotype-arial-regular-r-normal--*-140-*-*p*-iso8859-1"
to type FontStruct
```

You can safely ignore the warning and use the ikeyman utility.

---

## Installation and profile creation log files

Various log files are created during installation and uninstallation of WebSphere Process Server and during profile creation, augmentation, and deletion. Consult the applicable logs if problems occur during these procedures.

Table 166 on page 670 shows the logs, content, and indicators of success and failure for WebSphere Process Server.

If the logs directory does not exist on your system, the installation failed very early in the process. In this case, review the following:

- **Linux** **UNIX** **On Linux and UNIX platforms:** *user\_home*/wbilogs
- **Windows** **On Windows platforms:** *user\_home*\wbilogs
- **i5/OS** **On i5/OS platforms:** *user\_home*/wbilogs

Some directory paths, file names, and indicator values in Table 166 contain spaces to allow the entries to fit in the table cells. The actual directory paths, file names, and indicator values do not contain spaces.

The variable *install\_root* represents the installation directory of WebSphere Process Server. The variable *profile\_root* represents the root location of a profile.

**i5/OS** On **i5/OS platforms**: The variable *user\_data\_root* represents the default user data directory.

For more information see “Default installation directories for the product, profiles, and tools” on page 539.

Table 166. Installation and profile logs for WebSphere Process Server components

Log	Content	Indicators
<ul style="list-style-type: none"> <li>• <b>Linux</b> <b>UNIX</b> <i>install_root</i>/logs/wbi/install/log.txt</li> <li>• <b>Windows</b> <i>install_root</i>\logs\wbi\install\log.txt</li> <li>• <b>i5/OS</b> <i>install_root</i>/logs/wbi/install/log.txt</li> </ul>	Logs all installation events relating to WebSphere Process Server.	<b>INSTCONFFAILED</b> Total installation failure.  <b>INSTCONFSUCCESS</b> Successful installation.  <b>INSTCONFPARTIALSUCCESS</b> Installation errors occurred but the installation is still usable. Additional information in other log files identifies the errors.
<ul style="list-style-type: none"> <li>• <b>Linux</b> <b>UNIX</b> <i>install_root</i>/logs/wbi/install/install_error.log</li> <li>• <b>Windows</b> <i>install_root</i>\logs\wbi\install\install_error.log</li> <li>• <b>i5/OS</b> <i>install_root</i>/logs/wbi/install/install_error.log</li> </ul>	Logs errors, warnings, and installation results extracted from the log files for installation of WebSphere Application Server Network Deployment, WebSphere Feature Pack for Web Services, and WebSphere Process Server. If profile creation failed or was partially successful during an installation, the results are extracted from the profile log files and included in this file as well.	N/A

Table 166. Installation and profile logs for WebSphere Process Server components (continued)

Log	Content	Indicators
<ul style="list-style-type: none"> <li>• <b>Linux</b> <b>UNIX</b> <i>install_root</i>/logs/wbi/installconfig.log</li> <li>• <b>Windows</b> <i>install_root</i>\logs\wbi\installconfig.log</li> <li>• <b>i5/OS</b> <i>install_root</i>/logs/wbi/installconfig.log</li> </ul>	<p>Logs configuration actions that run at the end of the installation process to configure components, install system applications, and create Windows shortcuts and registry entries.</p>	<p>Contains a series of &lt;record&gt; elements that document the configuration actions. If a post-installation configuration action fails, text like the following appears in the log:</p> <pre>&lt;record&gt; &lt;date&gt;2005-05-26T11:41:17&lt;/date&gt; &lt;millis&gt;1117132877344&lt;/millis&gt; &lt;sequence&gt;742&lt;/sequence&gt; &lt;logger&gt;com.ibm.ws.install.configmanager.ConfigManager&lt;/logger&gt; &lt;level&gt;WARNING&lt;/level&gt; &lt;class&gt;com.ibm.ws.install.configmanager.ConfigManager&lt;/class&gt; &lt;method&gt;executeAllActionsFound&lt;/method&gt; &lt;thread&gt;12&lt;/thread&gt; &lt;message&gt;Configuration action failed: com.ibm.ws.install.configmanager.actionengine.ANTAction-D:\WBI\AS\properties\version\install.wbi\6.1.0.0\config\full\install\90SInstallCEI.ant&lt;/message&gt; &lt;/record&gt;</pre> <p>If no actions fail, the following message is included in the record in the log:</p> <pre>&lt;record&gt; . . . &lt;message&gt;Returning with return code: INSTCONFSUCCESS&lt;/message&gt; &lt;/record&gt;</pre>
<ul style="list-style-type: none"> <li>• <b>Linux</b> <b>UNIX</b> <i>install_root</i>/logs/manageprofiles/pmt.log</li> <li>• <b>Windows</b> <i>install_root</i>\logs\manageprofiles\pmt.log</li> <li>• <b>i5/OS</b> <i>user_data_root</i>/profileRegistry/logs/manageprofiles/pmt.log</li> </ul>	<p>Logs all events from the Profile Management Tool.</p>	<p><b>INSTCONFFAILED</b> Total profile creation failure.</p> <p><b>INSTCONFSUCCESS</b> Successful profile creation.</p> <p><b>INSTCONFPARTIALSUCCESS</b> Profile creation errors occurred but the profile is still functional. Additional information in other log files identifies the errors.</p>
<ul style="list-style-type: none"> <li>• <b>Linux</b> <b>UNIX</b> <i>install_root</i>/logs/manageprofiles/profile_name_create.log</li> <li>• <b>Windows</b> <i>install_root</i>\logs\manageprofiles\profile_name_create.log</li> <li>• <b>i5/OS</b> <i>user_data_root</i>/profileRegistry/logs/manageprofiles/profile_name_create.log</li> </ul>	<ul style="list-style-type: none"> <li>• Traces all events that occur during the creation of the named profile.</li> <li>• Created when a profile is created during a Complete installation, when using the Profile Management Tool, or when using the manageprofiles command.</li> </ul>	<p><b>INSTCONFFAILED</b> Total profile creation failure.</p> <p><b>INSTCONFSUCCESS</b> Successful profile creation.</p> <p><b>INSTCONFPARTIALSUCCESS</b> Profile creation errors occurred but the profile is still functional. Additional information in other log files identifies the errors.</p>

Table 166. Installation and profile logs for WebSphere Process Server components (continued)

Log	Content	Indicators
<ul style="list-style-type: none"> <li>Linux UNIX <i>install_root</i>/logs/manageprofiles/<i>profile_name_create_error.log</i></li> <li>Windows <i>install_root</i>\logs\wbi\update\<i>profile_name_create_error.log</i></li> <li>i5/OS <i>install_root</i>/logs/wbi/update/<i>profile_name_create_error.log</i></li> </ul>	<p>Logs information extracted from the <i>profile_name_create.log</i> file. This information pertains to any failing configuration actions, validations, wsadmin calls and or any corresponding log files.</p>	N/A
<ul style="list-style-type: none"> <li>Linux UNIX <i>install_root</i>/logs/manageprofiles/<i>profile_name_augment.log</i></li> <li>Windows <i>install_root</i>\logs\manageprofiles\<i>profile_name_augment.log</i></li> <li>i5/OS <i>user_data_root</i>/profileRegistry/logs/manageprofiles/<i>profile_name_augment.log</i></li> </ul>	<ul style="list-style-type: none"> <li>Traces all events that occur during the augmentation of the named profile.</li> <li>Created when a profile is augmented, when using the Profile Management Tool, or when using the <code>manageprofiles</code> command.</li> </ul>	<p><b>INSTCONFFAILED</b> Total profile augmentation failure.</p> <p><b>INSTCONFSUCCESS</b> Successful profile augmentation.</p> <p><b>INSTCONFPARTIALSUCCESS</b> Profile augmentation errors occurred but the profile is still functional. Additional information in other log files identifies the errors.</p>
<ul style="list-style-type: none"> <li>Linux UNIX <i>install_root</i>/logs/manageprofiles/<i>profile_name_augment_error.log</i></li> <li>Windows <i>install_root</i>\logs\wbi\update\<i>profile_name_augment_error.log</i></li> <li>i5/OS <i>install_root</i>/logs/wbi/update/<i>profile_name_augment_error.log</i></li> </ul>	<p>Logs information extracted from the <i>profile_name_augment.log</i> file. This information pertains to any failing configuration actions, validations, wsadmin calls and any corresponding log files.</p>	N/A
<ul style="list-style-type: none"> <li>Linux UNIX <i>install_root</i>/logs/manageprofiles/<i>profile_name_delete.log</i></li> <li>Windows <i>install_root</i>/logs/manageprofiles/<i>profile_name_delete.log</i></li> <li>i5/OS <i>user_data_root</i>/profileRegistry/logs/manageprofiles/<i>profile_name_delete.log</i></li> </ul>	<ul style="list-style-type: none"> <li>Traces all events that occur during the deletion of the named profile.</li> <li>Created when profile deletion is performed with the <code>manageprofiles</code> command.</li> </ul>	<p><b>INSTCONFFAILED</b> Total profile deletion failure.</p> <p><b>INSTCONFSUCCESS</b> Successful profile deletion.</p> <p><b>INSTCONFPARTIALSUCCESS</b> Profile deletion errors occurred but the profile is still deleted. Additional information in other log files identifies the errors.</p>

Table 166. Installation and profile logs for WebSphere Process Server components (continued)

Log	Content	Indicators
<ul style="list-style-type: none"> <li>• <b>Linux</b> <b>UNIX</b> <i>install_root</i>/logs/install/log.txt</li> <li>• <b>Windows</b> <i>install_root</i>\logs\install\log.txt</li> <li>• <b>i5/OS</b> <i>install_root</i>/logs/wbi/install/log.txt</li> </ul>	<ul style="list-style-type: none"> <li>• Logs all installation events relating to WebSphere Application Server Network Deployment.</li> <li>• Created as part the underlying installation of WebSphere Application Server Network Deployment that is installed with WebSphere Process Server.</li> </ul>	<p><b>INSTCONFFAILED</b> Total installation failure.</p> <p><b>INSTCONFSUCCESS</b> Successful installation.</p> <p><b>INSTCONFPARTIALSUCCESS</b> Installation errors occurred but the installation is still usable. Additional information in other log files identifies the errors.</p>
<ul style="list-style-type: none"> <li>• <b>Linux</b> <b>UNIX</b> <i>install_root</i>/logs/installconfig.log</li> <li>• <b>Windows</b> <i>install_root</i>\logs\installconfig.log</li> <li>• <b>i5/OS</b> <i>install_root</i>/logs/wbi/installconfig.log</li> </ul>	<ul style="list-style-type: none"> <li>• Logs configuration actions that run at the end of the installation process to configure components, install system applications, and create Windows shortcuts and registry entries.</li> <li>• Created as part the underlying installation of WebSphere Application Server Network Deployment that is installed with WebSphere Process Server.</li> </ul>	<p>Contains a series of &lt;record&gt; elements that document the configuration actions.</p>
<ul style="list-style-type: none"> <li>• <b>Linux</b> <b>UNIX</b> <i>install_root</i>/logs/wbi/uninstall/log.txt</li> <li>• <b>Windows</b> <i>install_root</i>\logs\wbi\uninstall\log.txt</li> <li>• <b>i5/OS</b> <i>install_root</i>/logs/wbi/uninstall/log.txt</li> </ul>	<p>Logs all uninstallation events relating to WebSphere Process Server.</p>	<p><b>INSTCONFFAILED</b> Total uninstallation failure.</p> <p><b>INSTCONFSUCCESS</b> Successful uninstallation.</p> <p><b>INSTCONFPARTIALSUCCESS</b> The uninstallation wizard successfully removed the core product files, but errors occurred during configuration. Additional information in other log files identifies the errors.</p>
<ul style="list-style-type: none"> <li>• <b>Linux</b> <b>UNIX</b> <i>install_root</i>/logs/wbi/update/updateconfig.log</li> <li>• <b>Windows</b> <i>install_root</i>\logs\wbi\update\updateconfig.log</li> <li>• <b>i5/OS</b> <i>install_root</i>/logs/wbi/update/updateconfig.log</li> </ul>	<p>Logs configuration actions that run at the end of the uninstallation process.</p>	<p>Contains a series of &lt;record&gt; elements that document the configuration actions.</p>
<ul style="list-style-type: none"> <li>• <b>i5/OS</b> <i>%TEMP%</i>\firststeps_i5.log</li> </ul>	<p>Logs errors that can occur when running the First steps console and provides suggestions on how to fix them.</p>	<p>If you experience any unexpected or erroneous behavior from the First steps console, check this log file. It is particularly useful if you run the First steps console from the command line, because of the chance of typographical errors.</p>

---

## Troubleshooting the launchpad application

If the launchpad application does not start, try the following troubleshooting tips.

Restart the launchpad after you make any changes.

- If you are using images from Passport Advantage, make sure that you extract the contents of the images for *WebSphere Process Server V6.2 DVD*, *WebSphere Application Server Network Deployment Supplements V6.1 CD*, and *WebSphere Application Server Toolkit V6.1.1 Disk 1* (if included for your platform) into three separate directories. Extracting the files from the images into the same directory will cause errors to occur. It is recommended that you use three sibling directories. For example, use a set of directories such as the following:

**Note:** i5/OS The installation images obtained from Passport Advantage must be downloaded to a Windows workstation.

– i5/OS  
%/downloads/WPS/image1  
%/downloads/WPS/image2  
%/downloads/WPS/image3

– Linux UNIX  
%/downloads/WPS/image1  
%/downloads/WPS/image2  
%/downloads/WPS/image3

– Windows  
C:\downloads\WPS\image1  
C:\downloads\WPS\image2  
C:\downloads\WPS\image3

- If you can start the launchpad, but selecting a link does not resolve to a page in the launchpad, you might have the media for the wrong operating system in the disk drive. Check the validity of the media.
- Windows If you are attempting to use the Mozilla browser on a Windows system, Internet Explorer might open instead. The launchpad does not recognize Mozilla as the default browser if Internet Explorer is also installed on the same system. The launchpad is fully functional with Internet Explorer, so no action is required.

To create an environment variable that forces the use of Mozilla, issue the following case-specific command at a command prompt:

```
set BROWSER=Mozilla
```

- Ensure that the JavaScript™ function is enabled in your browser.

Linux UNIX Mozilla: Click **Edit > Preferences > Advanced > Scripts & Plugins:**

- Enable JavaScript for: Navigator.
- Allow scripts to ... (Select all boxes.)

Linux UNIX Mozilla Firefox: Click **Tools > Options > Content:**

- Select **Enable Java**.
- Select **Enable JavaScript**.
- Click **Advanced** and Allow scripts to ... (Select all boxes.)

Windows Internet Explorer: Click **Tools > Internet Options > Security > Custom Level for Internet > Scripting > Active scripting > Enable**.



If the launchpad links still do not work after trying these tips, start the component installation programs directly. The locations of these programs are listed in “Options on the launchpad” on page 70.

---

## Troubleshooting a silent installation

If a silent installation using a response file fails, you can examine log files and error messages to determine what went wrong, and make changes to your response file.

### Before you begin

For information about using the response file for a silent installation of WebSphere Process Server, see *Installing silently*.

To troubleshoot a silent product installation, perform the following steps.

### Procedure

1. Check your response file to make sure you are precise when supplying option values in the file so that the installation program can read the values. Incorrect specifications affect the silent interface of the installation wizard. For example, always use the correct case within property names, which are case-sensitive. In addition, always enclose values in double quotation marks. If the error is an incorrect option value, the InstallShield MultiPlatform program displays a warning message that you must confirm and stops the installation.
2. Compare your response file to the `responsefile.wbis.txt` file that is shipped with the product to make the necessary corrections. This file is in the `install_image/WBI` directory. After correcting the file, reinstall.
3. Review commonly found error messages in *Messages: installation and profile creation and augmentation*.
4. Examine log files. See the descriptions of relevant log files listed in *Installation and profile creation log files*.
5. Certain events can prevent InstallShield MultiPlatform from starting the installation wizard silently (for example, not having enough disk space to launch the installation wizard). If your installation fails and there is no information in the installation logs, record entries for events that cause the ISMP program to fail to start the installation wizard.

The syntax of the `install` command for logging such events is as follows:

#### **AIX** On AIX platforms:

```
install -options "/usr/IBM/WebSphere/silentFiles/myresponsefile.txt"  
-silent -log
```

#### **HP-UX** **Solaris** On HP-UX and Solaris platforms:

```
install -options "/opt/IBM/WebSphere/silentFiles/myresponsefile.txt"  
-silent -log
```

#### **i5/OS** On i5/OS platforms:

```
install -options responsefile.wbis.txt -silent -log log.txt @ALL
```

**Note:** **i5/OS** On i5/OS platforms: You must change to the directory that contains the copied DVD image. Example: `/MYDIR/WBI`

#### **Linux** On Linux platforms:

```
install -options "/opt/ibm/WebSphere/silentFiles/myresponsefile.txt"  
-silent -log
```

**On Windows platforms:**

```
install.exe -options "C:\IBM\WebSphere\silentFiles\myresponsefile.txt"
             -silent -log # !C:\IBM\WebSphere\silentFiles\log.txt @ALL
```

6. For other tips on troubleshooting your installation, see [Troubleshooting installation](#).
7. If your profile did not create successfully, see [Recovering from profile creation or augmentation failure](#).

---

## i5/OS installation troubleshooting tips

You can refer to sources that might be helpful in troubleshooting an installation problem for a WebSphere Process Server product on the i5/OS operating system.

WebSphere Process Server offers several methods you can use to troubleshoot problems. Which method you use depends on the nature of the problem. Generally, you use a combination of these methods to determine the cause of a problem and then decide on an appropriate method for its resolution.

### Tip 1: Refer to troubleshooting documentation for WebSphere Application Server for i5/OS

These resources provide general troubleshooting assistance:

- [WebSphere Process Server Release Notes](#).
- [WebSphere Application Server FAQ database](#).
- [WebSphere Application Server for OS/400® newsgroup](#). This System i Technical Support Web-based forum is dedicated to WebSphere Application Server for i5/OS and OS/400.

### Tip 2: Install WebSphere Process Server Version 6.2 for i5/OS

- **Wrong version of i5/OS installed on your server.**

WebSphere Process Server runs on i5/OS V5R4 and V6R1. The product cannot be installed on prior releases of i5/OS.

- **IBM Development Kit for Java V1.5 is not installed.**

Local and remote command-line installations require JDK 1.5. Install product 5722-JV1, option 7 to obtain JDK 1.5. After installing option 7, you should reinstall the cumulative PTF package and Java group PTF to pick up any JDK 1.5 specific fixes.

- **Host servers are not started, or failed to start correctly.**

The installation process requires that the i5/OS host servers be running. To start the host servers, run this command from the CL command line.

```
STRHOSTSVR SERVER(*ALL)
```

If errors other than "Host server daemon jobs unable to communicate using IPX." occur when starting the host servers, follow the instructions in the error message to fix the problem. After the problem is fixed, start the host servers and attempt to install WebSphere Process Server again.

- **Installation fails due to "Object not found" or "Not authorized" errors.**

The user profile of the user installing the product must have \*ALLOBJ and \*SECADM special authorities.

### Tip 3: Start WebSphere Process Server for i5/OS

- **Port conflicts**

Port conflicts may exist if you have multiple stand-alone installations of WebSphere Application Server or multiple installations of stack products that bundle WebSphere Application Server like WebSphere Enterprise Service Bus or WebSphere Process Server on the same physical i5/OS machine.

---

## Diagnosing a failing Ant configuration script

Determine whether a product installation problem on an operating system such as AIX, Linux, Windows, or i5/OS is caused by a failing Apache Ant configuration script.

### Before you begin

Start diagnosing installation problems by looking at the troubleshooting procedure. See Troubleshooting installation. After the installation completes successfully, several Ant scripts configure the product. The following procedure describes what to do when an Ant script fails. When the installation log does not indicate a failure, determine how to correct any problems with failing Ant configuration scripts.

### About this task

The *install\_root/logs/wbi/installconfig.log* file, when present, describes any failure of an Ant script. Determine if any of the following configuration scripts failed. If so, use the configuration script recovery procedures. Use the investigative action to manually verify that the following configuration scripts ran successfully during the configuration of the WebSphere Process Server product. If any script failed, use the recovery action steps to complete the function of the script.

To diagnose failed Ant configuration scripts, perform the following steps.

- Diagnose the failed *90SConfigWBIMigrationScript.ant* configuration script. This script changes the permissions of the following script to 755: *install\_root/bin/wbi\_migration*. This script also replaces the following tokens in the *install\_root/bin/wbi\_migration* script:

From:	To the value that you selected during installation:
<code>\${JAVAROOT}</code>	<i>install_root/java/jre/bin/java</i>
<code>\${MIGRATIONJAR}</code>	<i>install_root/bin/migration/migrationGUI/migrationGUI.jar</i>
<code>\${WASROOT}</code>	<i>install_root</i>
<code>\${PRODUCTID}</code>	<code>\${WS_CMT_PRODUCT_TYPE}</code>

1. Investigative action: Verify that the permissions are 755 for the *install\_root/bin/wbi\_migration.sh* script on Linux and UNIX platforms, *install\_root\bin\wbi\_migration.bat* on Windows platforms, or for the *install\_root/bin/wbi\_migration* script on i5/OS platforms.
2. Recovery action: Issue the following command: `chmod 755 install_root/bin/wbi_migration.sh` on Linux and UNIX platforms, `chmod 755 install_root\bin\wbi_migration.bat` on Windows platforms or `chmod 755 install_root/bin/wbi_migration` on i5/OS platforms.
3. Investigative action: Open the *install\_root/bin/wbi\_migration.sh* on Linux and UNIX platforms, *install\_root\bin\wbi\_migration.bat* on Windows platforms, or *install\_root/bin/wbi\_migration* script on i5/OS platforms in an

editor and verify that real values exist instead of the following values: `${JAVAROOT}`, `${MIGRATIONJAR}`, `${WASROOT}`, and `${PRODUCTID}`.

4. Recovery action: Change the following tokens to actual values in the `wbi_migration` script: `${JAVAROOT}`, `${MIGRATIONJAR}`, `${WASROOT}`, and `${PRODUCTID}`.
- Diagnose the failed `85SConfigNoProfileFirstStepsWBI.ant`. This script copies all files from the `install_root/properties/version/install.wbi/firststeps.wbi` directory to the `install_root/firststeps/wbi/html/noprofile` directory. This script also replaces the following tokens in the `install_root/firststeps/wbi/firststeps.sh` script (Linux, and UNIX), the `install_root\firststeps\wbi\firststeps.bat` script (Windows platforms), or the `install_root /firststeps/wbi/firststeps` script (i5/OS platforms):

From:	To the value that you selected during installation:
<code>\${JAVAROOT}</code>	<code>install_root/java/jre/bin/java</code>
<code>\${PROFILEROOT}</code>	<code>install_root</code>
<code>\${HTMLSHELLJAR}</code>	<code>install_root/lib/htmlshellwbi.jar</code>
<code>\${CELLNAME}</code>	<code>\${WS_CMT_CELL_NAME}</code>

1. Investigative action: Verify that all files are copied from the `install_root/properties/version/install.wbi/firststeps.wbi` directory to the `install_root/firststeps/wbi/html/noprofile` directory.
2. Recovery action: Copy all of the files from the `install_root/properties/version/install.wbi/firststeps.wbi` directory to the `install_root/firststeps/wbi/html/noprofile` directory.
3. Investigative action: Open the `install_root/firststeps/wbi/firststeps` script in an editor. Verify that real values exist instead of the following values: `${JAVAROOT}`, `${PROFILEROOT}`, `${HTMLSHELLJAR}`, and `${CELLNAME}`.
4. Recovery action: Change the following tokens to actual values in the `install_root/firststeps/wbi/firststeps` script. `${JAVAROOT}`, `${PROFILEROOT}`, `${HTMLSHELLJAR}`, and `${CELLNAME}`.

## Results

After you correct any installation errors and any Ant script configuration errors by performing the corrective actions in this procedure, the installation is complete.

## What to do next

Start the First steps console.

---

## Recovering from profile creation or augmentation failure

The Profile Management Tool can experience failures when creating new or augmenting existing profiles. The same can occur using the `manageprofiles` command. If such a failure occurs, first check the log files as described in this topic, then follow the recovery instructions described, depending on the situation.

### Log files

All `manageprofiles` log files are in `install_root/logs/manageprofiles`. Look at the following log files in the order given. Each log file must contain the entry

“INSTCONFSUCCESS.” If a file does not include this entry, a failure was detected. Look at the log files to determine why a failure was encountered and to determine a remedy.

1. The log file *profile\_name\_create\_error.log* (where *profile\_name* is the name of the profile).

**Note:** Look at this file only if you were creating a new profile, not augmenting an existing one.

- **Linux** **UNIX** *install\_root/logs/manageprofiles/profile\_name\_create\_error.log*
- **Windows** *install\_root\logs\wbi\update\profile\_name\_create\_error.log*
- **i5/OS** *install\_root/logs/wbi/update/profile\_name\_create\_error.log*

Search for the text Configuration action succeeded or Configuration action failed.

**Note:** There can be multiple occurrences of Configuration action failed. Investigate and remedy each one. Also review the log files described in the following options, if the profile was created.

**Note:** Additional information is available in the manageprofiles directory in the pmt.log, which logs all events that occur when a default profile is created during a complete installation using the Profile Management Tool.

2. Log file *profile\_name\_augment\_error.log* (where *profile\_name* is the name of the profile).

This log file is located in the following directories:

- **Linux** **UNIX** *install\_root/logs/manageprofiles/profile\_name\_augment\_error.log*
- **Windows** *install\_root\logs\wbi\update\profile\_name\_augment\_error.log*
- **i5/OS** *install\_root/logs/wbi/update/profile\_name\_augment\_error.log*

Search for the text Configuration action succeeded or Configuration action failed.

**Note:** There can be multiple occurrences of Configuration action failed. Investigate and remedy each one. Also review the log files described in the following options, if the profile was created.

**Note:** If you want to know the status of a profile you created during installation, run the following commands:

- **Linux** **UNIX** *install\_root/bin/logProfileErrors.sh*
- **Windows** *install\_root\bin\logProfileErrors.bat*
- **i5/OS** *install\_root/logProfileErrors*

3. Individual profile template action log files.

If you discovered false values in the log files described in the preceding options, review the log files in the following directories:

- **i5/OS** *user\_data\_root/profileregistry/logs* on i5/OS systems
- **Linux** **UNIX** *install\_root/logs/manageprofiles/profile\_name* on Linux and UNIX systems
- **Windows** *install\_root\logs\manageprofiles\profile\_name* on Windows systems

where *profile\_root* or *user\_data\_root* is the installation location of the profile. These log files do not follow a consistent naming convention, but typically, each is the name of the Apache Ant script that failed followed by `.log`. For example, suppose the following entry is in the *profile\_name\_augment.log* file:

```
<messages>Result of executing  
E:\o0536.15\profileTemplates\default.wbi\core\actions\saveParamsWbiCore.ant  
was:false</messages>
```

First look at the surrounding entries in the *profile\_name\_augment.log* file in the *install\_root/logs/manageprofiles* directory. If you cannot determine the cause of the failure from the surrounding entries, look for the corresponding log file for any failing Ant script entries. In this case, the log file created by the `saveParamsWbiCore.ant` script is `saveParamsWbiCore.ant.log`. Look at that file to investigate why the failure occurred.

## Recovery for creation failure

After you determine why profile creation failed and address the cause of the failure, you can try to create the profile again.

**Note:** When you create a profile, it first creates a WebSphere Application Server profile and then augments it with WebSphere Process Server profile templates to create a WebSphere Process Server profile. Even if you encountered a profile creation failure, a profile can exist that does not have all the needed augmentations.

To determine if the profile exists, run the *install\_root/bin/manageprofiles -listProfiles* command. If the profile name you used for creation does not exist, you can recreate the profile. If the profile name you used for creation exists, then the profile was created and you have encountered an augmentation failure. For tips on recovering from an augmentation failure, see “Recovery for augmentation failure.”

## Recovery for augmentation failure

After you determine why profile augmentation failed and address the cause of the failure, you can try to augment the existing profile again to successfully create a complete WebSphere Process Server profile by following these steps:

1. Start the Profile Management Tool and, instead of creating a new profile, choose to augment an existing profile.
2. Choose the profile you were working with, and enter the correct information for it.

**Note:** Some of the augmentations might have completed successfully the first time you ran the Profile Management Tool. As a result, you might not see all of the panels that you saw the first time you tried to create the profile. This is because the Profile Management Tool detects which remaining augmentations must be completed and displays only the necessary panels.

---

## Troubleshooting the Business Process Choreographer configuration

For information on how to solve problems relating to the configuration of Business Process Choreographer and its Business Flow Manager or Human Task Manager components, go to the WebSphere Process Server for Multiplatforms, version 6.2, information center and review the topics under **Installing and configuring**

**WebSphere Process Server > Troubleshooting installation and configuration > Troubleshooting the Business Process Choreographer configuration.** You can also find this information in the *Business Process Choreographer PDF*.





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