WebSphere® WebSphere Process Server for z/OS

IBM

Version 6.1.0

Installing and Configuring WebSphere Process Server

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Note

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

1 February 2008

This edition applies to version 6, release 1, modification 0 of WebSphere Process Server for z/OS (product number 5655-N53) and to all subsequent releases and modifications until otherwise indicated in new editions.

To send us your comments about this document, send an e-mail message to doc-comments@us.ibm.com. We look forward to hearing from you.

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WebSphere Process Server documentation (in PDF format)

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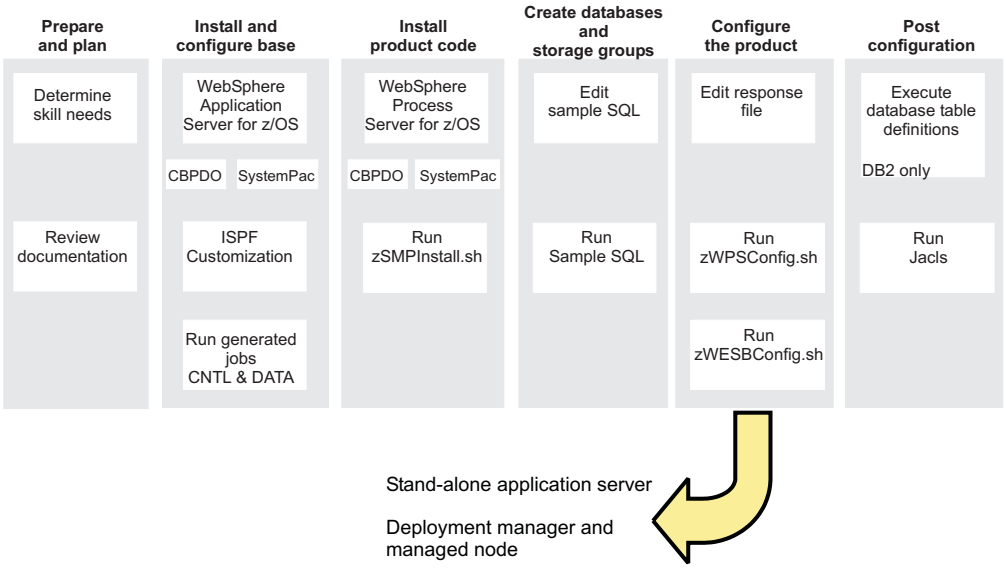
This article introduces the WebSphere Process Server for z/OS installation and configuration task flow for the supported configurations.

Before you begin

This article introduces the context of installing and customizing IBM® WebSphere Process Server, including the tasks you need to perform before and after installing.

The following diagram illustrates a high-level task flow for installing and configuring the product.



To create a complete, customized WebSphere Process Server application serving environment, you need to install the product binaries, create WebSphere Process Server definitions, augment your user profile as needed and bring up your server.

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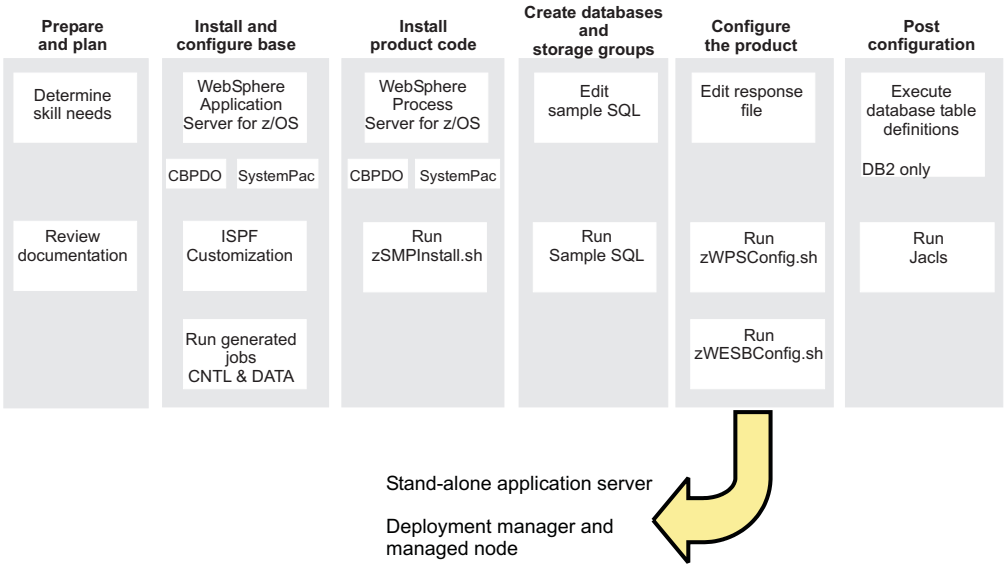

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Preparing to install

A WebSphere Process Server for z/OS installation and configuration includes planning activities for WebSphere Process Server as well as WebSphere Application Server for z/OS.

About this task

The sections below list the tasks that you need to perform and provide references to the documentation resources that can help you install and configure WebSphere Process Server.

You must have made the following considerations to implement your plan:

Task description	Information center resource
Determine the skills that you need.	See Determining your skill needs for information.
Determine the system requirements.	See the System requirements web site for WebSphere Process Server and select *Version 6.0.1 Process Server for z/OS*. WebSphere Process Server for z/OS installs on top of WebSphere Application Server for z/OS. For a list of system requirements see, Hardware and software requirements in the *WebSphere Application Server for z/OS Information Center*.
Understand security options and prepare for securing your system.	Security options are set in WebSphere Application Server for z/OS. See Security planning overview information in the *WebSphere Application Server for z/OS Information Center*.

Task description	Information center resource
Implement Workload Management in goal mode on each z/OS system if necessary.	See Workload management (WLM) plan strategy in the *WebSphere Application Server for z/OS Information Center*.
Implement Resource Recovery Services (if not already implemented) on each z/OS system.	See Preparing Resource Recovery Services in the *WebSphere Application Server for z/OS Information Center*.
Plan for your performance and monitoring systems.	See Monitoring end user response time in the *WebSphere Application Server for z/OS Information Center*.
Plan and define your problem diagnosis procedures.	See Problem diagnostic plan strategy in the *WebSphere Application Server for z/OS Information Center*.
Consider automatic restart management before you install WebSphere Application Server for z/OS.	See Automatic restart management in the *WebSphere Application Server for z/OS Information Center*.
Perform planning tasks in preparation for loading the program materials from the installation media onto z/OS.	For information on planning tasks associated with unloading the WebSphere Application Server for z/OS installation media, see Planning for installation in the *WebSphere Application Server for z/OS Information Center*.

Depending on environment configuration variables and how you configured your response file, you may need to perform additional configuration tasks to complete the WebSphere Process Server for z/OS configuration.

Installing the documentation

To view IBM product documentation in the viewer, you must install new or updated document plug-ins into the `eclipse/plugins` folder of the IBM WebSphere Process Server help system. The help system works with any information that has been packaged as an Eclipse document plug-in, including IBM product document plug-ins. IBM product plug-in folders are easily identified because they use a common naming convention (com.ibm.*xxx*.doc). You can install and run a server copy of the WebSphere Process Server for z/OS information center on z/OS. Alternatively, you can install and view the information center on Linux® or Windows®.

Before you begin

The documentation is packaged as Eclipse document plug-ins and must be viewed using the help system. The help system (or viewer) and document plug-in format are based on an open source approach developed by the Eclipse Project. IBM product document plug-ins are contained in folders that follow a consistent naming convention (com.ibm.*xxx*.doc).

A version of the help system is included on the supplemental Message Service Client CD, which is included with the WebSphere Process Server for z/OS product. For instructions on how to install the help system on Linux or Windows, see http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r1mx/topic/com.ibm.websphere.wps.610.doc/doc/tins_installingthedocumentation.html.

The help system is packaged on the WebSphere Process Server for z/OS product tape. The information in this topic assumes that the help system has been loaded onto the z/OS server as part of the WebSphere Process Server for z/OS product install.

Be aware of the following requirements and considerations if you want to install and run a server copy of the WebSphere Process Server for z/OS information center:

- Support for the information center on z/OS is only offered in server mode for remote access using a browser.
- The information center uses a JRE. If you want to run an information center on z/OS, you need to use the JRE provided with the operating system.
- Make sure that your systems administrator has given your user ID permission to work with files on the z/OS system.
- The first time you perform a search in the information center, there is a delay where the pregenerated search indexes are unzipped and any additional files are indexed. In a server environment, the indexing takes place once for every browser locale that performs a search in the information center. For example, if a user has a browser locale of en_gb and another user has a locale of en_us, both users will create a search index.
- You can choose to download PDF versions of the documentation from the WebSphere Process Server for z/OS library page as another option for working with the information offline.

Note: If you already have an IBM WebSphere Process Server help system, you can opt to install only the WebSphere Process Server for z/OS document plug-in and view the documentation within that tool.

About this task

Installing the document plug-ins

To install document plug-ins, complete the following steps:

Procedure

1. Perform the following steps to install the help system:
   a. Change to the following directory: `cd` *`installation_file_system_root`*`/zos.iehs/lib`.
   b. Locate the file IBM-Help-zOS.tar.
   c. Create the directory into which you will extract IBM-Help-zOS.tar.
   d. Extract the file into a directory of your choosing by using the command: `tar -xvf IBM-Help-zOS.tar -C directory_name`
2. Obtain the document plug-ins from the IBM product Web page http://www.ibm.com/software/integration/wps/library/infocenter/.
3. Download the document plug-ins that you require. You can download the zip file to a local directory on your machine and then use FTP to transfer the file to a directory on the z/OS system. These commands maintain the directory structure. Ensure that the plug-ins, when extracted, are placed in the `eclipse/plugins` directory of the help system.
4. Change the permissions on the IC_start.sh and IC_end.sh scripts so that you have permission to edit and execute the files that start and stop the information center.

5. Edit the startup file IC_start.sh, that is provided in the `ibm_help` directory, to point to the location of Java™. For example, you could add the following statements to the file: `export PATH=/usr/lpp/java142/J1.4/bin:$PATH`, where `/java142/J1.4/bin:$PATH` is the location of Java. Eclipse requires Java™ 1.4.2 to run. This version is provided with the information center on all platforms except z/OS.
6. Optional: Change the -port parameter, if you do not want to use the default value. The port number is specified in the file IC_start.sh and the default value is 8888.
7. Start the information center server:
   a. Run the file IC_start.sh. You can run the information center as a background task. This means that even if you log off the workstation or server, the information center will continue to run. Use the following command: `./IC_start.sh &`.
   b. To verify that the information center has started on a remote computer, open a browser and enter a URL using the name of the server and the port number that is specified in the file IC_start.sh. For example, you could specify: `http://winmvs26.site.company.com:8888`.
8. To stop the information center (for example, to add or remove documentation plug-ins):
   a. Run the file IC_end.sh.

Overview of installation and configuration

The WebSphere Process Server for z/OS installation and configuration is tightly integrated with, and dependent on, the installation and configuration of WebSphere Application Server for z/OS. The task is, therefore, a multiphase process that can span multiple roles.

In order to create a WebSphere Application Server for z/OS server, the default profile that is created when WebSphere Application Server for z/OS is installed must be augmented into a WebSphere Process Server profile. This process adds WebSphere Process Server functionality to the existing WebSphere Application Server functionality.

Unlike many products that are installed on z/OS, you do not use ISPF dialogs to install and configure WebSphere Process Server. Instead, you run two shell scripts that perform tasks such as creating symbolic links between the product installation file system and the product configuration file system.

Installation

There are two main phases when installing WebSphere Process Server for z/OS:

Phase 1

The contents of the installation media are loaded on to the z/OS system.

This first phase is the responsibility of a system programmer who plans, maintains, and controls the use of the operating system to improve the overall productivity of an installation.

The result of completing the first phase of the installation is a read-only installation file system, which can be HFS (Hierarchical File Structure) or zFS (z-Series File System).

Phase 2

The installation script (zSMPInstall.sh) is run to create the required definitions that prepare the product for use.

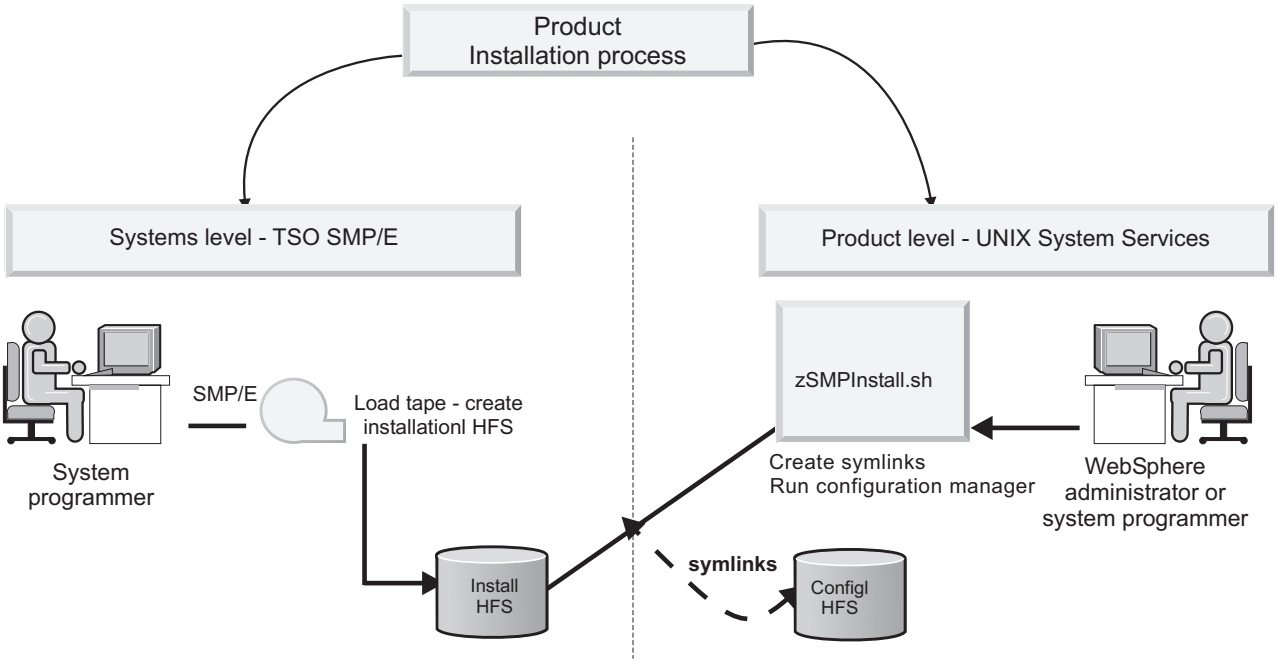
This second phase is the responsibility of a product administrator.

When this phase of the installation is complete, the following events have taken place:

- Symbolic links have been created from the WebSphere Application Server for z/OS configuration file system to the WebSphere Process Server for z/OS installation file system.
- Ant script actions have been invoked that update the administrative console with the WebSphere Process Server for z/OS function.
- applyPTF processing has run as required.

The configuration file system is a writable file system that holds customized configuration documents and files for the configured product installation. The configuration file system contains the application server root directories (/AppServer and /DeploymentManager) and certain symbolic links that are associated with them. Each different node type under the configuration file system requires its own cataloged procedures under z/OS. By default the configuration file system is mounted at /WebSphere/V6R1.
The configuration file system has symbolic links to the WebSphere Process Server installation file system (by default, /usr/lpp/zWPS/V6R1). The symbolic links point to read-only files from the installation file system, such as JAR files and shell scripts.

The relationship between the people involved in the installation, the system programmer and the product administrator, and the installation phases is illustrated in the following diagram:



The product installation is not complete until both phases (loading the product code and running the installation script) have been performed successfully.

After completing the product installation, the WebSphere administrator can begin to configure the product for use.

Configuration

After completing both stages of the installation process, you can configure WebSphere Process Server for z/OS. Prior to configuring WebSphere Process Server, you need to create the appropriate database and storage groups for some database types. For information on how to create the databases and storage groups, see "Creating the DB2 databases and storage groups using DButility.sh, SPUFI, or DSNTEP2" on page 41.

The product configuration script (zWPSConfig.sh or zWESBConfig.sh) is run from a command line.

There are several configuration options, which on z/OS are driven by the WebSphere Process Server for z/OS configuration script's use of response files. The content in the response file is used to augment the WebSphere Application Server for z/OS profile with WebSphere Process Server for z/OS configuration data.

Determining your skill needs

In assembling your project team, consider the skills you need to implement WebSphere Process Server for z/OS.

In assembling your project team, you should consider the skills you need to implement WebSphere Application Server for z/OS. This article discusses the recommended skill set necessary to support the following configurations:

- Basic configurations
- Production environments

Documentation to support the z/OS skills described here can be found at this web site: z/OS Internet Library.

For basic configurations:

Below are the recommended skills necessary to support a basic configuration:

- z/OS UNIX® System Services and the hierarchical file system (HFS) to set up a functional HFS and UNIX® environment.
- eNetwork Communications Server (TCP/IP) or equivalent to configure connectivity for WebSphere Application Server for z/OS clients and servers.
- Resource recovery services (RRS) to implement resource recovery services and to support two-phase commit transactions.
- Security Server (RACF®), or the security product you use to authenticate WebSphere Application Server for z/OS clients and servers, and authorize access to resources.
- Secure Sockets Layer (SSL) to enable security if desired (recommended).
- SMP/E and JCL.
- System logger to set up log streams for RRS and the WebSphere Application Server for z/OS error log.
- Webserver to support HTTP clients if desired.
- Workload management (WLM).
- Java™ and WebSphere Application Server tooling to support application development and deployment.

Depending on the needs of the applications you deploy, you might also need skills to configure the resource managers your applications require, such skills might include CICS®, DB2®, IMS™, and MQ.

For production environments:

As you move your system toward a production environment, you must have the following system skills available:

- Automatic restart management (ARM).
- System Automation, if you have it installed, or whichever automation you prefer to use.
- Sysplex, if you plan to use WebSphere Application Server for z/OS in a cell that spans systems.
- Sysplex Distributor (part of eNetwork Communications Server), if you plan to create a high availability environment.
- RMF™ or other performance measurement systems.

Stand-alone configuration

A stand-alone configuration, also known as a base configuration, is the simplest configuration you can use to deploy and run WebSphere Process Server for z/OS.

A stand-alone configuration of WebSphere Process Server for z/OS consists of a single node running an application server and one daemon server in a single z/OS® system or LPAR.

The application server runs the administrative console, which you can use to deploy and run additional applications. The application server is managed independently from other servers.

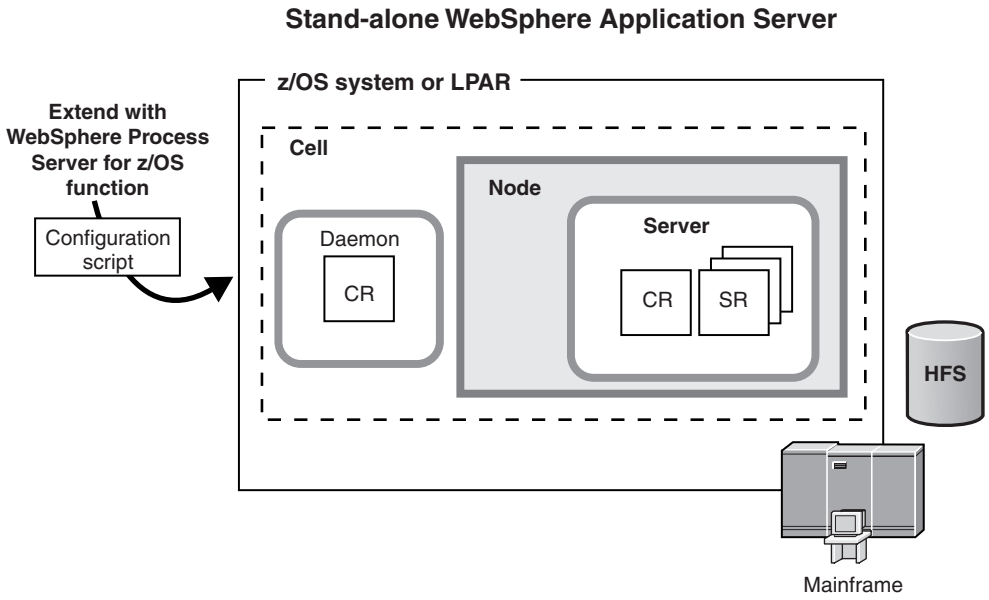
The daemon server is a unique server that runs constantly and has one controller region, which distributes server workload.

You can configure multiple application servers to run in a node. However, each server is isolated from the others. Each application server contains these items:

- Its own root file system, cell, node, TCP ports, and administration interface
- Its own administration policy for its own cell domain
- A separate flat file system to store its configuration information, in a set of XML and XMI files

Application servers in a node do not use workload distribution or common administration. You can define additional application servers in a stand-alone cell, but you cannot control them using the administrative console.

The following figure shows a stand-alone configuration which is made up of a single node running an application server and one daemon server in a single z/OS® system or LPAR:



The following figure shows a stand-alone configuration which is made up of a single node running an application server and one daemon server in a single z/OS® system or LPAR:

You must have the following configuration in place before you can create a stand-alone configuration:

- WebSphere Application Server for z/OS must be installed as the stand-alone server.
- Your UNIX user ID must have permission to access the UNIX shell to run the installation and augmentation scripts from inside the shell. Gaining permission to access the shell involves making modifications to your RACF® profile and creating a home directory in the UNIX shell. The home directory is where you begin a UNIX session, and where you store environment variable files that are required to run programs. You can also use the home directory as the main directory for storing data.
- The WebSphere Process Server for z/OS product code must be loaded onto the system from tape, so that you can use it to install and configure WebSphere Process Server for z/OS.

Advantages of a stand-alone configuration

Use a stand-alone configuration if you want to isolate the test and production systems in your company. Isolating test and production systems is important because, if the systems are not isolated, applications that are being tested in the test system might cause errors that can affect other applications on which your company depends.

You might choose to use a stand-alone configuration in the following scenarios:

- Your company is very large and you want to give each of your test groups an LPAR in which to run applications.
- Your company runs production and test environments on one zSeries® system. For example, you might give the test group access to one LPAR and give the production group access to all of the other LPARs.

- Your company is deciding whether to use WebSphere Process Server for z/OS and you want to provide a small amount of resource for feasibility testing.

The other type of configuration that you can use for WebSphere Process Server for z/OS is a network deployment configuration, which consists of multiple servers. A network deployment configuration is intended for a more sophisticated environment, and improves scalability and security throughout the system.

Network deployment configuration

An initial network deployment configuration consists of a deployment manager server that has a daemon for the z/OS® system on which the deployment manager runs. After a network deployment cell is created, you can add application server nodes by creating and federating new empty managed nodes, or by federating stand-alone application server nodes into the network deployment cell.

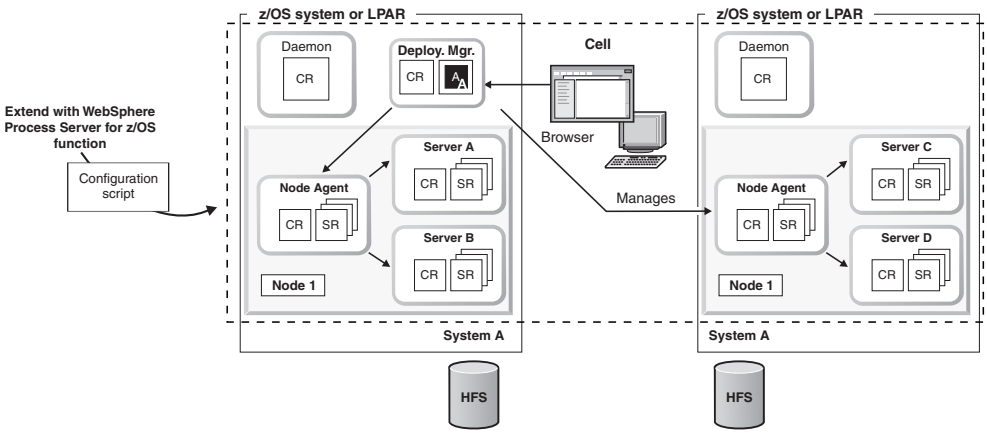
To install WebSphere Process Server into an network deployment environment, you must configure both a deployment manager node and an empty managed node before federation. Then to perform federation you run the job BBOWMNAN. When you federate an empty node to the deployment manager it becomes a managed node because it is being administered by the deployment manager. The managed node contains a node agent but no application servers. You can add an application server or cluster to the node with the administrative console.

The deployment manager runs the administrative console applications and is used for centralized administration tasks, such as managing the configuration of all of the managed nodes in its cell and deploying applications to selected servers and clusters in the cell. The deployment manager runs on one node, and application servers run in different nodes.

A basic network deployment configuration is made up of the following components:

- A deployment manager server running in a separate node that runs the administrative console application, which you can use to deploy applications.
- One or more application server nodes on each z/OS target system hosting portions of the cell. Each node consists of a node agent and some number of application servers. Each node must be federated into the deployment manager cell.
- A single location service daemon on each z/OS system. One daemon server must exist for each cell, which runs constantly, checking and distributing server workload.
- A DB2® database. DB2® Universal Database™ version 8.1 is the default database type for network deployment environments.

The following figure shows an network deployment configuration that consists of a deployment manager server that has a daemon for the z/OS system on which the deployment manager runs. The deployment manager is administering four servers, A,B,C, and D via two node agents:



The following figure shows an network deployment configuration that consists of a deployment manager server that has a daemon for the z/OS system on which the deployment manager runs. The deployment manager is administering four servers, A,B,C, and D via two node agents:

You must have the following configured before you can create a network deployment topology:

- WebSphere Application Server for z/OS must be configured on the server with a deployment manager node and an empty managed node that has not been federated to the deployment manager. It is important that the empty managed node is not federated before running the installation script. You will federate the node after you have augmented it to contain WebSphere Process Server for z/OS configuration data.
- Your UNIX® user ID must have permission to access the UNIX shell because this is where you run the installation and augmentation scripts. Providing access involves making modifications to your RACF® (security) profile and creating a home directory within the UNIX shell. The home directory is where you begin a UNIX session, and where you store environmental variable files that are required to run programs. You can also use the home directory as the main directory for keeping your work data.
- The WebSphere Process Server for z/OS product code must have been loaded onto the system from tape, so you can use it to install and configure WebSphere Process Server for z/OS.

When configuring a deployment manager node, keep the following in mind:

- When allocating target data sets it is possible, though not recommended, to use the same target data sets that you may have used for a stand-alone application server node. The job names for each configuration are very similar to one another, and if you use the same target data sets, you may find it difficult to keep the two sets of jobs separate. Therefore, create a new set of target data sets for the deployment manager node and keep the two sets of jobs separate from one another.
- Share the root of the file system across all processors apart from the configuration of the deployment manager in a file system on a generic system mount point.

It is very important that you plan your WebSphere Process Server for z/OS configuration before you start, especially when configuring a network deployment

cell. There are many choices and you must understand the factors that influence these choices to make the correct decisions during the installation process.

Advantages of a network deployment configuration

- One of the main advantages of a network deployment configuration is availability. When the configuration contains multiple LPARs, you can reduce single points of failure and maintain availability during planned and unplanned outages.
- You can configure how messages are delivered. For example, you can specify secure assured delivery where messages are guaranteed not to get lost and are transported securely, or best-effort where messages might get lost in case of a system failure.
- You can set up a network deployment cell to have several servers that host mediation modules. Mediation modules provide scalability (the ability to handle more client connections) and greater message throughput.
- You can create server clusters. With server clusters you can manage a group of servers together and enable those servers to participate in workload management.
- Your bus environment might be made up of several stand-alone and deployment manager profiles, to provide separate administrative domains for different departments or to separate test and production facilities. Each profile has its own SCA.SYSTEM service integration bus.

Related reference


zSMPInstall.sh script

Use the zSMPInstall.sh script to modify a WebSphere Application Server profile either to install or uninstall WebSphere Process Server. Run the script on each node in your configuration, including the deployment manager.


Response file values

When you have run the installation jobs which install the WebSphere Process Server for z/OS product definitions, sample response files are installed into the installation file system. Copy and edit these response files according to the configuration that you want to achieve, and pass in the response file when you run the augment script.


zWPSConfig.sh and zWESBConfig.sh scripts

Use these scripts to configure and augment the WebSphere Process Server for z/OS installation. Run the script on each node in your configuration, including the deployment manager.


JCL for installing WebSphere Process Server into a deployment manager node


JCL for augmenting a deployment manager node


JCL for installing WebSphere Process Server into an empty node

JCL for augmenting an empty node

Installing WebSphere Application Server

Before you can install WebSphere Process Server for z/OS, you must install and configure WebSphere Application Server for z/OS.

About this task

The procedure for installing WebSphere Application Server differs depending on the type of installation that you choose.

Stand-alone server configuration

If you are creating a stand-alone server configuration for WebSphere Process Server, you must first create a stand-alone application server configuration. See Creating a stand-alone application server cell in the WebSphere Application Server information center for more information.

Creating a WebSphere Application Server stand-alone server configuration provides you with the default profile that you will augment with WebSphere Process Server configuration data.

See Building a practice WebSphere Application Server for z/OS cell for information about creating a practice stand-alone configuration.

Network Deployment server configuration

If you are creating a Network Deployment configuration, you must create a deployment manager node in WebSphere Application Server. See Creating a Network Deployment cell in the WebSphere Application Server infocenter for more information.

Creating a WebSphere Application Server deployment manager creates the default WebSphere Application Server profile that you will augment with WebSphere Process Server functionality.

Next, install the WebSphere Process Server product code on top of WebSphere Application Server. See "Loading the product code from the installation media on to z/OS."

Loading the product code from the installation media on to z/OS

The product code for WebSphere Process Server for z/OS is installed using either an IBM SystemPac® or ServerPac or an IBM Custom-Built Product Delivery Option (CBPDO).

Before you begin

You must complete the WebSphere Application Server for z/OS installation and customization before you start working with WebSphere Process Server. For more information, see "Installing WebSphere Application Server."

About this task

In a z/OS environment, loading the product code from installation media on to the system is usually the responsibility of a system programmer.

- *Using an IBM SystemPac or ServerPac*. An IBM SystemPac or ServerPac consists of loadable product libraries and corresponding SMP/E data sets. The instructions for how to load the product code using a SystemPac or ServerPac are supplied with the SystemPac or ServerPac.
- *Using an IBM Custom-Build Product Delivery Offering .A CBPDO contains SMP/E relative files and maintenance for one or more products. The instructions for how to load the product code using a CBPDO are supplied in the WebSphere Process Server Program Directory.*

What to do next

When you have loaded the product code from the installation media and the product data sets are defined on the system, the system is ready for the product administrator to run the installation script (zSMPInstall.sh). See *Running the installation script* for more information.

Using an IBM SystemPac or ServerPac

An IBM CustomPac (SystemPac, ServerPac or ProductPac®) is a set of preloaded product data sets bundled with an IBM dialog that is used to load the data sets to disk and perform initial customization.

About this task

In general, SMP/E work is not required during installation of a CustomPac offering. Instead, SMP/E data sets that correspond to the CustomPac service level are loaded onto the disk along with the product data sets. You can still use SMP/E to install preventive and corrective service after CustomPac installation.

If you use an IBM SystemPac or ServerPac, follow the instructions in the copy of *ServerPac: Installing your Order* that ships with your SystemPac or ServerPac.

See *ServerPac: Using the Installation Dialog (SA22-7815)* for information about the ISPF dialog used to install a SystemPac or ServerPac.

For further information, see the following information sources:

- Web site at http://www.ibm.com/software/webservers/appserv/zos_os390/support
- PSP buckets at http://www14.software.ibm.com/webapp/set2/psp/srchBroker
- IBM Software Support Center Web site at http://www-306.ibm.com/software/support/.

When you install from an IBM SystemPac or ServerPac, you must ensure that the following requirements have been met:

- Choose a product data set naming convention that allows you to keep and maintain at least two copies of product libraries for maintenance purposes. See “Planning for product data sets” on page 15 for more information.
- If you are installing from a driving system, make sure the maintenance level of the target system meets requirements for WebSphere Process Server for z/OS.
- When installation is complete, make sure the product data sets are available to your z/OS target system or systems and the WebSphere Process Server installation file system is mounted at /usr/lpp/zWPS/V6R1 or a similar mount point of your choice on each target system.

Using an IBM Custom-Build Product Delivery Option

An IBM Custom-Build Product Delivery Option (CBPDO) is a set of product tapes for one or more IBM software products that is bundled with cumulative service. Install the products and service on your system using SMP/E.

About this task

If you use CBPDO, follow the instructions in the copy of *WebSphere Process Server for z/OS: Program Directory* (GI11-2880-00) which ships with your order.

You can download the Program Directory in PDF format from the WebSphere Process Server for z/OS download page, at http://www-306.ibm.com/software/integration/wps/library/infocenter/.

The Program Directory includes instructions on how to load the product code from the installation media on to your z/OS system. The Program Directory also provides instructions about how to set up the installation file system (using HFS or zFS) so that you can run the WebSphere Process Server installation script (zSMPInstall.sh).

For further information, see the following information sources:

- WebSphere Application Server for z/OS server product support Web site at http://www.ibm.com/software/webservers/appserv/zos_os390/support
- PSP buckets at http://www14.software.ibm.com/webapp/set2/psp/srchBroker
- IBM Software Support Center web site at http://www-306.ibm.com/software/support/.

When you install from an IBM SystemPac or ServerPac, you must ensure that the following requirements have been met:

- Choose a product data set naming convention that allows you to keep and maintain at least two copies of product libraries for maintenance purposes. See "Planning for product data sets" for more information.
- If you are installing from a driving system, make sure the maintenance level of the target system meets requirements for WebSphere Process Server for z/OS.
- When installation is complete, make sure the product data sets are available to your z/OS target system and the WebSphere Process Server installation file system is mounted at /usr/lpp/zWPS/V6R1 or a similar mount point of your choice on each target system.

Planning for product data sets

WebSphere Process Server for z/OS product code resides in partitioned data sets (which contain the product data sets) and hierarchical file system directories (which contain the product directory and its subdirectories). The default high-level qualifier for the product data sets is BPZ.

Product data set contents

The WebSphere Process Server product data sets are divided into target data sets (used during product customization and execution) and distribution data sets (used to "back off" maintenance if necessary). In the following information, *wps_hlq* is used to represent the high-level data set name qualifier for a particular set of WebSphere Process Server for z/OS product data sets.

WebSphere Process Server has the following target data sets:

wps_hlq.**SBPZEXEC**
: REXX™ execution scripts

wps_hlq.**SBPZJCL**
: JCL for installation jobs

WebSphere Process Server has the following distribution data sets:

wps_hlq.**ABPZANT**
: installation file system files (ASCII)

wps_hlq.**ABPZEBCD**
: installation file system files (EBCDIC)

wps_hlq.**ABPZEXEC**
: REXX executables

wps_hlq.**ABPZJCL**
: JCL for installation jobs

See the WebSphere Process Server for z/OS Program Directory (GI11-2880-00) for allocation information about each target data set and distribution data set. Updates to this information are included in the Preventive Service Planning (PSP) bucket for each release of WebSphere Process Server for z/OS. You can find the Preventive Service Planning (PSP) bucket at http://www14.software.ibm.com/webapp/set2/psp/srchBroker.

Product data set naming convention

Certain WebSphere Process Server for z/OS data sets must have the same high-level data set name qualifier in order for the product to function correctly. Product maintenance and migration is easier if all product data sets have the same high-level qualifier.

Alternatively, to continue to run WebSphere Process Server for z/OS while applying maintenance, you must have at least two copies of the product data sets: one for the running application execution environment and one to which service is applied.

Choose a middle level qualifier for each separate release and maintenance level of WebSphere Process Server for z/OS. This middle level qualifier can reflect a very simple production or test distinction; for example ″BPZ.V6PROD.*″ or ″BPZ.V6TEST.*″. Alternatively, the middle-level qualifier can include specific service level information; for example ″WPS.W610FP1.*″ or ″WPS.W610FP2.*″.

There are many places where you must specify the product data set names, so, to avoid confusion, use the simplest data set naming scheme that accomplishes your maintenance goals.

WebSphere Process Server file system directories

WebSphere Process Server for z/OS product and installation code resides in z/OS partitioned data sets (the product data sets) and z/OS USS file system directories (either HFS or zFS file systems).

WebSphere Process Server installation file system

All WebSphere Process Server for z/OS product files reside in the installation file system directory and its subdirectories. The installation file system for WebSphere Process Server is defined when you unload the product code from the installation media (Phase 1 of the installation process). The installation file system is typically mounted read-only.

The default location of the WebSphere Process Server installation file system is /usr/lpp/zWPS/V6R1.

The location of the WebSphere Process Server installation file system is different from the location of the WebSphere Application Server installation file system; the default location of the WebSphere Application Server installation file system is /usr/lpp/zWebSphere/V6R1.

The product directory and all of its subdirectories must reside in the same hierarchical file system (HFS) or zSeries file system (zFS) data set. The installation jobs and program directory assume that a data set is allocated to be used for WebSphere Process Server, separate from the z/OS root or version data set. The sample jobs to create either a zFS or HFS file system are supplied in hlq.SBPZJCL, members BPZALZFS and BPZALHFS. One of these two jobs is run during installation by your system programmer.

Configuration file system

Each WebSphere Process Server for z/OS application serving environment (stand-alone application server node or Network Deployment cell) has configuration files in one or more WebSphere Application Server configuration directories. These configuration directories contain symbolic links to files in the product directory.

The default location of the configuration directories is /WebSphere/V6R1, so the location of the Deployment Manager configuration files might be /WebSphere/V6R1/DeploymentManager/config/bin.

Related information

http://publib.boulder.ibm.com/infocenter/zoslnctr/v1r7/topic/com.ibm.zconcepts.doc/zconcepts_177.html

Installing the product

The installation script creates the WebSphere Process Server for z/OS definitions that enable the product for use.

Related reference

zSMPInstall.sh script

Use the zSMPInstall.sh script to modify a WebSphere Application Server profile either to install or uninstall WebSphere Process Server. Run the script on each node in your configuration, including the deployment manager.

JCL for installing WebSphere Process Server into a deployment manager node

JCL for installing WebSphere Process Server into an empty node

Installing the server

Running the installation script, zSMPInstall.sh, creates the code definitions needed to run WebSphere Process Server for z/OS on a WebSphere Application Server for z/OS server. If you are creating a Network Deployment configuration, you must run the installation script on each of the nodes that will belong to the Network Deployment cell.

Before you begin

Before you install the server, you must perform the following steps:

1. Install and customize WebSphere Application Server for z/OS.
2. Load the product code from the installation media on to the z/OS system.
3. Ensure that you have administrator authority on the system so that you can run the installation script.
4. If you are running the installation script from TSO OMVS, ensure that the region size for the TSO user ID is large enough to run Java (typically 150M).
5. Back up the file system on the server, so that you can restore it if necessary. For more information, see Backing up the WebSphere Application Server for z/OS system.
6. Ensure that the application server is stopped. For more information, see Starting and stopping the server.

For more information about the installation shell script, see zSMPInstall.sh script.

Optionally, you can use JCL scripts to install the WebSphere Process Server product definitions instead of running the zSMPInstall.sh script manually. For sample JCL scripts, see JCL for installing WebSphere Process Server into a deployment manager node and JCL for installing WebSphere Process Server into an empty node.

Procedure

1. Optional: You might need to increase the OMVS time limit to allow the product configuration script time to complete. To increase the OMVS time limit so the session will not time out, enter the following command in the SPSF console:

   ```
   SETOMVS MAXCPUTIME=86400
   ```

2. In OMVS, switch to the administrator user ID. For example:

   ```
   su wsadmin
   ```

3. Change to the directory in which you want to run the installation script: For example:

   ```
   cd /usr/lpp/zWPS/V6R1/zos.config/bin
   ```

4. Add the current directory to your PATH so that you can run the installation script:

   ```
   export PATH=.:$PATH
   ```

5. From the command prompt, run the installation script. For example:

   ```
   zSMPInstall.sh -smproot /usr/lpp/zWPS/V6R1 -runtime
    /usr/lpp/zWebSphere/V6R1/AppServer -install
   ```

   Optionally, you can redirect the standard out messages to a file instead of displaying it in the console but these instructions assume that you are viewing the standard out messages while the script runs.

   If you are uncertain about the progress of the running script, refresh the console display and check the last few messages.

When the installation script has finished running, the following messages (or similar) are displayed before you are returned to the shell prompt:

```
CWPIZ0256I: set up configuration complete
CWPIZ0257I: creating the symbolic links...
CWPIZ0259I: creation of symbolic links complete
CWPIZ0260I: doing post install file updates...
CWPIZ0262I: post install updates complete
CWPIZ0263I: running Configuration Manager update...
Oct 19, 2007 4:28:16 PM com.ibm.ws390.installer.WPSInstaller
INFO: BBZWI218
Oct 19, 2007 4:38:16 PM com.ibm.ws390.installer.WPSInstaller
WARNING: BBZWI221
CWPIZ0264I: Configuration Manager update complete
```

When the script has finished running, review the messages that are displayed in the console, checking that there are no error messages displayed.

If the software did not install successfully, see Troubleshooting the installation and configuration for information on how to assess installation problems.

Note: If you are creating a Network Deployment configuration, do not run the job BBOWMNAN to federate the node into the Deployment Manager at this time. You will federate the node at a later stage, after completing the configuration steps.

Results

The installation code for WebSphere Process Server now contains symbolic links to WebSphere Application Server, and the WebSphere Application Server administrative console is updated so that you can use it to administer WebSphere Process Server.

After you have run the installation script successfully, you are ready to create and configure the databases that are used by WebSphere Process Server. For more information, see "Creating and configuring the databases" on page 39

Installing the WebSphere Process Server Client

You can install WebSphere Process Server Client using the installation wizard graphical user interface (GUI). You can install WebSphere Application Server Network Deployment as part of your installation. You can also install the Client over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment, version 6.1.

Before you begin

Before you install WebSphere Process Server, make sure you have performed the following steps:

- Plan your installation. For more information, see Planning for WebSphere Process Server in the WebSphere Process Server for Multiplatforms, Version 6.1 information center.
- Ensure that you have reviewed the list of prerequisites for installing the product at Prerequisites for installing WebSphere Process Server in the WebSphere Process Server for Multiplatforms, Version 6.1 information center.
- Ensure that your system meets all hardware and software requirements, and that you have enough space (including temporary space) for your installation. See WebSphere Process Server detailed system requirements at http://www.ibm.com/support/docview.wss?uid=swg27006205 for more information.

About this task

The installation steps assume that you are installing from product discs.

Important: 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, a default language of English is used. You can override the default language of the system 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 WebSphere Process Server V6.1 Disk 1 CD or WebSphere Process Server V6.1 DVD:

- **On Linux® platforms:**

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

- **On Windows® platforms:**

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

For example, to start the installation wizard in German 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 in progress.

The installation program does not support console-mode installation.

You must start the installation wizard, check for prerequisites and existing WebSphere Application Server installations, and choose to perform a Client installation, by following the procedure in Installing WebSphere Process Server interactively in the WebSphere Process Server for Multiplatforms, Version 6.1 information center.

When you choose the Client installation type, a subset of WebSphere Process Server functions are installed on your system, which includes support for the following components:

- Service Component Architecture and business objects, which provide uniform invocation and data-representation programming models for deployed applications.
- Business Process Choreographer API client applications that connect to a workflow engine running on a remote WebSphere Process Server server. The workflow engine supports both business processes and human tasks in a WebSphere Application Server environment.

This procedure assumes that you want to install the Client interactively. Use the following procedure to install the product:

Procedure

1. By following the procedure in Installing WebSphere Process Server interactively to install the Client, you are now viewing either the Installation summary panel or the Installation location panel. The next step depends on whether you are installing the Client over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment.

Panel that is displayed	Next step
Installation summary panel because you are installing the Client over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment.	Proceed to step 3.
Installation location panel because you are not installing over an existing installation of WebSphere Application Server or WebSphere Application Server Network Deployment.	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**.

   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.

   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.

   - **On Linux platforms:** Do not use symbolic links as the installation root directory; they are not supported. Also, do not use spaces in the directory path.
   - **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.
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 chose to install the Client 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.

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

Attention:

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

- **Partial success**, which indicates that the installation completed but errors were generated.
- **Failed**, which indicates that the installation failed completely.

If an installation is not completely successful, the Installation results panel identifies the log file required to troubleshoot the problems. See the descriptions of relevant log files in Log files.

4. Select **Finish** to close the installation wizard.

Results

If the Installation results panel indicates **Success**, the Client was installed successfully.

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 under *Recommended Fixes* on the support pages at http://www.ibm.com/software/integration/wps/support/.

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 in the WebSphere Process Server for Multiplatforms, Version 6.1 information center.

Installing the WebSphere Process Server Client silently

If you do not want to use the graphical user interface to install WebSphere Process Server Client, 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.client.txt, is shipped with default values and can be used to silently install WebSphere Process Server.

Before you begin

Make sure that you have reviewed the list of prerequisites for installing the product at Prerequisites for installing WebSphere Process Server in the WebSphere Process Server for Multiplatforms, Version 6.1 information center

Important: 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.

Note: You cannot install from the product installation CDs using a response file, because the installation files are included on more than one CD. If you want to install silently, you can do one of the following:

- Save the contents of the electronic image from Passport Advantage® to a temporary location on your system and run the silent installation from there.
- Install silently using the *WebSphere Process Server Client V6.1 DVD*.

- Copy the contents of both *WebSphere Process Server Client V6.1 Disk 1* and *WebSphere Process Server Client V6.1 Disk 2* into a temporary location on your system and run the silent installation from there.

To install silently using the response file, perform the following steps.

Procedure

1. Log on to the operating system.
2. **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.client.txt from the WBI directory on the disc labeled *WebSphere Process Server Client V6.1 Disk 1* or the *WebSphere Process Server Client V6.1 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 value:

   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"`

   Note: You can always go back to the *WebSphere Process Server Client V6.1 Disk 1* CD or *WebSphere Process Server Client V6.1 DVD* in the WBI directory to view the example response file responsefile.client.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 Client 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 *WebSphere Process Server V6.1 DVD* or from the temporary location where you have saved the contents of the electronic image from Passport Advantage or *WebSphere Process Server Client V6.1 Disk 1* and *WebSphere Process Server Client V6.1 Disk 2*.

   - **On Linux and UNIX platforms:** `install -options /tmp/WBI/myoptions.txt -silent`
   - **On Windows platforms:** `install.bat -options "C:\temp\WBI\myoptions.txt" -silent`

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 Client installation:

- **On Linux and UNIX platforms:** *install_root*/logs/wbi/install/log.txt
- **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 installation was unsuccessful, examine other log files to determine why. See the descriptions of relevant log files listed in Log files, of error messages in Messages: installation and profile creation in the WebSphere Process Server for Multiplatforms, Version 6.1 information center, and examine Troubleshooting a silent installation. For tips on troubleshooting your installation, see Troubleshooting installation and configuration. For information on recovering from an unsuccessful installation, see Recovering from profile creation or augmentation failure.

If the installation was successful your installation is operational. 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.

Re-configuring a WebSphere ESB server with WebSphere Process Server functions

If you have previously configured a WebSphere Process Server node with only WebSphere ESB features but your business requirements have since changed, you can reconfigure the server so that it accesses the additional components of WebSphere Process Server, for example, Business Process Choreographer features.

About this task

When you unloaded the WebSphere Process Server media on to the z/OS system and ran the zSMPInstall.sh script, you set up the necessary product definitions for WebSphere Process Server even though you subsequently ran the zWESBConfig.sh script to configure the node as a WebSphere ESB node. You can, therefore, run the zWPSConfig.sh script to reconfigure the node to use the additional features of WebSphere Process Server.

Procedure

On the WebSphere ESB node, run the zWPSConfig.sh script.

The zWPSConfig.sh script verifies that the server is configured for WebSphere ESB, then configures the server with the additional components that are required for WebSphere Process Server; for example Business Process Choreographer.

For more information, see zWPSConfig.sh and zWESBConfig.sh scripts

Results

Your node is now installed and configured with WebSphere Process Server.

What to do next

You can now configure the Business Process Choreographer component of your server. For more information, see Configuring Business Process Choreographer.

Creating a stand-alone configuration with a Derby database

A stand-alone configuration is the simplest configuration type in WebSphere Process Server for z/OS. A stand-alone configuration has a single node running an application server and one daemon server in a single z/OS® system or LPAR. Use a Derby™ database only for a test system. Use a DB2 database for a production system.

Before you begin

Before you can configure WebSphere Process Server, you must complete the following task:

- Install WebSphere Process Server

Procedure

1. Create a response file to provide input to the configuration script zWPSConfig.sh. A sample response file for a stand-alone server with Derby is supplied in /usr/lpp/zWPS/V6R1/zos.config/standAloneProfile.rsp.
   a. Copy the sample response file, standAloneProfile.rsp, to your working directory. For example:
      ```
      cp /usr/lpp/zWPS/V6R1/zos.config/standAloneProfile.rsp /u/work
      ```
   b. Assign the appropriate permissions to the copy of the response file:
      ```
      chmod 755 standAloneProfile.rsp
      ```
   c. Edit the parameters in the response file as appropriate to your configuration. See http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r1mx/topic/com.ibm.websphere.wps.610.doc/doc/rins_zos_sampresp.html.
   d. Save the edited response file.
2. Stop the server if it is started. See Stopping a stand-alone server for more information.
3. Increase the OMVS time limit to allow the product configuration script time to complete. In an MVS™ console enter the following command:
   ```
   SETOMVS MAXCPUTIME=86400
   ```
4. Access the USS command shell, then switch to the administrator user ID. For example:
   ```
   su wsadmin
   ```
5. Change directory to the application server bin directory:
   ```
   cd /WebSphere/V6R1/AppServer/bin
   ```
6. Run the zWPSConfig.sh configuration script with the absolute path of your edited response file. For example:
   ```
   zWPSConfig.sh -augment -response /working_directory_path/standAloneProfile.rsp
   ```
   Where *working_directory_path* is the location of the standAloneProfile.rsp file that you have edited.

   For more information about the command, see zWPSConfig.sh and zWESBConfig.sh scripts.
7. Wait for the configuration to run.

   When the script has finished running, review the messages that are written to the console. If the script has run successfully, no error messages are displayed and the informational messages state "augmenting profile(s) complete".
8. Start the server. See Starting a stand-alone server for more information.
9. Verify WebSphere Process Server information appears in the admin console:
   a. Open the administrative console by opening a browser window and typing the URL of the server that you want to view. For example:
      ```
      http://server_name.domain_name:port_number/admin
      ```
   b. Log in to the administrative console.
   c. Verify you can see WebSphere Process Server on the Welcome page. You can click on this for more information.

d. Navigate around the Administrative console to check applications and messaging engines are started.

10. Back up the data sets that contain the stand-alone server configuration.

Results

If you specified values for the Business Process Choreographer Sample Configuration in the stand-alone configuration response file, you have created a sample configuration that includes the business process container, the human task container, and the Business Process Choreographer Explorer. This sample configuration is now part of your Process Server configuration. You can check to see if these components are configured by looking in the administrative console for enterprise applications with names that start with BPEContainer, BPCExplorer, and TaskContainer.

The sample configuration is not suitable for a production system. You can have only one Business Process Choreographer configuration, therefore you must remove the sample configuration, as described in Removing the Business Process Choreographer configuration before you can continue configuring Business Process Choreographer.

What to do next

You can now deploy applications to the stand-alone server.

Related reference

Response file values

When you have run the installation jobs which install the WebSphere Process Server for z/OS product definitions, sample response files are installed into the installation file system. Copy and edit these response files according to the configuration that you want to achieve, and pass in the response file when you run the augment script.

zWPSConfig.sh and zWESBConfig.sh scripts

Use these scripts to configure and augment the WebSphere Process Server for z/OS installation. Run the script on each node in your configuration, including the deployment manager.

JCL for installing WebSphere Process Server into a deployment manager node

JCL for augmenting a deployment manager node

JCL for installing WebSphere Process Server into an empty node

JCL for augmenting an empty node

zSMPInstall.sh script

Use the zSMPInstall.sh script to modify a WebSphere Application Server profile either to install or uninstall WebSphere Process Server. Run the script on each node in your configuration, including the deployment manager.

Creating a stand-alone configuration with a DB2 database

A stand-alone configuration has a single node running a process server and one daemon server in a single z/OS® system or LPAR. When you use a DB2 database you must make considerable changes to the response file, and you must set up and configure the database. If you want to quickly set up a stand-alone configuration for evaluation or demonstration purposes, you might prefer to use a Derby database instead.

Before you begin

Before you can configure WebSphere Process Server, you must complete the following task:

- Install WebSphere Process Server.

About this task

You must decide on the DB2 configuration settings before creating a stand-alone configuration with a DB2 database.

Procedure

1. Create and customize a DB2JccConfiguration.properties file to provide WebSphere Application Server with information about the DB2 sub-system:
   a. Create the file in a suitable directory. For example /etc/db2cfg.
   b. Set the permissions on the directory so that the WebSphere Control Region user ID and the user ID that runs your WebSphere Process Server configuration jobs can read the properties file.
   c. Make sure the DB2JccConfiguration.properties file contains the following line:

      ```
      db2.jcc.ssid=DB15
      ```

      Where DB15 is the SSID of your installation. For details of all the other possible properties you can change in the DB2JccConfiguration.properties files refer to the manual *DB2 for z/OS V8.1 Application Programming Guide and Reference for Java* (SC18-741).
2. Create a response file to provide input to the configuration script zWPSConfig.sh. A sample response file for a stand-alone server with DB2 is supplied in /usr/lpp/zWPS/V6R1/zos.config/standaloneProfileDB2.rsp.
   a. Copy the sample response file, standaloneProfileDB2.rsp to your working directory. For example:

      ```
      cp /usr/lpp/zWPS/V6R1/zos.config/standaloneProfileDB2.rsp /u/work
      ```
   b. Assign the appropriate permissions to the copy of the response file:

      ```
      chmod 755 standaloneProfileDB2.rsp
      ```
   c. Set the -dbDelayConfig parameter to `true` to prevent the configuration script automatically running the DDL scripts to create the database objects. You will run the DDL scripts later.
   d. Edit the other parameters in the response as appropriate to your system. See http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r1mx/topic/com.ibm.websphere.wps.610.doc/doc/rins_zos_sampresp.html.
   e. Save the edited response file.
3. Stop the server. See Stopping a stand-alone server for more information.

4. Increase the OMVS time limit to allow the product configuration script time to complete. In an MVS console enter the following command:

   ```
   SETOMVS MAXCPUTIME=86400
   ```

5. Access the USS command shell, then switch to the administrator user ID. For example:

   ```
   su wsadmin
   ```

6. Change directory to the application server bin directory:

   ```
   cd /WebSphere/V6R1/AppServer/bin
   ```

7. Run the zWPSConfig.sh configuration script with the absolute path of your edited response file. For example:

   ```
   zWPSConfig.sh -augment -response /working_directory_path
   /standaloneProfileDB2.rsp
   ```

   Where *working_directory_path* is the location of the standAloneProfileDB2.rsp file that you have edited.

   For more information about the command, see zWPSConfig.sh and zWESBConfig.sh scripts.

8. Wait for the configuration to run.

   When the script has finished running, review the messages that are written to the console. If the script has run successfully, no error messages are displayed and the informational messages state "augmenting profile(s) complete".

9. Back up the data sets that contain the stand-alone server configuration.

Results

The stand alone server has now been augmented with WebSphere Process Server functions and the DDL scripts that you will need to run to create the database objects have been generated.

Next, run the DDL scripts to create the DB2 database objects. See Create and configure the DB2 database objects.

Related reference

Response file values

When you have run the installation jobs which install the WebSphere Process Server for z/OS product definitions, sample response files are installed into the installation file system. Copy and edit these response files according to the configuration that you want to achieve, and pass in the response file when you run the augment script.

zWPSConfig.sh and zWESBConfig.sh scripts

Use these scripts to configure and augment the WebSphere Process Server for z/OS installation. Run the script on each node in your configuration, including the deployment manager.

JCL for installing WebSphere Process Server into a deployment manager node

JCL for augmenting a deployment manager node

JCL for installing WebSphere Process Server into an empty node

JCL for augmenting an empty node

 zSMPInstall.sh script

Use the zSMPInstall.sh script to modify a WebSphere Application Server profile either to install or uninstall WebSphere Process Server. Run the script on each node in your configuration, including the deployment manager.

Creating a network deployment configuration with WebSphere Process Server

A basic network deployment configuration has a deployment manager server in one node, and an application server in another node. In a WebSphere Process Server network deployment configuration, both nodes are augmented with WebSphere Process Server functions. The application server is then federated into the deployment manager cell, which allows the application server to be administered by the deployment manager. The application server must be augmented with WebSphere Process Server functionality *before* it is federated into the deployment manager cell.

Before you begin

Before you create a network deployment configuration, complete the following tasks:

- Install WebSphere Process Server on each node that is in the deployment manager cell.
- Decide a naming convention for the databases, storage groups, and schema (or SQL ID). Although you create and configure the DB2 database objects after configuration, you will need the names of these database objects when you edit the response files which provide input to the configuration script.

Procedure

1. Create the deployment manager.
2. Create one or more DB2 databases for the configuration:
   - Create and populate the DB2 database using the createDB.sh script.
   - Create and populate the DB2 database using DBUtility.sh, SPUFI, or DSNTEP2.
3. Configure an empty node.
4. Federate the empty node into the deployment manager cell.
5. Create a cluster.
6. Create the messaging engine data sources.
7. Configure SCA.
8. Configure Business Process Choreographer.
9. Configure Common Event Infrastructure.

Related concepts

"Network deployment configuration" on page 10
An initial network deployment configuration consists of a deployment manager server that has a daemon for the z/OS® system on which the deployment manager runs. After a network deployment cell is created, you can add application server nodes by creating and federating new empty managed nodes, or by federating stand-alone application server nodes into the network deployment cell.

Related reference

Response file values

When you have run the installation jobs which install the WebSphere Process Server for z/OS product definitions, sample response files are installed into the installation file system. Copy and edit these response files according to the configuration that you want to achieve, and pass in the response file when you run the augment script.

zWPSConfig.sh and zWESBConfig.sh scripts

Use these scripts to configure and augment the WebSphere Process Server for z/OS installation. Run the script on each node in your configuration, including the deployment manager.

JCL for installing WebSphere Process Server into a deployment manager node

JCL for augmenting a deployment manager node

JCL for installing WebSphere Process Server into an empty node

JCL for augmenting an empty node

zSMPInstall.sh script

Use the zSMPInstall.sh script to modify a WebSphere Application Server profile either to install or uninstall WebSphere Process Server. Run the script on each node in your configuration, including the deployment manager.

Configuring the deployment manager with WebSphere Process Server

The deployment manager manages the network deployment cell. All nodes in a network deployment configuration use DB2 database objects.

Before you begin

Before you configure the deployment manager node you must have completed the following tasks:

- Create a deployment manager node in WebSphere Application Server. See Creating a network deployment cell.
- Install WebSphere Process Server on the deployment manager node.
- Back up the data sets that contain the deployment manager configuration.

Procedure

1. Create and customize a DB2JccConfiguration.properties file to provide WebSphere Application Server with information about the DB2 sub-system:
   a. Create the file in a suitable directory. For example /etc/db2cfg/directory.
   b. Set the permissions on the directory so that the WebSphere Controller Region user ID and the user ID that runs your WebSphere Process Server configuration jobs can read the properties file.
   c. Make sure the DB2JccConfiguration.properties file contains the following line:

```
db2.jcc.ssid=DB15
```

Where DB15 is the SSID of your installation. For details of all the other possible properties you can change in the DB2JccConfiguration.properties files refer to the manual *DB2 for z/OS V8.1 Application Programming Guide and Reference for Java* (SC18-741).

2. Create a response file to provide input to the configuration script zWPSConfig.sh. A sample response file for a stand-alone server with DB2 is supplied in /usr/lpp/zWPS/V6R1/zos.config/DmgrDB2.rsp.
   a. Copy the sample response file, DmgrDB2.rsp, to your working directory. For example:
      ```
      cp /usr/lpp/zWPS/V6R1/zos.config/DmgrDB2.rsp /u/work
      ```
   b. Assign the appropriate permissions to the copy of the response file:
      ```
      chmod 755 DmgrDB2.rsp
      ```
   c. Set the -dbDelayConfig parameter to `true` to prevent the configuration script automatically running the DDL scripts to create the database objects. You will run the DDL scripts later.
   d. Edit the other parameters in the response as appropriate to your system. See http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r1mx/topic/com.ibm.websphere.wps.610.doc/doc/rins_zos_sampresp.html.
   e. Save the edited response file.
3. Increase the OMVS time limit to allow the product configuration script time to complete. In an MVS console enter the following command:
   ```
   SETOMVS MAXCPUTIME=86400
   ```
4. Access the USS command shell, then switch to the administrator user ID. For example:
   ```
   su wsadmin
   ```
5. Change directory to the deployment manager bin directory:
   ```
   cd /WebSphere/V6R1/DeploymentManager/bin
   ```
6. Run thezWPSConfig.sh configuration script.

   You can use JCL to run the configuration on the deployment manager node; see JCL for augmenting a deployment manager node for an example JCL script.

   Alternatively, you can run the configuration script directly from USS with the absolute path of your edited response file. For example:
   ```
   zWPSConfig.sh -augment -response /working_directory_path/DmgrDB2.rsp
   ```

   Where *working_directory_path* is the location of the DmgrDB2.rsp file that you have edited.

   For more information about the command, see zWPSConfig.sh and zWESBConfig.sh scripts.
7. Wait for the configuration to run.

   When the script has finished running, review the messages that are written to the console. If the script has run successfully, no error messages are displayed and the informational messages state "augmenting profile(s) complete".
8. Back up the data sets that contain the deployment manager configuration.

Results

The deployment manager is configured with WebSphere Process Server.

Next, create the DB2 Common database using one of the following methods:

- Run the supplied createDB.sh script to create a single Common database in which all the database objects for the configuration are created. The createDB.sh

script creates the database, then populates the database with the database objects that are required by, for example, Business Process Choreographer, Common Event Infrastructure, and SCA. See "Creating DB2 database objects using the createDB.sh script" on page 40.

- Run the DDL scripts that were generated by the configuration script using DBUtility.sh, SPUFI, or DSNTEP2. This method is more complex because you create the database using one DDL script, then later populate it by running other DDL scripts. This method does, however, enable you to specify that the database objects are created in multiple databases instead of them all being created in the single Common database. See "Creating the DB2 databases and storage groups using DButility.sh, SPUFI, or DSNTEP2" on page 41.

Configuring an empty node with WebSphere Process Server

This task configures an empty WebSphere Application Server node with WebSphere Process Server for z/OS functions.

Before you begin

Before you configure the empty node you must have completed the following steps:

- Create an empty node in WebSphere Application Server. See Creating a managed server node.
- Install WebSphere Process Server on the empty node.
- Back up the data sets that contain the deployment manager configuration.

About this task

Configuring the empty node involves the following steps:

Procedure

1. Create and customize a DB2JccConfiguration.properties file to provide WebSphere Application Server with information about the DB2 sub-system:
   a. Create the file in a suitable directory. For example /etc/db2cfg/directory.
   b. Set the permissions on the directory so that the WebSphere Controller Region user ID and the user ID that runs your WebSphere Process Server configuration jobs can read the properties file.
   c. Make sure the DB2JccConfiguration.properties file contains the following line:

      ```
      db2.jcc.ssid=DB15
      ```

      Where DB15 is the SSID of your installation. For details of all the other possible properties you can change in the DB2JccConfiguration.properties files refer to the manual *DB2 for z/OS V8.1 Application Programming Guide and Reference for Java* (SC18-741).
2. Create a response file to provide input to the configuration script zWPSConfig.sh. A sample response file for an empty managed node is supplied in /usr/lpp/zWPS/V6R1/zos.config/ManagedDB2.rsp.
   a. Copy the sample response file, ManagedDB2.rsp, to your working directory. For example:

      ```
      cp /usr/lpp/zWPS/V6R1/zos.config/ManagedDB2.rsp /u/work
      ```

   b. Assign the appropriate permissions to the copy of the response file:

      ```
      chmod 755 ManagedDB2.rsp
      ```

c. Set the -dbDelayConfig parameter to `true` to prevent the configuration script automatically running the DDL scripts to create the database objects. You will run the DDL scripts later.

d. Edit the other parameters in the response as appropriate to your system. See http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r1mx/topic/com.ibm.websphere.wps.610.doc/doc/rins_zos_sampresp.html.

e. Save the edited response file.

3. Increase the OMVS time limit to allow the product configuration script time to complete. In an MVS console enter the following command:

   ```
   SETOMVS MAXCPUTIME=86400
   ```

4. Access the USS command shell, then switch to the administrator user ID. For example:

   ```
   su wsadmin
   ```

5. Change directory to the application server bin directory:

   ```
   cd /WebSphere/V6R1/AppServer/bin
   ```

6. Run the zWPSConfig.sh configuration script.

   You can use JCL to run the configuration on the empty node; see JCL for augmenting an empty node for an example JCL script.

   Alternatively, you can run the configuration script directly from USS with the absolute path of your edited response file. For example:

   ```
   zWPSConfig.sh -augment -response /working_directory_path/ManagedDB2.rsp
   ```

   Where *working_directory_path* is the location of the ManagedDB2.rsp file that you have edited.

   For more information about the command, see zWPSConfig.sh and zWESBConfig.sh scripts.

7. Wait for the configuration to run.

8. **Optional:** Back up the file system that contains the empty node configuration.

Results

The empty node has now been configured with WebSphere Process Server for z/OS functions.

What to do next

Next, create other empty nodes, in the same way, as required. Then, federate each of the empty nodes to the deployment manager cell: “Federating the empty node into the deployment manager cell.”

Federating the empty node into the deployment manager cell

When you federate the empty nodes into the deployment manager cell, you associate the empty nodes with the deployment manager so that you can use the deployment manager to administer the nodes. Until you federate the empty nodes, you cannot use them for processing work.

Before you begin

Before you federate an empty node to the deployment manager cell, you must perform the following task:

- Create one or more empty nodes.

About this task

To federate the empty node into the deployment manager cell:

Procedure

1. Start the deployment manager. See Starting a server from the MVS consoleStarting a server from the MVS console.
2. Locate the JCL member BBOWMNAN which was customized by the WebSphere Application Server ISPF customization dialogs when you created the empty node. For more information, see "Configuring an empty node with WebSphere Process Server" on page 32.
3. Submit the BBOWMNAN job and check that it completes with a RC=0.
4. If you have chosen not to start the node agent automatically when you used the WebSphere Application Server ISPF application to configure the empty managed node, you must start the node agent manually now. See Starting a server from the MVS consoleStarting a server from the MVS console.
5. Backup of the configuration file system data sets for the deployment manager and for any managed nodes.

Results

The empty node has now been federated into the deployment manager cell and you can administer the node using the deployment manager in the administrative console.

What to do next

Next, use the administrative console to create a cluster. See "Creating a cluster" for more information.

Creating a cluster

The following instructions explain how to create a cluster with one cluster member in an empty managed node. The benefit of using the administrative console to create a cluster is that you can undo your changes as you go and you can use a graphical user interface. It is good practice to create a cluster because it makes it easier later to develop the cluster, for example if you want to add more servers to the cluster for reasons of scalability.

Before you begin

Before you create a cluster, start the deployment manager and the node agent for the managed node. See Starting a server from the MVS consoleStarting a server from the MVS console for more information.

Procedure

1. Log in to the administration console and navigate to **Servers** → **Clusters**.
2. Click **New**.
3. Type a name for the cluster and shortname.
4. Click **Next**.
5. Type the long and short names for the server.
6. From the **Select node** list, click the node in which you want to define the server.

7. Select the button to create the member using an application server template.
8. Select **defaultProcessServerZOS** from the drop down as the application server template with which to create the cluster member.
9. Click **Next**. A blank form is displayed which you can use to define a second cluster member. The server you have just created is listed at the bottom of the screen.
10. Click **Next**.
11. Check the details on the summary screen and click **Next**.
12. Save your configuration changes. The cluster you have just created is displayed in the list.
13. Customize the port numbers to suit your configuration. See techdoc TD104066 for directions, and for a jython script to assist you. See Creating new Application Servers in WAS V6.1 for z/OS.

Results

The cluster is created with your chosen server in the managed node as the first cluster member.

What to do next

Next, Create the messaging engine data sources.

Creating the messaging engine data store

Use the sibDDLGenerator command to generate the DDL statements that the database administrator will need to create the tables for the messaging engine data store.

Before you begin

Before you create and run the SQL scripts:

- Create a cluster.
- Decide which SIBus components you will be creating in your network deployment configuration.

About this task

You must create and populate a messaging engine data source for each of the following components that you configure:

- SCA (System and Application Buses)
- Business Process Choreographer
- Common Event Infrastructure

You can create all the database objects in a single database, in an existing database, or in one or more new databases.

Procedure

For each data source required, follow the instructions in the WebSphere Application Server information center to create and run the SQL scripts: Enabling your database administrator to create the data store tables. For example, to create an SIB data source for SCA, using a new database called S2SIBSCA:

```
sibDDLGenerator.sh -system db2 -version 8.1 -platform zos -schema
 S2CELLS -user wsadmin -create -database S2SIBSCA -storagegroup
 S2SIBSTO -statementend ";" > /u/hssd/SIBSCA.ddl
```

Results

The messaging engine data sources are created.

Next, configure SCA, Business Process Choreographer, and Common Event Infrastructure:

- "Configuring SCA support for a server or cluster"
- Configuring Business Process Choreographer
- Configuring Common Event Infrastructure

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:

- 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

On z/OS. you can use the sibDDLGenerator script in was_installation_root/bin to create the SQL scripts for messaging engines database. Use the sibDDLGenerator script for creating SQL scripts for use in production environment. For more information, see Enabling your database administrator to create the data store tables.

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**.
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.
   d. Optional: Ensure that the data source can contact and authenticate with the database by clicking **Test Connection**.
7. Click **OK** to complete the SCA configuration.

What to do next

Next, you can continue configuration as required:

- Configuring Business Process Choreographer
- Configuring Common Event Infrastructure

Related information

Planning your deployment environment

Managing resources for mediation modules

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 use database data stores.

By default, new servers and clusters in a network deployment configuration 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 Business Process Choreographer

For information on how to configure Business Process Choreographer containers for business processes and human tasks, as well as how to configure Business Process Choreographer Explorer and Business Process Choreographer Observer, go to the WebSphere Process Server for z/OS, version 6.1, information center and

review the topics under **Installing and configuring WebSphere Process Server > Configuring Business Process Choreographer**. You can also find this information in the *Business Process Choreographer* PDF.

Creating and configuring the databases

The WebSphere Process Server for z/OS server configuration is stored in a directory structure under theWebSphere Application Server for z/OS profiles directory:`/WebSphere/V6R1/AppServer/profiles/default` or `/usr/lpp/zWPS/V6R1/DeploymentManager/profiles/default`. The profiles directory contains a directory called default which contains all of the directories and files specific to the server. This directory structure is used to store the server and FFDC logs.

Before you begin

In WebSphere Application Server for z/OS, all runtime environments are created with the ISPF Customization Dialog using a profile name of `default`. The **manageprofiles** command, and the -profile option on other administrative commands, are not used with WebSphere Application Server for z/OS.The choice of database you use depends on the topology you choose:

- If you want to configure a network deployment environment, you must use a DB2 database.
- If you want to configure a stand-alone server, you can use either a Derby or a DB2 database.
- If you want to configure clustering, your DB2 z/OS system must be running in data-sharing mode.

About this task

If this is your first WebSphere Process Server for z/OS installation, start with a stand-alone configuration with a Derby database. After installing a stand-alone configuration with a Derby database, you can configure a stand-alone server with a DB2 database to become familiar with using DB2. You can then create a network deployment configuration that uses a DB2 type database, which is a more complex procedure.

Create the databases as required by the configuration that you are creating.

Deciding on a naming convention for the databases

If you have only one server configured with WebSphere Process Server for z/OS using a DB2 subsystem, you can use the default database names as provided in the sample response files. For multiple WebSphere Process Server for z/OS-configured servers (in the same cell, or different cells) using the same DB2 subsystem or same data-sharing group, you must plan for a naming convention to isolate the following DB2 components:

- Database names
- Storage Group names
- Schema-qualifiers for your tables
- VCATs, which stands for VSAM catalog name. VCATs are the high level qualifiers used to prefix DB2 tablespaces and tables for a DB2 sub system
- Volumes or SMS storage groups for these data sets

The following example is a database naming convention (for nine databases) in which the WebSphere Application Server cell name is B6CELL:

```
Data-   Dbase     Storage    Schema    VCAT
base    Name      Group      -Owner    DSN-hlq
-----   --------  --------   -------   -------
WPS:    B6WPSDB   B6WPSSTO   B6CELL    B6WPS
BPE:    B6BPEDB   B6BPESTO   B6CELL    B6WPS
SIBs:   B6SIBAPP  B6SIBSTO   B6CELLA   B6WPS
        B6SIBSCA  B6SIBSTO   B6CELLS   B6WPS
        B6SIBBPC  B6SIBSTO   B6CELLB   B6WPS
        B6SIBCEI  B6SIBSTO   B6CELLC   B6WPS
CEI:    B6EVTDB   B6EVTSTO   B6CELL    B6WPS
        B6EVCTDB  B6EVTSTO   B6CELL    B6WPS
ESB:    B6ESBDB   B6ESBSTO   B6CELL    B6WPS
```

Deciding on schema names and SQL IDs

It is important that you choose unique names for the schema names and SQL IDs in the DB2 tables.

The DB2 tables must have uniquely-qualified schema names to coexist with other WebSphere Process Server for z/OS or WebSphere Business Integration Server cells in the same DB2 subsystem. You can set the current schema or SQL ID values using the administrative console, in the Data source > Custom properties definitions.

The DB2 table and index names can be prefixed with these names in the DDL definitions, or you can insert a SET CURRENT SQLID statement in front of the DDL used to create the tables. For example:

```
SET CURRENT SQLID = 'B6CELL';
```

Each of the SI bus databases requires unique schema names for its tables, because the same table names are used for all Buses. These same schema names must also be set in the SI bus Messaging Engine Data Store properties. See Messaging engines in the WebSphere Application Server for z/OS information center.

Creating DB2 database objects using the createDB.sh script

You can run the createDB.sh script to create the DB2 database and populate it with objects after you have configured for WebSphere Process Server. You can use the createDB.sh script for either a stand-alone configuration that uses DB2, or for a network deployment configuration. If you use createDB.sh, all the database objects for the configuration are created in a single database. If you want to use multiple databases, use a different method of creating the databases and database objects; for example use the supplied DBUtility.sh script or SPUFI.

Before you begin

Before you run the createDB.sh script, you must complete the following steps:

- Decide on a naming convention for the databases.
- Decide on schema names and SQL IDs.
- For a stand-alone configuration: Create the stand-alone server for use with DB2; for a network deployment configuration: Create the deployment manager. Ensure that when you configured the nodes the dbDelayConfig parameter in the response file was set to `true`.

About this task

The createDB.sh script creates a database and populates it with all the DB2 database objects that are required by WebSphere Process Server, including the database objects used by SCA, Business Process Choreographer, and Common Event Infrastructure.

Procedure

1. On the stand-alone server node or the deployment manager node, access the USS command shell, then switch to the administrator user ID. For example:
   ```
   su wsadmin
   ```
2. Copy the sample createDB.sh file to your working directory. For example:
   ```
   cp /usr/lpp/zWPS/V6R1/zos.config/samples/createDB.sh /u/work
   ```
3. Assign the appropriate permissions to the copy of the createDB.sh file:
   ```
   chmod 755 createDB.sh
   ```
4. Customize the parameters in the copy of the createDB.sh file as required by your system. For a list of parameters that you must customize, see createDB.sh script.
5. Save the edited file.
6. Run the customized createDB.sh script. See createDB.sh script.
7. If you are creating a stand-alone configuration, verify the WebSphere Process Server installation:
   a. Start the server. See Starting a stand-alone server for more information.
   b. Open the administrative console by opening a browser window and typing the URL of the server that you want to view. For example:
      ```
      http://server_name.domain_name:port_number/admin
      ```
   c. Log in to the administrative console.
   d. Verify you can see WebSphere Process Server on the Welcome page. You can click on this for more information.
   e. Navigate around the console to check that the server has a status of started. Also check all the applications are started, and that the messaging engines are started. If anything has failed to start you can look in the server job logs for ″SEVERE″ or ″WARNING″ messages that provide detail about the failure.

Results

The database is created and populated with the database objects that are required by the your configuration.

If you are creating a stand-alone configuration, you can now deploy applications to the server.

If you are creating a network deployment configuration, next, you must create one or more empty nodes to add to the deployment manager cell. See “Configuring an empty node with WebSphere Process Server” on page 32.

Creating the DB2 databases and storage groups using DButility.sh, SPUFI, or DSNTEP2

The zWPSConfig.sh configuration script generates Data Definition Language (DDL) scripts that you can use to create the DB2 database objects for the configuration. There are several tools that you can use to run the DDL scripts to create the database objects for your configuration.

Before you begin

Before you create the DB2 databases and storage groups, you must complete the following task:

- Create the server configuration: for a stand-alone server, see "Creating a stand-alone configuration with a DB2 database" on page 27; for a deployment manager node, see "Configuring the deployment manager with WebSphere Process Server" on page 30.

About this task

You can run the DDL scripts using the supplied createDB.sh script (see "Creating DB2 database objects using the createDB.sh script" on page 40). The createDB.sh script creates all the DB2 database objects in a single database. If you want to create the database objects across multiple databases but still want to work in the USS environment, you can run the DDL scripts using the DBUtility.sh script, which is also supplied with WebSphere Process Server. Alternatively, you can run the DDL scripts using DB2 Connect™, SPUFI, or DSNTEP2.

Procedure

1. Create the databases and storage groups using the sample scripts that are provided in Database scripts. Copy and paste the scripts into the tool that you use and customize the values as required; for example DBUtility,sh or SPUFI.
2. Populate the databases using the DDL scripts that were generated by the configuration script. Copy the generated DDL script files from the following locations to your working directory.

   For a stand-alone configuration:

   - /WebSphere/V6R1/AppServer/profiles/default/dbscripts/CommonDB/*database_type*/*database_name*
   - /WebSphere/V6R1/AppServer/profiles/default/dbscripts/*CEI_database_name*/ddl
   - /WebSphere/V6R1/AppServer/profiles/default/dbscripts/ProcessChoreographer/*database_type*/*database_name*/*database_sqlid*

   For a network deployment configuration (only the CommonDB database is populated at this stage):

   - /WebSphere/V6R1/DeploymentManager/profiles/default/dbscripts/CommonDB/*database_type* /*database_name*

   Where *database_type* is the database version (for example, DB2zOSV8 for DB2 for z/OS version 8.1), *database_name* is the name of the database that you are creating (which you specified in the response file for the configuration script), *CEI_database_name* is the name of the CEI database, and *database_sqlid* is the SQL ID for the Business Process Choreographer database that you are creating (which you specified in the response file).
3. Assign the appropriate permissions to the copies of the files; for example:

   ```
   chmod 755 createTable_AppScheduler.sql
   ```
4. Edit the values in the file to suit your needs. Change the database names and the storage group names to meet your naming requirements. The names that you specify in the file must match the values that you entered in the response file that provided input to the configuration script.

   Note: The files are provided in ASCII format. If the tools that you use to view, edit, and run the scripts require the scripts to be in EBCDIC format, use the iconv command to convert the file to EBCDIC. For example:

```
iconv –t IBM-1047 –f ISO8859-1 createTable_AppScheduler.sql >
createTable_AppScheduler_EBCDIC.sql
```

If you the convert the file from ASCII format to EBCDIC but need to run the file in ASCII format, use iconv to convert the file back to ASCII. For example:

```
iconv -t ISO8859-1 -f IBM-1047 createTable_AppScheduler_EBCDIC.sql >
createTable_AppScheduler.sql
```

5. Run the customized scripts using the tool of your choice. For example:

   DBUtility.sh
   DBUtility.sh is a utility that is supplied with WebSphere Process Server for z/OS and installed in the installation file system. For example:/usr/lpp/zWPS/V6R1/bin/DBUtility.sh. You can use this utility to create the database and storage groups, as well as to run the SQL to create the database tables later, from USS. Here is an example of the syntax used with the DBUtility.sh script:

   ```
   /wasv6config/v2cell/dmgr/DeploymentManager/bin/DBUtility.sh
  createTable
   -DsqlScriptPath.default=/wasv6config/v2cell/dmgr/database
 /v2adropandcreate.sql
   -DdbType=DB2UDBOS390_V8_1 -DdbName=xxxxxV2
   -DprofilePath=/wasv6config/v2cell/dmgr/DeploymentManager/profiles
 /default
   -DdbJDBCProperties=/shared/db2810/jcc/properties
   -DdbConnectionLocation=WBDDB2
   -DdbJDBCClasspath=/shared/db2810/jcc/classes
   -DdbUserId=sysadm1
   -DdbPassword=sysadm1
   -DdbDelayConfig=false
   -DdbCreateNew=false
   ```

   SPUFI A utility that runs SQL scripts from z/OS.

6. Verify that each database and storage group is created successfully with no errors by inspecting the output.
7. If you are creating a stand-alone configuration, verify the WebSphere Process Server installation:
   a. Start the server. See Starting a stand-alone server for more information.
   b. Open the administrative console by opening a browser window and typing the URL of the server that you want to view. For example:

      ```
      http://server_name.domain_name:port_number/admin
      ```

   c. Log in to the administrative console.
   d. Verify you can see WebSphere Process Server on the Welcome page. You can click on this for more information.
   e. Navigate around the console to check that the server has a status of started. Also check all the applications are started, and that the messaging engines are started. If anything has failed to start you can look in the server job logs for ″SEVERE″ or ″WARNING″ messages that provide detail about the failure.

Results

The DB2 databases and storage groups are created and populated with the necessary database objects, such as tables and indexes.

If you are creating a stand-alone configuration, you can now deploy applications to the server.

If you are creating a network deployment configuration, next, you must create one or more empty nodes to add to the deployment manager cell. See "Configuring an empty node with WebSphere Process Server" on page 32.

Granting table privileges to the J2C authentication alias user ID

If the schema name you are using is not the same as the J2C authentication alias user ID you must grant a sub-set of DB2 privileges to the J2C authentication alias user ID.

About this task

The DDL for the Service Integration Bus already contains commented GRANT commands that you can use as a basis for granting access to the SIB tables. However, the other WebSphere Process Server for z/OS components do not supply any GRANT statements.

Use a schema name that is not the same as the J2C authentication alias to prevent the alias user ID having the power to drop tables. (The power to drop tables is implicitly granted to the creator, that is, the schema.) Note that it does not make sense to grant a privilege like DBADM to the J2C authentication alias user ID because DBADM also has the ability to DROP tables.

If you want the WebSphere Process Server to function while not allowing the alias user ID to have DROP capability, create some GRANT statements by copying the DDL and editing it to construct GRANT commands from the CREATE commands. Create GRANT commands like:

```
GRANT ALL PRIVILEGES ON TABLE
cell.tablename TO userid/sqlid
```

Where userid/sqlid is the J2C authentication alias user ID.

Setting the correct schema name for the SIBs

To ensure the SIB messaging engines can access the appropriate DB2 tables, set the correct schema name for the SIBs.

Before you begin

Before you start:

- Start the server.

About this task

Use the administrative console to change the schema names.

Procedure

1. Log in to the administrative console.
2. Navigate to **Service Integration** → **Buses**.
3. For each bus:
   a. Select **Messaging engines**, then click the name that is displayed.
   b. Click **Message store**.
   c. Change the value of **Schema name** to the name used when creating the DB2 tables for this SIB.

d. Click **Apply**.
e. Save your configuration changes.
4. Log out of the administrative console.
5. Stop, then restart the server.
6. Look in the output of the Adjunct job log for successful SIB messaging engine startup messages. For example:

```
BBOO0222I: "BusName"
CWSID0016I: Messaging engine MessagingEngineName is in state Started.
```

Results

The schema name used by the SIB messaging tables to access the DB2 tables is changed.

Adding the DB2 libraries to the Servant and Adjunct JCL

If your DB2 system does not run with SDSNEXIT, SDSNLOAD, and SDSNLOD2 in LNKLST, update your WebSphere Servant and Adjunst JCL so that the STEPLIB includes the customized DB2 SDSNEXIT, the SDSNLOAD, and the SDSNLOD2.

About this task

If you do not have the STEPLIB set correctly, you will get the problem "Failure in loading T2 native library db2jcct2zos" , in the server systout, since the DB2 programs in SDSNLOD2 cannot be loaded. This error causes the SIBs to fail during initialization.

Backup the WebSphere Application Server configuration file system when you have completed the configuration.

Cleaning up the Cloudscape JDBC resources

If you find any JDBC datasources defined for Cloudscape™ JDBC providers you can delete them. In some circumstances SIB datasources are defined under a Cloudscape JDBC Provider.

About this task

Perform the following steps to cleaning up the Cloudscape JDBC resources

Procedure

1. Log in to the Administration console and navigate to **Resources** → **JDBC Providers**.
2. Set the scope to the cell level by removing any node or server name and clicking **Apply**.
3. Click any Cloudscape JDBC Provider or Cloudscape JDBC Provider (XA) that you find and then click **Data sources** on the right.
4. Delete any data sources with names that contain character strings related to WebSphere Process Server, for example WPS, BPE, SCA, SIB.
5. Save your configuration changes.
6. Navigate to **Resources** → **JDBC Providers** again, and change the scope to your Application Server node.
7. Check and delete any Cloudscape JDBC providers for data sources that relate to WebSphere Process Server.

8. Save your configuration changes.
9. Navigate to **Resources** → **JDBC Providers**, change the scope to the node level and select your application server.
10. Check and delete any Cloudscape JDBC providers for any data sources that relate to WebSphere Process Server.
11. Save your configuration changes.

What to do next

The next step is to verify the installation. Refer to the techdoc WP100830 Performing Installation Verification for WPS on z/OS for more information..

Verifying the installation with DB2

When verifying an installation with a DB2 database, it is important to check the Servant and Adjunct job logs to see whether there are any error messages that might indicate problems accessing the data store.

Procedure

1. Ask your DB2 system administrator to check the authorities that have been granted to ensure that you have not granted more authority than necessary to any user ID. It can be tempting to grant DB2 SYSADM authority to the J2C authentication aliases in order to avoid possible problems with DB2 security during the configuration.
2. Ask your DB2 system administrator to check the storage group assignments and buffer pool usage. Incorrect storage group assignment and buffer pool usage might not show up as an error message in a log but might cause problems later. It is better to resolve such problems now rather than when the system has been handed over to people to use. For example, correcting storage groups and VCATs is not easy after the tables and indexes have been used.
3. Log in to the administrative console. See Starting and stopping the administrative consoleStarting and stopping the administrative console.
4. In the administrative console, check that all the applications are started, the messaging engines are started, and all the data sources can be accessed using the **Test Connection** option. If any application has failed to start, look in the Servant and Adjunct job logs for SEVERE or WARNING messages that provide detail about the failure.
5. If you see DB2 errors such as SQLCODE -204, in the administrative console, set the correct schema name or currentSQLID value in the custom properties section of the data sources. If the schema name is not the same as the user ID in the J2C authentication aliases, the SQL requests try to find tables qualified by the user ID in the J2C authentication alias.

What to do next

If all the SIBs have initialized correctly, and you do not see any other errors related to opening JDBC connections, you can continue to customize your configuration of WebSphere Process Server.

Coexisting

Coexistence is the ability of two or more entities to function in the same system or network.

Coexistence does not imply the interoperability of these entities. As defined here, coexistence refers to a single environment in which a number of different WebSphere server configurations, which may involve different versions of the same product, coexist.

Coexistence support

Coexistence support gives you the ability to install, configure, run, and manage more than one product on your system.

You can have the following products installed together on your system:

- WebSphere Application Server for z/OS
- WebSphere Process Server for z/OS
- WebSphere Process Server configured as an ESB-only server.

Be aware of the following points when setting up your system for coexistence:

- **Dependency on WebSphere Application Server for z/OS**

  Because WebSphere Process Server for z/OS installs on top of WebSphere Application Server for z/OS, each server must initially be configured with WebSphere Application Server for z/OS and be compliant with WebSphere Application Server for z/OS coexistence before installing and configuring WebSphere Process Server for z/OS. For more information, see Coexistence support as described in the WebSphere Application Server for z/OS Information Center.
- **Version coexistence**

  You can have previous versions of the product on your system at the same time. Previous versions of the product can exist in the same LPAR or in separate LPARs.

  WebSphere Process Server for z/OS cannot be installed on top of a WebSphere Business Integration Server Foundation for z/OS server.
- **Installing for coexistence**

  The following installation scenarios for coexistence are supported:
  - WebSphere Application Server for z/OS, WebSphere Process Server and WebSphere ESB coexisting where none of the products are currently installed.
  - Coexisting WebSphere Process Server for z/OS and WebSphere Application Server for z/OS when WebSphere Application Server for z/OS already exists
  - Coexisting WebSphere Process Server for z/OS and WebSphere Process Server for z/OS configured as an ESB-only server in an existing WebSphere Application Server for z/OS

Applying product maintenance

WebSphere Process Server for z/OS is installed and configured into a WebSphere Application Server. Consequently, you apply product maintenance to WebSphere Process Server for z/OS using the WebSphere Application Server product and techniques.

Before you begin

Contact the IBM Software Support Center for information about preventive service planning (PSP) upgrades for the product. For more information about PSP upgrades for WebSphere Process Server for z/OS, see the *Program Directory for*

WebSphere Process Server for z/OS. Although the Program Directory contains a list of required program temporary fixes (PTFs), the most current information is available from the IBM Software Support Center.

About this task

Use the following procedure when you want to apply a new service release to your system.

Procedure

See *Applying product maintenance* in the WebSphere Application Server for z/OS information center for a description of how to apply product maintenance

What to do next

You can maintain service to clients when upgrading the host cluster of WebSphere Application Server for z/OS.

Applying a service level or restoring to the previous accepted service level

Because WebSphere Process Server for z/OS is installed and configured into the WebSphere Application Server, the service level applied to WebSphere Process Server for z/OS is done so through the WebSphere Application Server product, using the WebSphere Application Server techniques for applying service level or restoring to the previous accepted service level

About this task

Service that is applied to the product data sets and product file system occasionally requires corresponding changes to be made to the configuration file system for existing application serving environments that configure at a lower service level. Most of these post-maintenance or post-install updates can be performed automatically. This is done by the post-installer. See *Applying a service level or restoring to the previous accepted service level* in the WebSphere Application Server for z/OS information center for a description of how to apply service

About the upgrade process

Upgrading WebSphere Process Server for z/OS is a multiphase process that can span multiple roles.

You can upgrade the WebSphere Process Server for z/OS product using one of these methods:

- Overlaying an existing installation file system with a newer product version
- Running the upgrade script to update an older version to a newer installed product version

Scenario 1: Overlaying an existing Installation file system with a newer version

In this scenario, you upgrade WebSphere Process Server for z/OS by using SMP/E to load the newer version of the product over the existing installation file system (Figure 1).

Note: A configuration has access only to its configuration file system. Symbolic links in the configuration file system provide access to the code in the installation file system.

Subsequently, the *applyPTF.sh* script runs when the server controller starts. The script checks the level of the configuration file system against the level of the installation file system. If the two file systems are at the same maintenance level, the server starts. If the configuration file system is at a lower level than the installation file system, the *applyPTF.sh* script makes changes to the configuration file system specified by the maintenance level of the installation file system and starts the server.

Note: If the configuration file system is at a higher level than the installation file system, for example when maintenance is backed off, the server cannot start.

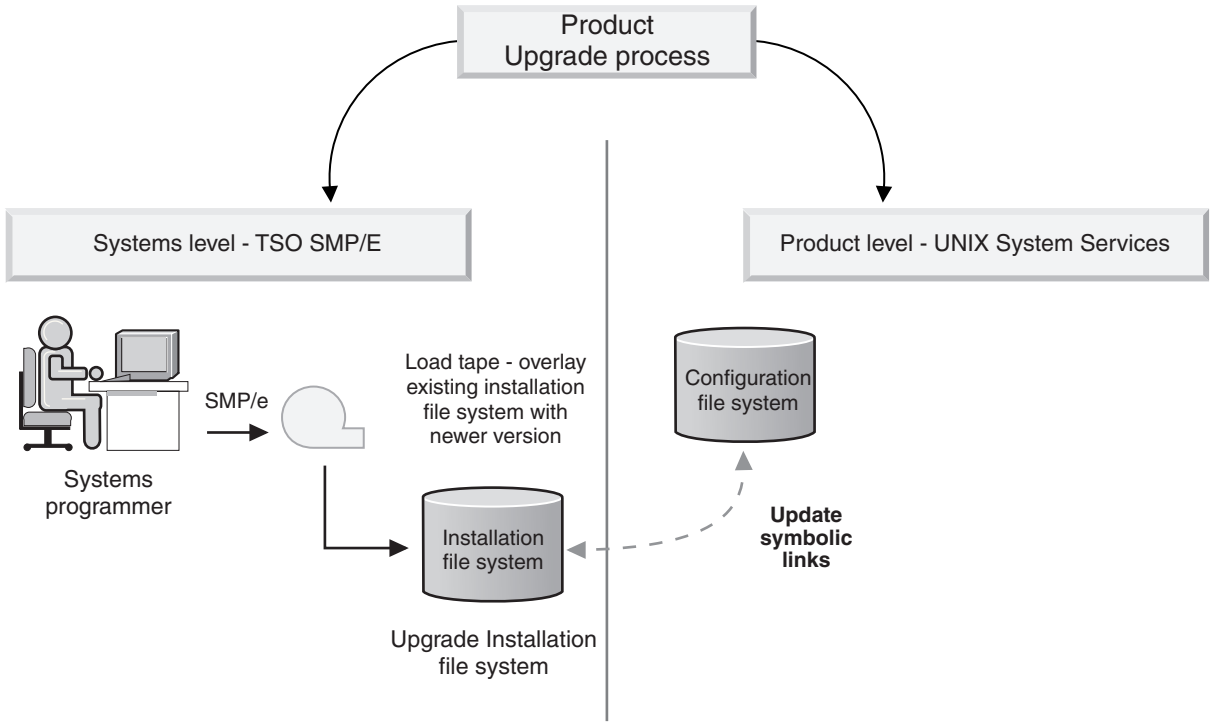


Figure 1. Upgrading WebSphere Process Server for z/OS product by overlaying the existing Installation file system

Scenario 2: Using the upgrade script

In this scenario, you upgrade WebSphere Process Server for z/OS by using SMP/E to load the newer version of the product separate from the existing installation file system (Figure 2).

You can then run the upgrade script for each application server that you want to upgrade. The upgrade process changes the service level symbolic link from the existing installation file system to the newer installation file system for the application server.

Subsequently, the *applyPTF.sh* script is run when the server controller starts. The script checks the level of the configuration file system against the level of the

installation file system. In this case, the configuration file system is at a *lower* level than the installation file system, and the *applyPTF.sh* script performs the changes to the configuration file system specified by the maintenance level of the installation file system and starts the server.

In Figure 2, the newer version of the WebSphere Process Server for z/OS has been installed and configured to run on application server A. To upgrade application server B, the systems programmer can run the upgrade script. The script updates the application server B Configuration file system by pointing its service level symbolic link to the new installation file system associated with application server A. The installation upgrade is completed when the *applyPTF.sh* script is run.

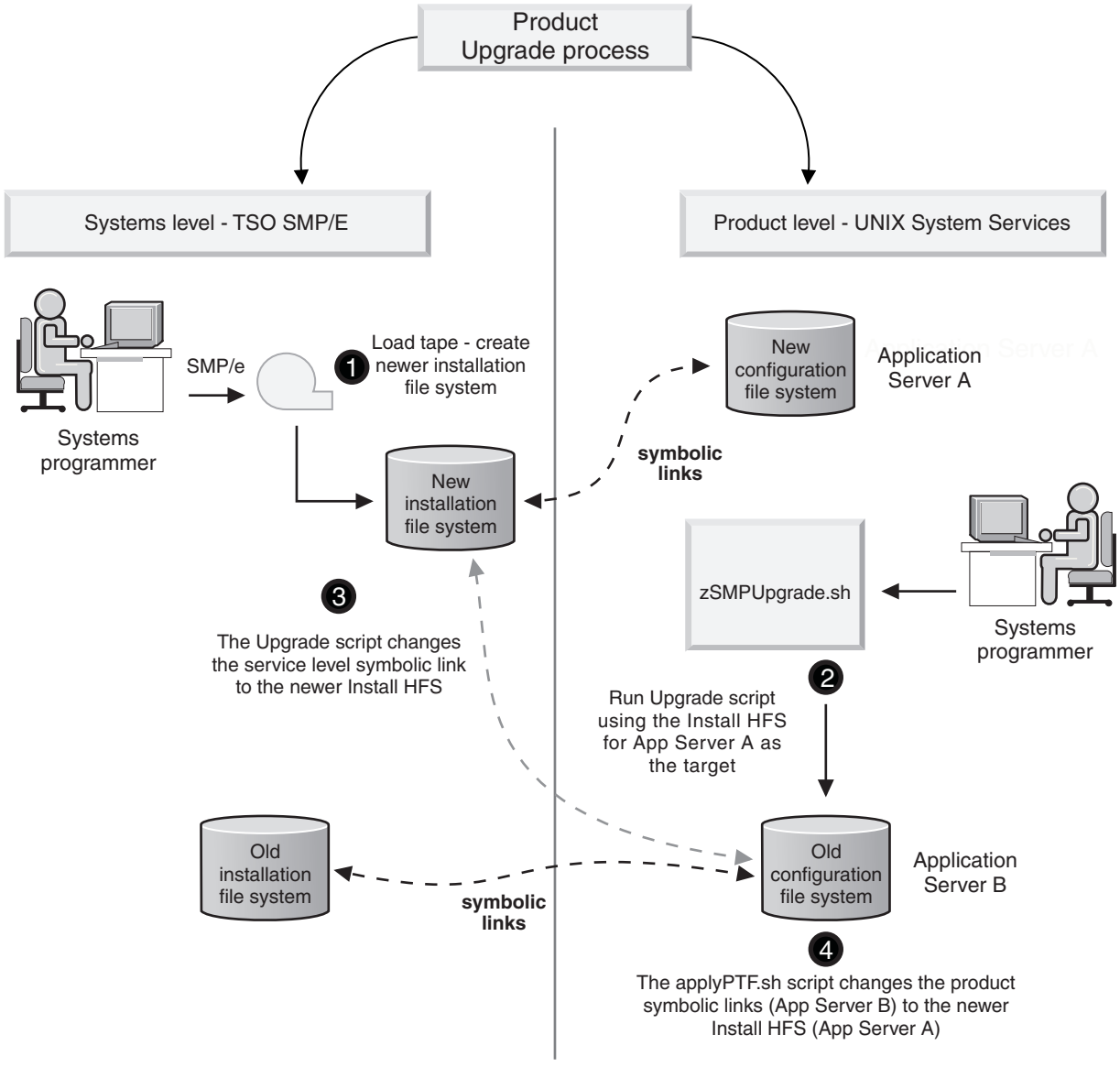


Figure 2. Upgrading the WebSphere Process Server for z/OS product using the upgrade script

Using the upgrade script with intermediate symbolic links

This example is similar to scenario in Figure 2, except that rather than a direct symbolic link between the installation file system and configuration file system, an intermediate symbolic link is used. The intermediate symbolic link is a standard symbolic link that points to the installation file system and the configuration file system points to the intermediate symbolic link. Changing a node to another service level simply involves changing the single intermediate symbolic link.

You can run the upgrade script for each application server that you want to upgrade. The script uses the newer version of the installed file system to update the symbolic links for the configuration file system that you want to update. The configuration file system points to the intermediate symbolic link, which is an additional layer of indirection.

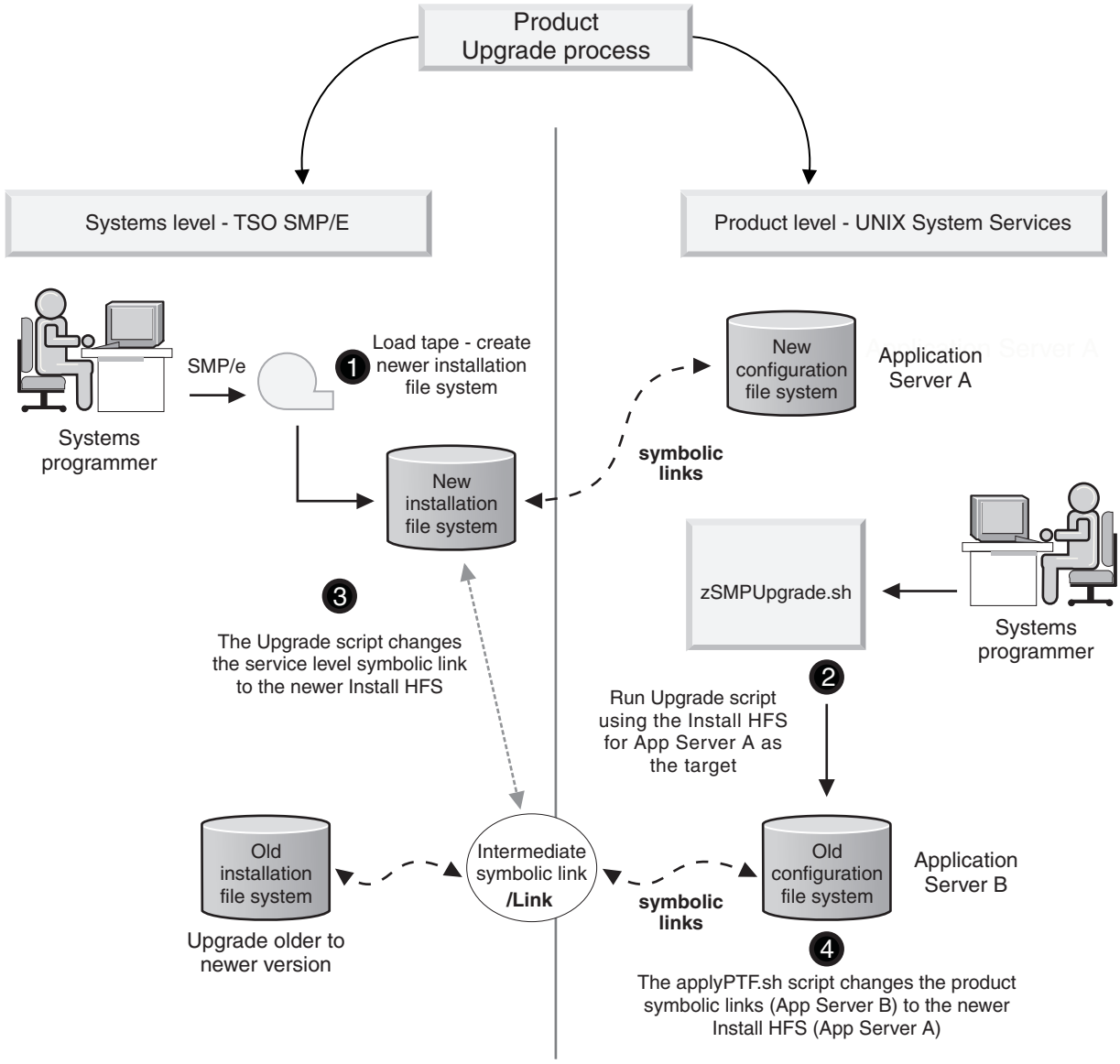


Figure 3. Upgrading the WebSphere Process Server for z/OS product using the upgrade script

Uninstalling

The Uninstalling section describes how to uninstall WebSphere Process Server for z/OS.

Uninstallation overview

You can uninstall WebSphere Process Server for z/OS by running the install script **zSMPInstall.sh** with the uninstall parameter from a command line.

Review the latest technote information WebSphere Process Server for z/OS before running the uninstall script.

Running the command **zSMPInstall.sh** with the `-uninstall` command argument restores the WebSphere environment back to the level it was at prior to installation.

Note: You must uninstall the Common Event Infrastructure and Business Process Choreographer components separately. Consult the appropriate help topics for information.

The uninstall process results in the following actions:

- WebSphere Process Server features are disabled by running Configuration Manager scripted actions. All administrative console plug-in extensions are removed.
- WSPROFILE scripted actions reverse the augmentation process on the default WebSphere Application Server profile.
- The post install file is deleted and code base permissions are removed.

Uninstalling WebSphere Process Server for z/OS

Uninstall WebSphere Process Server for z/OS by running the shell script zSMPInstall.sh with the keyword -uninstall. These instructions describe how to run the install script with the uninstall keyword from a OS/390® UNIX command shell. Alternatively you can run the script and keyword from a prompt using telnet. These instructions assume you are using TSO, if you are using telnet use the equivalent commands. These instructions also assume that you have the default key mappings using the CTRL key to enter input. If you have changed this configuration, use whichever key you have mapped to enter information into TSO.

Before you begin

Note: There is no support for a partial or incremental uninstall.

Read the latest technote information on uninstalling WebSphere Process Server for z/OS before running the uninstall script.

The WebSphere Process Server for z/OS install process assumes that you have a working knowledge of z/OS UNIX System Services. Refer to the following documentation if you need more information:

- z/OS V1R7.0 UNIX System Services User's Guide
- z/OS V1R7.0 UNIX System Services Command Reference

Procedure

1. Access the OS/390® UNIX® command shell. telnet into USS directly, or from TSO enter the TSO command OMVS at the ISPF Command Option 6 or TSO

OMVS from any other ISPF panel. Once you are in the UNIX shell, a command prompt (usually a dollar ($) or pound (#) sign) indicates that the system is ready to accept input.

2. Switch to the administrator user ID:

   ```
   su wsadmin
   ```

3. Change to zos.config/bin in the product installation file system directory:

   ```
   cd /usr/zWPS/VR61/zos.config/bin
   ```

4. Add the current directory to the path:

   ```
   export PATH=.:$PATH
   ```

5. From the command prompt, run the installation script with the uninstall command, for example:

   ```
   zSMPInstall.sh -smproot /wps/pathofWPScode/zWPS/V6R1 -runtime
    /WebSphere/V6R1M0/AppServer -uninstall -response
    /yourdrivename/yourfoldername/responsefilename.rsp
   ```

   Type in the absolute path name of the response file according to your system configuration. The path file names above assume the uninstaller is using the default response files. If the response file was customized, the path name must represent the absolute path of the customized file.

6. Wait for the 'Configuration Manager for uninstall complete' message, and for the command prompt to return.

Results

Running the install script with the -uninstall parameter results in the following actions:

- WebSphere Process Server for z/OS product features are disabled when the Configuration Manager runs its scripted actions. The Administrative Console plug-in extensions are removed when the WebSphere Process Server for z/OS product features are disabled.
- The WSPROFILE script reverses the augment process on the default WebSphere Application Server profile which removes all WebSphere Process Server functionality. You are warned that the augmented default profile will be deleted (if underlying WebSphere Application Server for z/OS or WebSphere Application Server network deployment for z/OS is being uninstalled) or that you can no longer use other augmented profiles.
- The post install file is deleted.
- Code base permissions are removed.

If any shared common components are being used by other applications the command line prompting warns that uninstalling the product may cause other applications to no longer function correctly.

If the uninstall command was not successful check the associated log file and trace files:

- **Standard out messages**

  Standard output messages display directly on the screen. You can choose to redirect these messages to a file by using redirect symbol and a file name at the end of the command line. For example, adding the syntax `>run.log` to the end of the install command redirect the standard output messages to the file named **run.log** in the present working directory. The standard out messages display as follows:

```
parsing command arguments...
parsing arguments complete
setting up configuration...
runtimeRootDirName is: /WebSphere/V6R1M0/AppServer
WAS_HOME is: /WebSphere/V6R1M0/AppServer
WBI_HOME is: /WebSphere/V6R1M0/AppServer
running Configuration Manager for uninstall...
Configuration Manager for uninstall complete
unaugmenting profile(s)...
unaugmenting profile(s) complete
```

- **Log file**

  Log messages are written to the zSMPInstall.log file in the run-time directory. The default location of this file is /WebSphere/V6R1M0/AppServer/logs/wbi/zSMPInstall.log.

- **Trace file**

  Review the zSMPInstall.trace (ASCII) file in the run-time directory. The default location for this file is/WebSphere/V6R1M0/AppServer/logs/wbi/zSMPInstall.trace..

  There must be no error messages that have an ″E″ suffix..

You can also carry out the following troubleshooting actions:

- **Review the actions of the Update Configuration Manager task.** The actions are written to the log file cmtInstall.log, which is in ASCII format. The default location for this file is /WebSphere/V6R0M0/AppServer/logs/wbi. Search in this log for the text `>SEVERE<` or `>WARNING<` level messages to determine which errors have occurred. Each Ant script that runs from the install directory has a log that it writes to, which is in ASCII format.

  The default name of the directory that contains the ant scripts is:/WebSphere/V6R1M0/AppServer/properties/version/install.wbi/6.0.0.0/config/full/uninstall. The resulting ant logs are written to the product log directory. The default name for this directory is /WebSphere/V6R1M0/AppServer/logs/wbi. Ant logs include the following (review these logs to determine errors in processing) :

  – 90SDeleteFirstStepsFilesWBI.ant.log
  – 90SRemoveJavaOptions.ant.log
  – 90SUninstallCEI.ant.log
  – 98SUndeployBPCAdminConsolePlugins.ant.log
  – 98SUndeployServerAdminConsolePlugins.ant.log
  – 99SUndeployCoreAdminConsolePlugins.ant.log

  Each of these logs must contain a 'build successful' message when the uninstall has been successful.

- **Review the contents of the Unaugment Log**. The unaugment profile task records the actions it has made by writing to a log file (ASCII). The log file name is wasprofile_unaugment_default.log.. The standard location for this file is /WebSphere/V6R0M0/AppServer/logs/wasprofile. Search this WAS Profile Augment log for `>SEVERE<` or `>WARNING<` level messages to determine overall error in processing. There should be no SEVERE messages.

What to do next

After you have removed WebSphere Process Server for z/OS from your system you must remove the Business Process Choreographer configuration.

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 z/OS, version 6.1, 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*.

Troubleshooting the installation and configuration

Use the information in the troubleshooting section to help you assess and correct problems that may occur if the product installation has not been successful.

Before you begin

The installer program logs installation records in multiple ways:

- Standard output messages

  Standard output messages display directly on the screen of server when you run the installation script zSMPInstall.sh. Standard output messages are also displayed when you run the augment script zWPSConfig.sh. You can choose to redirect these messages to a file by using redirect symbol > and a file name at the end of the command line. For example, adding `>run.log` to the end of the installation command will redirect the standard output messages to a file called **run.log** in the present working directory.
- Log file messages

  Log file messages for the installation process are written to the **zSMPInstall.log** file in the runtime directory. The default location for this file is /WebSphere/V6R1/AppServer/logs/wbi/zSMPInstall.log.

  Log messages for the configuration process are written to the **zWPSConfig.log** file in the runtime directory. The default location of this file is/WebSphere/V6R1/AppServer/logs/wbi/zWPSConfig.log.
- Trace file messages

  Trace messages for the installation process are written to the **zSMPInstall.trace** file in the runtime directory when you specify the -trace parameter on the command line when running the installation script zSMPInstall.sh. If you do not specify this parameter, the trace messages do not get written to the file. The default location of this file is /WebSphere/V6R1/AppServer/logs/wbi/zSMPInstall.trace.

  Trace messages for the configuration process are written to the **zWPSConfig.trace** file in the runtime directory. The default location of this file is/WebSphere/V6R1/AppServer/logs/wbi/zWPSConfig.trace.

Make sure that you have installed and configured WebSphere Application Server for z/OS successfully. Refer to the installation troubleshooting information in the WebSphere Application Server for z/OS information center if you are having trouble installing and configuring WebSphere Application Server for z/OS.

About this task

For current information available from IBM Support on known problems and their resolution, see the WebSphere Process Server Support page.

Procedure

1. Review the messages from Standard Out. There should be no error messages displayed. The standard output messages display on either the screen from which you ran the installation command or in a file that you specified by using the redirect (">") symbol on the command line.

   The following is an example of a successful execution of the installation script with the **-install** option:

   ```
   parsing command arguments...
   parsing arguments complete
   setting up configuration...
   runtimeRootDirName is: /WebSphere/V6R0M0/AppServer
   WAS_HOME is: /WebSphere/V6R0M0/AppServer
   WBI_HOME is: /WebSphere/V6R0M0/AppServer
   set up configuration complete
   creating the symbolic links...
   invokeSymLink
   creation of symbolic links complete
   doing post install file updates...
   post install updates complete
   running Configuration Manager update...
   Configuration Manager update complete
   augmenting profile(s)...
   augmenting profile(s) complete
   ```

   Error messages indicate an unsuccessful installation. Some errors as displayed in Standard Out will be self explanatory and can be easily corrected. If the installation completed to the point where the log and trace files were created, continue with the following steps.

2. Review the zSMPInstall.log (ASCII) file in the runtime directory. For a stand-alone configuration, the standard location for this file is /WebSphere/V6R1/AppServer/logs/wbi/zSMPInstall.log. For a deployment manager configuration, the standard location for this file is /WebSphere/V6R1/DeploymentManager/logs/wbi/zSMPInstall.log

   If there are error messages, determine which of the following tasks were in progress when the error occurred.

   - Create symbolic links
   - Create post installation file
   - Update codebase permissions
   - Update Configuration Manager

   Knowing the task that was in progress at the time of an error will help you assess the information in the trace file.

3. Review the zSMPInstall.trace or the zWPSConfig.trace / zWESBConfig.trace (ASCII) file in the runtime directory. For a stand-alone configuration, the standard location for these files are /WebSphere/V6R1/AppServer/logs/wbi/zSMPInstall.trace or /WebSphere/V6R1/AppServer/logs/wbi/zWPSConfig.trace For a deployment manager configuration, the standard location of this file is /WebSphere/V6R1/DeploymentManger/logs/wbi/zSMPInstall.trace or /WebSphere/V6R1/DeploymentManger/logs/wbi/zWPSConfig.trace

   On a successful installation, only informational messages (messages with a suffix of **I**, for example CWPIZ0044**I**) should be listed in the trace file.

   If warning messages (messages with a suffix of **W**) or error messages (messages with a suffix of **E**) are listed in the trace, further review is required.

   If the warning or error occurred during the create symbolic links, create post installation file, or update codebase permissions tasks, the trace message should contain information that will help you diagnose and correct the problem.

If the warning or error occurred in the update Configuration Manager task, proceed to the next step.

If the warning or error occurred in the augment profile(s) task, proceed to step 5.

4. Review the actions of the Update Configuration Manager task. These actions are recorded by writing to a log file (ASCII). The log file name is `installconfig.log`.

   Standard location for this file is in directory /WebSphere/V6R1/AppServer/logs/wbi/install.

   Search the Configuration Manager log for `>SEVERE<` or `>WARNING<` level messages to determine overall error in processing.

   Each Ant script run from the installation directory writes to its own log (ASCII).

   To determine what Ant file was running at the time of the error, you can look for 'Buildfile' previous.

   The default name for the installation directory that contains the ant scripts is: /WebSphere/V6R1/AppServer/properties/version/install.wbi/config/install.

   The resulting ant logs are written to the product log directory. The default name for this directory is /WebSphere/V6R1/AppServer/logs/wbi. Review these logs to determine errors in processing.

   If there were no problems a **BUILD SUCCESSFUL** message displays at the end of the file.

5. Review the actions of the WebSphere Application Server profile augment task. The augment profile(s) task records its actions by writing to a log file (ASCII). The log file name has the name **default_augment.log**. Standard location for this file is in the directory /WebSphere/V6R1/AppServer/logs/manageprofiles/default_augment.log.

   Search the Profile Augmentation log for `>SEVERE<` or `>WARNING<` level messages to determine overall error in processing.

   Individual Ant action logs are located in /WebSphere/V6R1/AppServer/profiles/default/logs/manageprofiles/default.

   To determine what Ant file was running at the time of the error, you can look in the log for last instance of 'Buildfile' prior to the message in which you are interested.

What to do next

After troubleshooting the problems that caused the installation errors, and after you have run the installation script successfully, you should perform the following steps:

1. Start the WebSphere Application Server.
2. Launch the Administrative Console and verify that the product components have been installed.

   For example, by installing WebSphere Process Server successfully, you should see evidence of Process Choreographer under the Enterprise Applications with names that start with `BPEContainer`, `BPCExplorer`, and `TaskContainer`.

WebSphere Process Server errors

If you experience a problem with one of the configuration tasks then there will be three main sources of information about the problem:

1. The error messages issued by the task

2. Error messages in the WebSphere deployment manager or application server job logs. If you are federating a node you might also find messages in the node agent job logs
3. Log files in the UNIX file system

Wherever possible, the cause and solution to each problem is also documented with the symptoms. The problems described here were experienced when starting the server after completing the installation procedure for WebSphere Process Server. In the examples of error messages, the messages have been made easier to read by changing the places where line breaks occur. Therefore, if you see these errors in your system the messages will have a slightly different layout.

Related reference


Failure in loading T2 native library db2jcct2zos

The following error happens when trying to use the DB2 Universal Type connector and WebSphere Application Server cannot load some external DB2 modules from SDSNLOAD or SDSNLOD2.


DataSource has a null RelationalResourceAdapter property

The error shown in the example below is caused by a redundant datasource that is left behind after running the augment script zWPSConfig.sh. You can safely delete this datasource using the WebSphere Administration Console. Be careful not to delete the JDBC provider that has a very similar name.


SQLCODE = -471

This problem occurs when the Universal Driver has not been properly configured in a DB2 system.


SQL code -204 and -516

This error can be caused if the currentSchema property does not match the schema name of the tables and indexes that you created. The error messages show the J2C authentication alias that is being used.


Repeated SIB messages about acquiring and losing locks

This error can occur after correcting the DB2 Universal Driver configuration and restarting the server. The error messages are repeated continuously in the adjunct region.


Verification errors

When you verify the installation you may encountered some problems, which are described in this section.

When you are checking that applications you have installed exist in the system, you may not see them listed under the installed applications section. If you do not see the applications listed log out of the administrative console and log back in.

There are a number of reasons why you might see an error when testing the CBE Browser in a Network Deployment configuration:

A bpeconfig.jacl error normally occurs if you enter invalid input. The example below is displayed if you make a a mistake entering group names and if you use the delete key instead of the backspace key to make a correction. In the example below, the input appears to be MKHTSMG, but the value that was actually entered contained invalid characters ″MKSMG[D[D[D[D[CHTSMG″.


Resources not seen in the administrative console

When you are checking that applications you have installed exist in the system, you may not see them listed under the installed applications section. If you do not see the applications listed log out of the administrative console and log back in.

Troubleshooting the CBE Browser verification

There are a number of reasons why you might see an error when testing the CBE Browser in a Network Deployment configuration:

bpeconfig.jacl: An error occurred installing TaskContainer

A bpeconfig.jacl error normally occurs if you enter invalid input. The example below is displayed if you make a a mistake entering group names and if you use the delete key instead of the backspace key to make a correction. In the example below, the input appears to be MKHTSMG, but the value that was actually entered contained invalid characters "MKSMG[D[D[D[D[D[CHTSMG".

Failure in loading T2 native library db2jcct2zos

The following error happens when trying to use the DB2 Universal Type connector and WebSphere Application Server cannot load some external DB2 modules from SDSNLOAD or SDSNLOD2.

Error message: BBOO0220E:

```
error message: BBOO0220E:
[SCA.APPLICATION.mdcell.Bus:mdnodea.mdsr01a-SCA.APPLICATION.mdcell.Bus]
CWSIS0002E: The messaging engine encountered an exception while
starting.
Exception: com.ibm.ws.sib.msgstore.PersistenceException:
CWSIS1501E: The data source has produced an unexpected exception:
java.sql.SQLException: Failure in loading T2 native library
db2jcct2zos, reason: java.lang.UnsatisfiedLinkError:
/pp/db2v8/UK14852/jcc/lib/libdb2jcct2zos.so:
EDC5157I An internal error has occurred. (errno2=0x0BDF03B2)DSRA0010E:
SQL State = null, Error Code = -99,999DSRA0010E: SQL State = null,
Error Code = -99,999
com.ibm.ws.sib.utils.ras.SibMessage
com.ibm.ws.sib.utils.ras.SibMessage
```

There are a number of possible causes of a failure to load libdb2jcct2zos.so, but usually a failure like this is a symptom of a larger problem such as the DB2 Universal Driver not being been fully configured in the DB2 system you are accessing.

Check that all the steps for installing the DB2 Universal Driver have been performed for your DB2 system.

The installation instructions for the DB2 Universal Driver can be found in the DB2 Information Center at http://publib.boulder.ibm.com/infocenter/dzichelp/v2r2/topic/com.ibm.db2.doc.java/install.htm#install?

Related reference

WebSphere Process Server errors

If you experience a problem with one of the configuration tasks then there will be three main sources of information about the problem:

Message reference for WebSphere Process Server for z/OS installation and configuration

The message reference for WebSphere Process Server for z/OS lists the message codes that display while running the install script or when running the configuration script.

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Log files

Various log files are created during the product installation and configuration process.

Verification errors

When you verify the installation you may encountered some problems, which are described in this section.

When you are checking that applications you have installed exist in the system, you may not see them listed under the installed applications section. If you do not see the applications listed log out of the administrative console and log back in.

There are a number of reasons why you might see an error when testing the CBE Browser in a Network Deployment configuration:

Resources not seen in the administrative console

When you are checking that applications you have installed exist in the system, you may not see them listed under the installed applications section. If you do not see the applications listed log out of the administrative console and log back in.

Troubleshooting the CBE Browser verification

There are a number of reasons why you might see an error when testing the CBE Browser in a Network Deployment configuration:

DataSource has a null RelationalResourceAdapter property

The error shown in the example below is caused by a redundant datasource that is left behind after running the augment script zWPSConfig.sh. You can safely delete this datasource using the WebSphere Administration Console. Be careful not to delete the JDBC provider that has a very similar name.

```
error message: BBOO0222I: DSRA8208I: JDBC driver type : 2
com.ibm.ws.exception.RuntimeWarning:
com.ibm.ws.runtime.component.binder.ResourceBindingException:
invalid configuration passed to resource binding logic. REASON: Invalid
Configuration!
The DataSource: DB2 Universal JDBC Driver DataSource has a null
RelationalResourceAdapter property.
```

Perform the following steps to remove the redundant datasource:

1. Log in to the WebSphere Administration Console and navigate to Resources → JDBC Providers.
2. Set the scope to Server and click **Apply**.
3. Click the JDBC provider called **DB2 Universal JDBC Driver Provider**.
4. Click the link to **Datasources** on the right.

5. You should see a list of three datasources. Check the box next to **DB2 Universal JDBC Driver Datasource** and click the **Delete** button.
6. Save your configuration changes and restart the WebSphere server.

Related reference

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Troubleshooting the CBE Browser verification

There are a number of reasons why you might see an error when testing the CBE Browser in a Network Deployment configuration:

SQLCODE = -471

This problem occurs when the Universal Driver has not been properly configured in a DB2 system.

The WLM_ENVIRONMENT for SYSIBM.SYSTABLES in the table SYSIBM.SYSROUTINES has a WLM name that does not match that being used in the stored procedure address space JCL. The installation instructions for the DB2

Universal Driver can be found in the DB2 Information Center at http://publib.boulder.ibm.com/infocenter/dzichelp/v2r2/topic/com.ibm.db2.doc.java/install.htm#install?

```
ExtendedMessage: BBOO0220E:
[CommonEventInfrastructure_Bus:mdnodea.mdsr01a-CommonEventInfrastructur e_Bus]
CWSIS0002E: The messaging engine encountered an exception while
starting.
Exception: com.ibm.ws.sib.msgstore.PersistenceException:
CWSIS1501E: The data source has produced an unexpected exception:
com.ibm.db2.jcc.t2zos.y:[IBM/DB2][T2zos/2.9.32]
v.readExecuteCallInternal: nativeExecuteCall:5587:
DB2 engine SQL error, SQLCODE = -471, SQLSTATE = 55023,
error tokens = SYSIBM.SQLTABLES;00E7900C
```

Related reference

WebSphere Process Server errors

If you experience a problem with one of the configuration tasks then there will be three main sources of information about the problem:

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Troubleshooting the CBE Browser verification

There are a number of reasons why you might see an error when testing the CBE Browser in a Network Deployment configuration:

SQL code -204 and -516

This error can be caused if the currentSchema property does not match the schema name of the tables and indexes that you created. The error messages show the J2C authentication alias that is being used.

```
error message: BBOO0220E: SCHD0125E: Unexpected exception
while processing the acquireLease operation:
com.ibm.ws.leasemanager.LeaseException: SCHD0300E:
Error during Database operation,
localized message is

_
:nativePrepareInto:1377:
DB2 engine SQL error, SQLCODE = -204, SQLSTATE = 42704,
error tokens = MDDBU.WSCH_LMGR,
Vendor Error Code is -204, ANSI-92 SQLState is 42704, cause:
[IBM/DB2][T2zos/2.9.32]T2zosPreparedStatement.readDescribeInput_
:nativeDescribeInput:2006:
DB2 engine SQL error, SQLCODE = -516, SQLSTATE = 26501,
error tokens =


..
..
com.ibm.db2.jcc.t2zos.y:
[IBM/DB2][T2zos/2.9.32]T2zosPreparedStatement.readDescribeInput:2006:
DB2 engine SQL error, SQLCODE = -516, SQLSTATE = 26501, ...
```

Related reference

WebSphere Process Server errors

If you experience a problem with one of the configuration tasks then there will be three main sources of information about the problem:

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Troubleshooting the CBE Browser verification

There are a number of reasons why you might see an error when testing the CBE Browser in a Network Deployment configuration:

Repeated SIB messages about acquiring and losing locks

This error can occur after correcting the DB2 Universal Driver configuration and restarting the server. The error messages are repeated continuously in the adjunct region.

```
ExtendedMessage: BBOO0222I:
[CommonEventInfrastructure_Bus:mdnodea.mdsr01a-CommonEventInfrastructur e_Bus]
CWSIS1538I: The messaging engine, ME_UUID=68E9550CE7780888,
INC_UUID=5f244052b02f04b4,
is attempting to obtain an exclusive lock on the data store.
..
..
ExtendedMessage: BBOO0222I:
[CommonEventInfrastructure_Bus:mdnodea.mdsr01a-CommonEventInfrastructur
e_Bus]
CWSIS1546I: The messaging engine, ME_UUID=68E9550CE7780888,
INC_UUID=5f244052b02f04b4,
has lost an existing lock or failed to gain an initial lock on the database
```

These error messages indicate that there is a problem accessing the data store. Check that the fixWPSvars.jacl had created (jdbc/MEdatasource) in the datasource. Check that the datasource has an J2C authentication alias associated with it. If there is no J2C authentication alias associated with the datasource the database access defaults to the user ID of the servant region and tries to find tables called MKASRU which do not exist.

This error can occur because the -sibauth option has not been coded when running fixWPSvars.jacl. You can fix this in a number of ways:

- Associate the JDBC datasources used by the SIBs with the J2C authentication alias called WPSDBAlias.
- Create a new J2C Authentication Alias and associate that with the JDBC. Re-run fixWPSvars.jacl using the -sibauth option to specify WPSDBAuth as the J2C authentication alias, or use the WebSphere Administration console to make the change, specifying WPSDBAlias as the alias name.

The following steps explain how to create a new J2C authentication alias to be used by the SIBs to access DB2:

1. Pen theWebSphere Administration Console and navigate to **Security** → **Global security**.
2. Click the link to **J2C Authentication data** under **Additional Properties**.
3. Click the **New** button.
4. Enter a name for the alias, and enter the user ID and the password for the alias.
5. Click **OK**.
6. Click **Save**.

The following steps explain how to associate the Service Integration Buses with the authentication alias that you have created:

1. Open the WebSphere Administration Console and navigate to **Service integration → Buses**.
2. Click the first bus in the list.
3. On the next panel, click **Messaging engines**.
4. Click the hyperlink to the messaging engine.
5. Click the link to **Data store** under **Additional Properties**.
6. Expand the drop-down list box in the **Authentication alias** field and select the alias you created earlier.
7. Click **OK** and then save the change to the configuration.
8. Click the link at the top of the page to navigate back to the list of buses.
9. Select the next bus in the list and repeat the same procedure. Repeat for the remaining buses.
10. When all the buses have been updated to refer to a valid J2C authentication alias and stop and restart the server.

Related reference


WebSphere Process Server errors

If you experience a problem with one of the configuration tasks then there will be three main sources of information about the problem:


Message reference for WebSphere Process Server for z/OS installation and configuration

The message reference for WebSphere Process Server for z/OS lists the message codes that display while running the install script or when running the configuration script.


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Troubleshooting the CBE Browser verification

There are a number of reasons why you might see an error when testing the CBE Browser in a Network Deployment configuration:

bpeconfig.jacl: An error occurred installing TaskContainer

A bpeconfig.jacl error normally occurs if you enter invalid input. The example below is displayed if you make a a mistake entering group names and if you use the delete key instead of the backspace key to make a correction. In the example below, the input appears to be MKHTSMG, but the value that was actually entered contained invalid characters ″MKSMG[D[D[D[D[D[CHTSMG″.

```
..
..
[] Install the task container [Yes/no]? Yes
[adminHTMUsers] User(s) to add to role TaskSystemAdministrator
(separator is pipe,
'|') []: MKADMIN
[adminHTMGroups] Group(s) to add to role TaskSystemAdministrator
(separator is pipe,
'|') []: MKSMADMG|MKCFG
[monitorHTMUsers] User(s) to add to role TaskSystemMonitor
(separator is pipe, '|')
[]:
[monitorHTMGroups] Group(s) to add to role TaskSystemMonitor
(separator is pipe, '|')
[]: MKSMG[D[D[D[D[CHTSMG
[jmsHTMRunAsUser] Run-as UserId for role EscalationUser
 [MKADMIN]: MKHTSM
[jmsHTMRunAsPwd] MKHTSM's password []: ********
[auto:mqType] Use WebSphere default messaging or
WebSphere MQ? WPM
task.ear install options: -appname "TaskContainer_mkcl01"
-usedefaultbindings
-defaultbinding.ejbjndi.prefix ejb/htm -cluster
"mkcl01"
-BindJndiForEJBMessageBinding {{"TaskContainer" "HTMScheduler"
"taskejb.jar,META-INF/ejb-jar.xml" ""
"eis/HTMInternalActivationSpec"
"jms/HTMIntQueue" ""}} -MapResRefToEJB {
{"TaskContainer"
"GenericHumanTaskManagerEJB" "taskejb.jar,META-INF/
ejb-jar.xml" "jdbc/BPEDB"
"javax.sql.DataSource" "jdbc/BPEDB_mkcl01"} {"TaskContainer"
"TaskContainerStartUpBean" "taskejb.jar,META-INF/ejb-jar.xml"
 "jdbc/BPEDB"
"javax.sql.DataSource" "jdbc/BPEDB_mkcl01"}} -MapResEnvRefToRes
{ {"TaskContainer"
"TaskContainerStartUpBean" "taskejb.jar,META-INF/ejb-jar.xml"
 "jms/HTMHoldQueue"
"javax.jms.Queue" "jms/HTMHldQueue"} {"TaskContainer"
 "TaskContainerStartUpBean"
"taskejb.jar,META-INF/ejb-jar.xml" "scheduler/BPCScheduler"
"com.ibm.websphere.scheduler.Scheduler" "BPEScheduler"}
} -MapRolesToUsers
{{"TaskSystemAdministrator" "AppDeploymentOption.No"
 "AppDeploymentOption.No"
"MKADMIN" "MKSMADMG|MKCFG"} {"TaskSystemMonitor"
 "AppDeploymentOption.No"
"AppDeploymentOption.No" "" "MKSMG[D[D[D[D[CHTSMG"}
 {"EscalationUser"
```

```
"AppDeploymentOption.No" "AppDeploymentOption.Yes"
 "" ""}} -MapRunAsRolesToUsers
{{"EscalationUser" "********" "MKHTSM"}}
An error occured installing TaskContainer_mkcl01:
..
..
com.ibm.ws.scripting.ScriptingException: WASX7132E: Application install for
/wasmkconfig/mkcell/mkdmnode/DeploymentManager/installableApps/task.ear failed: see
previous messages for details. Discarding changes.
```

If you look in the log of the servant job in the Deployment Manager you could also see a related error like that shown below:

```
error message: FFDC0010I: FFDC closed incident stream file
/wasmkconfig/mkcell/mkdmnode/DeploymentManager/profiles/default/logs/ff
dc/mkcell_mkdmnode_dmgr_STC12532_MKDMGRS_06.11.13_04.05.37_1.txt
com.ibm.etools.j2ee.commonarchivecore.exception.ResourceLoadException: IWAE0007E
Could not load resource "META-INF/ibm-application-bnd.xmi" in archive
"/wasmkconfig/mkcell/mkdmnode/DeploymentManager/profiles/default/temp/app35301.ear"
!Stack_trace_of_nested_exce!
com.ibm.etools.j2ee.exception.WrappedRuntimeException:
Exception occurred loading META-INF/ibm-application-bnd.xmi
!Stack_trace_of_nested_exce!
Wrapped exception
org.xml.sax.SAXParseException: An invalid XML character (Unicode: 0x1b) was found in
the value of attribute "name" and element is "groups".
```

Related reference

Verification errors

When you verify the installation you may encountered some problems, which are described in this section.

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Troubleshooting the CBE Browser verification

There are a number of reasons why you might see an error when testing the CBE Browser in a Network Deployment configuration:

Verification errors

When you verify the installation you may encountered some problems, which are described in this section.

Related reference

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There are a number of reasons why you might see an error when testing the CBE Browser in a Network Deployment configuration:

Failure in loading T2 native library db2jcct2zos

The following error happens when trying to use the DB2 Universal Type connector and WebSphere Application Server cannot load some external DB2 modules from SDSNLOAD or SDSNLOD2.

DataSource has a null RelationalResourceAdapter property

The error shown in the example below is caused by a redundant datasource that is left behind after running the augment script zWPSConfig.sh. You can safely delete this datasource using the WebSphere Administration Console. Be careful not to delete the JDBC provider that has a very similar name.

SQLCODE = -471

This problem occurs when the Universal Driver has not been properly configured in a DB2 system.

SQL code -204 and -516

This error can be caused if the currentSchema property does not match the schema name of the tables and indexes that you created. The error messages show the J2C authentication alias that is being used.

Repeated SIB messages about acquiring and losing locks

This error can occur after correcting the DB2 Universal Driver configuration and restarting the server. The error messages are repeated continuously in the adjunct region.

Verification errors

When you verify the installation you may encountered some problems, which are described in this section.

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A bpeconfig.jacl error normally occurs if you enter invalid input. The example below is displayed if you make a a mistake entering group names and if you use the delete key instead of the backspace key to make a correction. In the example below, the input appears to be MKHTSMG, but the value that was actually entered contained invalid characters ″MKSMG[D[D[D[D[D[CHTSMG″.

bpeconfig.jacl: An error occurred installing TaskContainer

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If you experience a problem with one of the configuration tasks then there will be three main sources of information about the problem:

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Resources not seen in the administrative console

When you are checking that applications you have installed exist in the system, you may not see them listed under the installed applications section. If you do not see the applications listed log out of the administrative console and log back in.

If you do not see Service Integration Buses that you have configured, log out of the administrative console and log back in.

Related reference

Verification errors

When you verify the installation you may encountered some problems, which are described in this section.

When you are checking that applications you have installed exist in the system, you may not see them listed under the installed applications section. If you do not see the applications listed log out of the administrative console and log back in.

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The message reference for WebSphere Process Server for z/OS lists the message codes that display while running the install script or when running the configuration script.

Log files

Various log files are created during the product installation and configuration process.

Troubleshooting the CBE Browser verification

There are a number of reasons why you might see an error when testing the CBE Browser in a Network Deployment configuration:

CWLCB0020E: Common Event Infrastructure is unavailable with NameNotFoundException

- A fully qualified JNDI name was not used on the CBE Browser.
- The schema name for the CEI tables is not equal to the user ID in the J2C Authentication Alias that is being used by the event and eventcat datasources.

The following is an example of messages that can be displayed when verifying the CBE browser in the Network Deployment configuration for the first time.

The following is an example of messages that can be displayed in the servant log of the WebSphere Application Server:

```
javax.naming.NameNotFoundException:
Context: mkcell/nodes/mkdmnode/servers/dmgr,
name: ejb/com/ibm/events/access/EventAccess:
First component in name com/ibm/events/access/EventAccess not found.
Root exception is org.omg.CosNaming.NamingContextPackage.NotFound:
IDL:omg.org/CosNaming/NamingContext/NotFound:1.0
```

A fully qualified JNDI name is needed in the Event Data Store when CEI is configured in a Network Deployment configuration. To resolve this problem, specify a fully qualified JNDI name for the EventAccess EJB.

CWLCB0020E: Common Event Infrastructure is unavailable with CEIDS0035E

The following error messages can also be displayed when verifying the CBE browser in the Network Deployment configuration for the first time:

```
error message: CEIDS0035E The implementation class that supports the
configured relational database system cannot be loaded.
Implementation class name:
com.ibm.events.datastore.impl.Db2UniveralDriverImpl
Relational database name: DB2
Database version: DSN08015
com.ibm.events.datastore.impl.DatabaseSpecificsFactory
handleCreateException(String, String, String, Exception)
```

These error messages indicate a problem loading a class, but the cause is usually a problem accessing the database. Sometimes there are also some error messages with DB2 return codes like -204 that can help you diagnose the problem, but sometimes you only see the CEIDS0035E message.

Solution 1

Check that the ws.ext.dirs JVM custom property is set correctly to include CEI_HOME=${CEI_HOME}/lib:${CEI_HOME}/client.

If you have a Network Deployment configuration you must set ws.ext.dirs in the Deployment Manager and in any nodes where the EventServer application is deployed. You may still see these errors if you have ws.ext.dirs set correctly. In addition to the error messages, FFDC logs are created at the same time as the CEIDCS0035E messages. These are written in ASCII, so are not easily viewable from OMVS unless you have installed a tool like AOBROWSE. Alternatively, use a workstation-based graphical file manager to browse the FFDC logs.

The following is an example of the type of messages you may see in the first FFDC log created before the CEIDCS0035E message:

```
Stack Dump = com.ibm.db2.jcc.t2zos.y:
[IBM/DB2][T2zos/2.9.32]T2zosPreparedStatement.readPrepareDescribeOutput
_:nativePrepareInto:1377:DB2 engine SQL error, SQLCODE = -551, SQLSTATE
= 42501, error tokens = MKDBU;SELECT;MKCELL.CEI_T_PROPERTIES
```

A -551 code indicates an authorization failure. In this example the J2C Authentication Alias user ID, MKDBU, is not authorized to SELECT from MKCELL.CEI_T_PROPERTIES. Notice that the is example has the CEI tables created using a schema name that is not equal to the J2C Authentication Alias user ID.

Solution 2

If you find a -551 error in the FFDC file, correct the authorization failure reported there by issuing appropriate GRANT statements in DB2.

For example, you could issue GRANT ALL ON TABLE MKCELL. TO MKDBU for all of the CEI tables, views, and indexes created in the CEI databases, then restart the WebSphere Application Server. You may still however receive error message CWLCB0020E on the CBE Browser and CEIDCS0035E in the servant log.

The following is an example of a different DB2 error reported in the FFDC log, and the same error reported in the servant message log:

```
Exception = com.ibm.db2.jcc.t2zos.y
Source = com.ibm.ws.rsadapter.jdbc.WSJdbcConnection.prepareStatement
probeid = 1584
Stack Dump = com.ibm.db2.jcc.t2zos.y:
[IBM/DB2][T2zos/2.9.32]T2zosPreparedStatement.readPrepareDescribeOutput
_:nativePrepareInto:1377:DB2 engine SQL error, SQLCODE = -204, SQLSTATE
= 42704, error tokens = MKDBU.CEI_T_CBE_MAP
```

A -204 code is resource allocation failure, that is, MKDBU.CEI_T_CBE_MAP not found. We had created all the CEI tables with a schema name of MKCELL, but the failure shows that the CBE Browser is attempting to access MKDBU.CEI_T_CBE_MAP. The user ID MKDBU is the one in the J2C Authentication Alias being used by the event and eventcat datasources.

The problem is that the CEI component interrogates the alias associated with the datasource and uses that to issue fully qualified SQL. This means that any value you set in the currentSchema custom property on the datasources is ignored. Unfortunately, at this time CEI must be configured so that the schema of all CEI objects in DB2 is equal to the user ID in the J2C Authentication Alias used by the event and eventcat datasources.

There are two ways to resolve this problem:

- Make the schema in the database match the user ID in the J2C Authentication Alias user ID being used on the event and eventcat datasources (solution 3a).
- Use a new J2C Authentication Alias for the event and eventcat datasources that has a user ID that matches the schema of the existing CEI tables (solution 3b). This is the approach we recommend if longer term you do not want to have the schema of CEI tables equal to the J2C Authentication Alias user ID.

Solution 3a

Drop the CEI databases, then recreate them. Then re-run the CEI DDL (which includes inserting the metadata and seeding the catalog), but specify a schema name equal to the J2C Authentication Alias user ID on all CREATE statements.

Solution 3b

Perform the following steps if you do not want to drop and recreate the CEI tables:

1. Create a RACF user ID equal to the schema name you are currently using.
2. Using the WebSphere Administration Console, define a new J2C Authentication Alias and set the RACF user ID with a password in that alias. Set the schema of the CEI user ID and password in the J2C alias that you create.
3. Navigate to **Resources** → **JDDC Providers** and set the scope depending on whether CEI was deployed in a cluster or a server:
   - If the CEI EventServer application is deployed in a cluster, set the scope to the cluster.
   - If the CEI Event Server application is deployed in a server, set the scope to the server.

   Click **Event_DB2ZOS_JDBC_Provider**.
4. Click **Data sources** under **Additional properties**.
5. Click **Event**.
6. Scroll down and select the new J2C Authentication Alias you created from the drop-down list box in field Component-managed authentication alias.
7. Click **OK**.
8. Navigate to the eventcat datasource and make the same change.
9. Save your configuration changes then restart the server or cluster.

The advantage of using solution 3b rather than 3a is that the reason you experienced this problem in the first place is that you do not want to have tables in DB2 with a schema that matches the J2C Authentication Alias user ID. The CEI tables already have the schema you want to use, so it does not make sense to change the schema. When a fix is available to CEI that allows you to use the currentSchema property on the datasource, you can easily switch the datasources so that they return to using the original J2C Authentication Alias.

Of course, even with solution 3b you will be temporarily using a J2C Authentication Alias equal to the CEI schema. When there is a fix for CEI and you switch back to the original J2C Authentication Alias (the one that is not the same as the schema), you can delete the alias and the RACF user ID for the J2C Authentication Alias you created to temporarily match the CEI schema.

CWLCB0020E: Common Event Infrastructure is unavailable with CORBA NO MEMORY

In the servant long you may also see the following error:

```
java.rmi.RemoteException: CORBA NO_MEMORY exception
```

You are unlikely to experience this problem if you have just installed WebSphere Process Server, but it is useful to know that you can experience memory problems if you get events with a high number specified in the Maximum number of events field.

You can resolve this problem in either of two ways:

- Reduce the maximum number of events to retrieve from 500 to 100, then retrieve the next blocks of events using the time and date query.
- Increase the minimum and maximum heap sizes for the JVM of the servant region in the server running the EventServer application.

Related reference

Verification errors

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There are a number of reasons why you might see an error when testing the CBE Browser in a Network Deployment configuration:

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DataSource has a null RelationalResourceAdapter property

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SQLCODE = -471

This problem occurs when the Universal Driver has not been properly configured in a DB2 system.

SQL code -204 and -516

This error can be caused if the currentSchema property does not match the schema name of the tables and indexes that you created. The error messages show the J2C authentication alias that is being used.

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example below, the input appears to be MKHTSMG, but the value that was actually entered contained invalid characters ″MKSMG[D[D[D[D[D[CHTSMG″.

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Message reference for WebSphere Process Server for z/OS installation and configuration

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About the installation error messages

Use the data in the Explanation and user response fields to troubleshoot the WebSphere Process Server for z/OS message codes.

The message code displays as CWPIZyyyyz, where:

- CWPIZ = The WebSphere Process Server for z/OS message prefix

- yyyy = The numeric identifier assigned to the number
- z = Descriptor (E, I or W) for the type of message, where:
  - E = Error message
  - I = Informational message
  - W = Warning message

For a listing of the WebSphere Process Server for z/OS installation error messages, see CWPIZ in the Messages portion of the Reference documentation.

The WebSphere Process Server for z/OS installation error messages are written to the zSMPInstall.log file in the run-time directory. The standard default location for the log file is /WebSphere/V6R1/AppServer/logs/wbi/zSMPInstall.log.

The WebSphere Process Server for z/OS configuration error messages are written to the zWPSConfig.log file and the zWESBConfig.log file in the run-time directory. The standard default location for these log files are /WebSphere/V6R1/AppServer/logs/wbi/zWESBConfig.log and /WebSphere/V6R1/AppServer/logs/wbi/zWPSConfig.log respectively.

Related reference

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Log files

Various log files are created during the product installation and configuration process.

Purpose

Consult the applicable logs if problems occur during the product installation and configuration process.

Standard out messages redirected to log file

Standard out messages report high-level actions such as the starting and completing of the action that verifies the command line arguments.

By default, these messages display directly on the screen from which you run the product installation script. However, you can *redirect* these messages to a file by using the redirect symbol and a file name at the end of the command line. For example, specifying `>run.log` at the end of the installation command redirects the standard out messages to a file named `run.log` in the present working directory.

Standard out messages also report severe errors that occur prior to the Log and Trace File being opened. For instance, the following message block displays if a required keyword (-runtime) was not included in the installation command.

```
parsing command arguments...
CWPIZ0101E -runtime keyword and value not specified on command line.
com.ibm.ws390.installer.InstallFailureException: -runtime keyword and value not specified
CWPIZ0017E  install task failed.
```

Log file

These messages include the messages written to Standard Out, but provide additional information and settings that were used by the installer program.

For instance, the following log portion shows the response properties and their values being used. It also shows the source and target directories being used during the creation of the symbolic links.

```
response property: profilePath=/WebSphere/V6R1M0/AppServer/profiles/default
response property: nodeName=SY1
response property: scaSecurityPassword=ibmuser
response property: dbType=Derby
response property: ceiSampleJmsUser=ibmuser
response property: scaSecurityUserId=ibmuser
response property: configureScaSecurity=true
response property: mqUser=ibmuser
response property: serverName=server1
response property: adminBFMGroups=ibmuser
response property: profileName=default
response property: dbCreateNew=true
response property: ceiSampleJmsPwd=ibmuser
response property: cellName=SY1
response property: dbLocation=/WebSphere/V6R1M0/AppServer/derby/databases/WBIDB
response property: mqPwd=ibmuser
response property: was.install.root=/WebSphere/V6R1M0/AppServer
response property: augment=
response property: ceiDbProduct=CLOUDSCAPE_V51_1
response property: wbi.install.root=/WebSphere/V6R1M0/AppServer
response property: ceiSampleServerName=server1
response property: templatePath=/WebSphere/V6R1M0/AppServer/profileTemplates/default.*
response property: dbName=WBIDB
set up configuration complete
creating the symbolic links...
Source=/usr/lpp/zWPS/V6R1M0

Target=/WebSphere/V6R1M0/AppServer
creation of symbolic links complete
doing post install file updates...
post install updates complete
running Configuration Manager update...
Configuration Manager update complete
```

Trace file

These messages are written to the **zSMPInstall.trace** file in the run-time directory.

The example below shows some preliminary informational messages and then a **CWPIZ0322E** error indicating that the required profileName property was not found in the response file that the user specified on the installation script command line (nor was provided as a -Z override).

The subsequent **CWPIZ0017E** error message is a general message indicating the final outcome of the zSMPInstall.sh run.

```
[8/16/05 17:00:45:380 EDT] 0000000a ManagerAdmin  I   BBOO0222I:
TRAS0017I: The startup trace state is *=info.

[8/16/05 17:00:48:230 EDT] 0000000a WPSInstaller  I   BBOO0222I:
CWPIZ0044I Begin install task.

[8/16/05 17:00:48:273 EDT] 0000000a WPSInstaller  I   BBOO0222I:
CWPIZ0117I WPS installer log data will be written to
/WebSphere/V6R1M0/AppServer/logs/wbi/zSMPInstall.log.

[8/16/05 17:00:48:282 EDT] 0000000a WPSInstaller  I   BBOO0222I:
CWPIZ0024I WPS installer trace data will be written to
/WebSphere/V6R1M0/AppServer/logs/wbi/zSMPInstall.trace.

[8/16/05 17:00:48:292 EDT] 0000000a WPSInstaller  I   BBOO0222I:
CWPIZ0014I Trace specification is "*=all=disabled".

[8/16/05 17:00:48:298 EDT] 0000000a WPSInstaller  I   BBOO0222I:
CWPIZ0045I WPS SMP/E root directory is /zrockuser/wbi/Install.
```

```
[8/16/05 17:00:48:302 EDT] 0000000a WPSInstaller  I   BBOO0222I:
CWPIZ0052I WAS SMP/E root directory is /web/usr/lpp/zWebSphere/V6R0.

[8/16/05 17:00:48:307 EDT] 0000000a WPSInstaller  I   BBOO0222I:
CWPIZ0046I Destination application server root directory is
/WebSphere/V6R1M0/AppServer.

[8/16/05 17:00:48:314 EDT] 0000000a WPSInstaller  E   BBOO0220E:
CWPIZ0322E profileName property not specified in Response File.

[8/16/05 17:00:48:318 EDT] 0000000a WPSInstaller  E   BBOO0220E:
CWPIZ0017E install task failed.

A trace file from a zSMPInstall.sh executed with the trace specification argument
set to "*=all=enabled" provides additional debugging information. It may contain
information that is meaningful only to a developer. The following is a partial
trace using "*=all=enabled":

************ Start Display Current Environment ************
Host Operating System is z/OS, version 01.04.00
Java version = J2RE 1.4.2 IBM z/OS Persistent Reusable VM build cm142-20050623
(JIT enabled: jitc), Java
Compiler = jitc, Java VM name = Classic VM
was.install.root = /WebSphere/V6R1M0/AppServer
user.install.root = /WebSphere/V6R1M0/AppServer/profiles/default
Java Home = /web/usr/lpp/zWebSphere/V6R0/java/J1.4
ws.ext.dirs = /WebSphere/V6R1M0/AppServer/java/lib:/WebSphere/V6R1M0/AppServer/java/lib/
ext:/WebSphere/V6R1M0/AppServer/classes:/WebSphere/V6R1M0/AppServer/lib:/WebSphere/V6R1M0/AppServer/
installedChannels:/WebSphere/V6R1M0/AppServer/lib/ext:/WebSphere/V6R1M0/AppServer/deploytool/itp
/plugins/com.ibm.etools.ejbdeploy/runtime:/WebSphere/V6R1M0/AppServer/MQSeries/pubsubroot/lib
Classpath = /zrockuser/bbzconfig.jar:/WebSphere/V6R1M0/AppServer/lib/admin.jar:/WebSphere/V6R1M0
/AppServer/lib/ant.jar:/WebSphere/V6R1M0/AppServer/lib/bootstrapws390.jar:/WebSphere/V6R1M0
/AppServer/lib/bootstrap.jar:/WebSphere/V6R1M0/AppServer/lib/configmanager.jar:/WebSphere
/V6R1M0/AppServer/lib/emf.jar:/WebSphere/V6R1M0/AppServer/lib/ras.jar:/WebSphere/V6R1M0
/AppServer/lib/runtimefw.jar:/WebSphere/V6R1M0/AppServer/lib/utils.jar:/WebSphere/V6R1M0
/AppServer/lib/wasjmx.jar:/WebSphere/V6R1M0/AppServer/lib/wasproduct.jar:/WebSphere/V6R1M0
/AppServer/lib/wccm_base.jar:/WebSphere/V6R1M0/AppServer/lib/wjmxapp.jar:/WebSphere/V6R1M0
/AppServer/lib/wsanttasks.jar:/WebSphere/V6R1M0/AppServer/lib/wsexception.jar:/WebSphere
/V6R1M0/AppServer/lib/wsprofile.jar:/WebSphere/V6R1M0/AppServer/profiles/default/properties:
/WebSphere/V6R1M0/AppServer/properties:/WebSphere/V6R1M0/AppServer/lib/bootstrap.jar:/WebSphere
/V6R1M0/AppServer/lib/j2ee.jar:/WebSphere/V6R1M0/AppServer/lib/lmproxy.jar:/WebSphere/V6R1M0
/AppServer/lib/urlprotocols.jar:/WebSphere/V6R1M0/AppServer/lib/bootstrapws390.jar
Java Library path = /web/usr/lpp/zWebSphere/V6R0/java/J1.4/bin/classic/libjvm.so:/web/usr
/lpp/zWebSphere/V6R0/java/J1.4/bin/classic:/web/usr/lpp/zWebSphere/V6R0/java/J1.4/bin/:
/WebSphere/V6R1M0/AppServer/lib:/WebSphere/V6R1M0/AppServer/lib:/WebSphere/V6R1M0/AppServer
/MQSeries/pubsubroot/lib:/mqm/java/bin:/mqm/java/lib:/db2810/lib:/db2beta/db2710/lib:
/web/usr/lpp/WebSphere/lib:/lib:/usr/lib:/java/J1.3/bin:/java/J1.4/bin:/java/J5.0/bin:
/staf/lib:/WebSphere/V6R1M0/AppServer/lib:/usr/lib
Current trace specification = *=all
************ End Display Current Environment ************
[10/3/05 16:35:05:709 EDT] 0000000a ManagerAdmin  I   BBOO0222I: TRAS0017I:
The startup trace state is *=all.
[10/3/05 16:35:08:638 EDT] 0000000a WPSInstaller  >  setup Entry
                                /web/usr/wbi/zWebSphere/V6R0
                                APPSERVER
                                zSMPInstall.sh
                                -smproot
                                /web/usr/wbi/zWPS/V6R0
                                -runtime
                                /WebSphere/V6R1M0/AppServer
                                -response
                                /web/usr/wbi/zWPS/V6R0/zos.config/standAloneProfile.rsp
                                -prereqonly
                                -trace
                                *=all=enabled
[10/3/05 16:35:08:640 EDT] 0000000a WPSInstaller  3   logFileDeleted
                                true
[10/3/05 16:35:08:660 EDT] 0000000a WPSInstaller  I   BBOO0222I: CWPIZ0044I:
Begin install task.
[10/3/05 16:35:08:702 EDT] 0000000a WPSInstaller  I   BBOO0222I: CWPIZ0117I:
WPS installer log data will be written to /WebSphere/V6R1M0/AppServer/logs/wbi/zSMPInstall.log.
[10/3/05 16:35:08:712 EDT] 0000000a WPSInstaller  I   BBOO0222I: CWPIZ0024I:
WPS installer trace data will be written to /WebSphere/V6R1M0/AppServer/logs/wbi/zSMPInstall.trace.
[10/3/05 16:35:08:722 EDT] 0000000a WPSInstaller  I   BBOO0222I: CWPIZ0014I:
Trace specification is "*=all=enabled".
[10/3/05 16:35:08:726 EDT] 0000000a WPSInstaller  I   BBOO0222I: CWPIZ0052I:
WAS SMP/E root directory is /web/usr/lpp/zWebSphere/V6R0.
[10/3/05 16:35:08:730 EDT] 0000000a WPSInstaller  >  checkPathName Entry
                                /web/usr/wbi/zWPS/V6R0
[10/3/05 16:35:08:731 EDT] 0000000a WPSInstaller  <  checkPathName Exit
[10/3/05 16:35:08:732 EDT] 0000000a WPSInstaller  I   BBOO0222I: CWPIZ0045I:
WPS SMP/E root directory is /web/usr/wbi/zWPS/V6R0.
[10/3/05 16:35:08:736 EDT] 0000000a Symlink       >  isSymlink Entry
                                /web/usr/wbi/zWPS/V6R0
[10/3/05 16:35:08:737 EDT] 0000000a Symlink       3   absolute path
                                /web/usr/wbi/zWPS/V6R0
[10/3/05 16:35:08:737 EDT] 0000000a Symlink       3   canonical path
                                /web/usr/wbi/zWPS/V6R0
[10/3/05 16:35:08:738 EDT] 0000000a Symlink       <  isSymlink Exit
                                false
```

```
[10/3/05 16:35:08:738 EDT] 0000000a WPSInstaller  I   BBOO0222I: CWPIZ0046I:
Destination application server root directory is /WebSphere/V6R1M0/AppServer.
[10/3/05 16:35:08:744 EDT] 0000000a WPSInstaller  I   BBOO0222I: CWPIZ0247I:
Response file is /web/usr/wbi/zWPS/V6R0/zos.config/sample.rsp.
[10/3/05 16:35:08:764 EDT] 0000000a WPSInstaller  3   response property
                           profilePath=/WebSphere/V6R1M0/AppServer/profiles/default
[10/3/05 16:35:08:765 EDT] 0000000a WPSInstaller  3   response property
                           nodeName=SY1
```

Related reference

Failure in loading T2 native library db2jcct2zos

The following error happens when trying to use the DB2 Universal Type connector and WebSphere Application Server cannot load some external DB2 modules from SDSNLOAD or SDSNLOD2.

DataSource has a null RelationalResourceAdapter property

The error shown in the example below is caused by a redundant datasource that is left behind after running the augment script zWPSConfig.sh. You can safely delete this datasource using the WebSphere Administration Console. Be careful not to delete the JDBC provider that has a very similar name.

SQLCODE = -471

This problem occurs when the Universal Driver has not been properly configured in a DB2 system.

SQL code -204 and -516

This error can be caused if the currentSchema property does not match the schema name of the tables and indexes that you created. The error messages show the J2C authentication alias that is being used.

Repeated SIB messages about acquiring and losing locks

This error can occur after correcting the DB2 Universal Driver configuration and restarting the server. The error messages are repeated continuously in the adjunct region.

Verification errors

When you verify the installation you may encountered some problems, which are described in this section.

When you are checking that applications you have installed exist in the system, you may not see them listed under the installed applications section. If you do not see the applications listed log out of the administrative console and log back in.

There are a number of reasons why you might see an error when testing the CBE Browser in a Network Deployment configuration:

A bpeconfig.jacl error normally occurs if you enter invalid input. The example below is displayed if you make a a mistake entering group names and if you use the delete key instead of the backspace key to make a correction. In the example below, the input appears to be MKHTSMG, but the value that was actually entered contained invalid characters ″MKSMG[D[D[D[D[CHTSMG″.

Resources not seen in the administrative console

When you are checking that applications you have installed exist in the system, you may not see them listed under the installed applications section. If you do not see the applications listed log out of the administrative console and log back in.

Troubleshooting the CBE Browser verification

There are a number of reasons why you might see an error when testing the CBE Browser in a Network Deployment configuration:

 bpeconfig.jacl: An error occurred installing TaskContainer

A bpeconfig.jacl error normally occurs if you enter invalid input. The example below is displayed if you make a a mistake entering group names and if you use the delete key instead of the backspace key to make a correction. In the example below, the input appears to be MKHTSMG, but the value that was actually entered contained invalid characters ″MKSMG[D[D[D[D[CHTSMG″.

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