



Migrating to WebSphere Process Server

Note

Before using this information, be sure to read the general information in "Notices" on page 13.

September 29 2005

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

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

When you send information to IBM, you grant IBM a nonexclusive right to use or distribute the information in any way it believes appropriate without incurring any obligation to you.

© Copyright International Business Machines Corporation 2005. All rights reserved.

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

Migrating to WebSphere Process Server.	1
Migration overview	1
Using the reposMigrate utility	2
Deprecated features	6
Deprecation list	6
Notices	13
Programming interface information	15
Trademarks and service marks	15

Migrating to WebSphere Process Server

This section describes how to migrate your system to IBM WebSphere Process Server, Version 6.0.

WebSphere Process Server documentation PDFs 

Migration overview

Migrating is copying configuration information from an older product to the new release of WebSphere Process Server. You must migrate your existing applications and configuration information to WebSphere Process Server in order to use them in the new environment.

Migrating to WebSphere Process Server is supported from the following product versions:

- WebSphere InterChange Server version 4.2.0 or later. (See the WebSphere Integration Developer Information Center and “Using the reposMigrate utility” on page 2 for details).
- WebSphere Business Integration Server Foundation versions 5.1 and 5.1.1 (upgrade migration from WebSphere Business Integration Server Foundation directly into WebSphere Process Server will only be possible in future releases of WebSphere Process Server). For details on how to migrate your application source code, see the WebSphere Integration Developer Information Center.
- WebSphere MQ Workflow version 3.5. (See the WebSphere Integration Developer Information Center for details).

If you have one of these previous version, you must decide whether to migrate. Migrating entails copying the configuration and applications of the previous version to WebSphere Process Server. Migration does not uninstall the previous version. To run an earlier release and the new release (or two installations of the same release) at the same time is “coexistence”. To support coexistence, you need to provide non-default port assignments during profile creation. See the guide for more information on coexistence. See the Installing WebSphere Process Server guide for more information on coexistence.

WebSphere Process Server contains migration tools that offer migration functionality. These migration tools allow you to migrate applications and configuration information to WebSphere Process Server. A Migration wizard guides you through the migration process; it provides a graphical user interface to the migration tools. You can use the Migration wizard to invoke the migration tools, or you can execute the tools directly from a command line.

Table 1. Overview of migration pathways

Migration pathway	Description
WebSphere InterChange Server versions 4.2.0 or later.	Use either the Migration wizard from the WebSphere Process Server First Steps console or the reposMigrate command-line utility to migrate all WebSphere InterChange Server artifacts into WebSphere Process Server deployable artifacts, and optionally deploy them directly to WebSphere Process Server. For more information on the reposMigrate command-line utility, see "Using the reposMigrate utility." Alternatively, you can use the Migration wizard from WebSphere Integration Developer to migrate all WebSphere InterChange Server artifacts into WebSphere Process Server deployable artifacts and place them into projects in the active WebSphere Integration Developer workspace. See the WebSphere Integration Developer Information Center for details.
WebSphere InterChange Server versions 4.1.1 or earlier.	You must first migrate to WebSphere InterChange Server version 4.2.0 or later.
WebSphere Business Integration Server Foundation versions 5.1 and 5.1.1.	Not available until future versions of WebSphere Process Server.
WebSphere MQ Workflow version 3.5.	Use either the Migration wizard or the FDL2BPEL utility to migrate all WebSphere MQ Workflow artifacts into WebSphere Integration Developer deployable artifacts. See the WebSphere Integration Developer Information Center for details.
WebSphere MQ Workflow version 3.4 or earlier	You must first migrate to WebSphere MQ Workflow version 3.5.

If you neither migrate nor coexist, you will not be able to use your existing applications in WebSphere Process Server.

Using the reposMigrate utility

You can use the reposMigrate utility in migrating WebSphere InterChange Server artifacts to WebSphere Process Server deployable artifacts, and optionally to deploy them to WebSphere Process Server. The utility can be invoked from a command-line or by using the migration wizard from the WebSphere Process Server First Steps console.

The reposMigrate utility requires as input a WebSphere InterChange Server repository JAR file. This JAR file should be self-contained with respect to the applications being migrated. That is, all artifacts referenced by any of the artifacts in the JAR file, must also be contained in the JAR file. Export these artifacts, and create the JAR file, using the WebSphere InterChange Server repos_copy command with the -o option (please refer to the WebSphere InterChange Server v4.3 documentation for more details, including how to export individual components).

The reposMigrate utility will convert all of the WebSphere InterChange Server artifacts in a JAR file into WebSphere Process Server deployable artifacts and optionally deploy these artifacts to a server running on a specified cell. Follow these steps to migrate the artifacts:

1. Identify the JAR file containing the pre-exported WebSphere InterChange Server artifacts that are to be converted to WebSphere Process Server deployable artifacts.
2. Migrate these artifacts in one of two ways:

Option	Description
Invoke the reposMigrate utility from a command-line prompt	Type the command at a command prompt in WebSphere Process Server, with the required arguments and any optional arguments you require.
Use the Migration wizard	<ol style="list-style-type: none"> 1. Launch the WebSphere Process Server First Steps console and select the Migration wizard. 2. Select the option to migrate a WebSphere InterChange Server repository JAR file. 3. Browse to the required JAR file, or type the full path name of the JAR file in the Source selection field. 4. Specify or browse to the migration output directory where the results of the migration should be placed. 5. Enter any other necessary parameters and click Finish.

3. Check the output messages for any errors.
4. If you chose not to deploy the newly migrated artifacts, you can install them into a WebSphere Process Server installation at this time.

Examples

You can use the reposMigrate utility to migrate existing WebSphere InterChange Server artifacts directly to a running WebSphere Process Server:

1. Open a command prompt in WebSphere Process Server.
2. Issue the reposMigrate command with the deploy option:


```
%WAS_HOME%\bin\reposMigrate -iics-jar-file-name -otarget-dir-name
-scell=MyCell,node=MyNode,server=Server1
```

With the deploy to server flag (-s) specified, the reposMigrate utility builds and installs the generated artifacts to WebSphere Process Server as follows:

- For each WebSphere InterChange Server collaboration object and connector definition in the input JAR file reposMigrate will utilize serviceDeploy to create a deployable EAR file from the migrated artifacts. After creating the EAR files, reposMigrate will use **wsadmin** to install them on WebSphere Process Server.
- For other artifacts such as business objects, maps and relationships, a copy of all of these artifacts generated from the input JAR file will be included in each EAR file generated and will be installed as part of the service component architecture (SCA) module EAR.

- For all target resources, such as JDBC data sources and WBScheduler entries, the standard resource definition machinery (i.e., **wsadmin**) will be invoked to create the resources in the WebSphere Process Server system.

You can also use the `reposMigrate` utility to migrate existing WebSphere InterChange Server artifacts into EAR files which can then later be installed on a WebSphere Process Server:

1. Open a command prompt in WebSphere Process Server.
2. Issue the `reposMigrate` command without the `deploy` option:

```
%WAS_HOME%\bin\reposMigrate -iics-jar-file-name -otarget-dir-name
```

The default behavior of the `reposMigrate` utility is to log errors for the migration of each individual artifact and continue to migrate the remainder of the artifacts. Regardless of the manner in which `reposMigrate` is invoked, output messages should be checked for errors after the execution completes. To facilitate examination of the output, use the `logfile` parameter (`-lfLogFileName`) to direct the output into the specified file. To override this default behavior, and force `reposMigrate` to end processing when the first artifact that cannot be migrated is encountered, specify the `-fh` (halt at first failure) flag. The `reposMigrate` utility can be rerun from the beginning to retry after a failed execution.

Details of the `reposMigrate` command line utility

The `reposMigrate` utility is invoked from a command line or via the Migration wizard launched from the First Steps console. Details of the syntax and usage of the `reposMigrate` utility are provided.

Note: If you enable security for a WebSphere Process Server cell, setup the `soap.client.props` file to supply authentication information to communicate with servers when using the SOAP related parameters of the `reposMigrate` command. For detailed information refer to the **Configuring security with scripting** topic in the WebSphere Application Server Information Center.

Purpose

Use the `reposMigrate` utility to migrate WebSphere InterChange Server artifacts to WebSphere Process Server deployable artifacts.

Location

The command file is located in the `install_root/bin` directory. The command file is a script named `reposMigrate.sh` for Linux and UNIX-based operating systems and `reposMigrate.bat` for Windows operating systems.

Syntax

```
reposMigrate -iSourceArtifactJAR -oOutputArtifactDirectory  
[-scell=CellName,node=NodeName,server=ServerName] [-fh] [-lfLogFileName] [-lv] [-sh]  
[-sp] [-sf] [-ai] [-r] [-ao] [-wi]
```

The first two arguments are required.

Parameters

-iSourceArtifactJAR
 Required parameter. Specifies the source artifact JAR file containing one or more WebSphere InterChange Server artifacts in XML format.

-oOutputArtifactDirectory

Required parameter. Specifies the output directory where the results of the conversion will be placed.

[-scell=CellName,node=NodeName,server=ServerName]

Optional parameter. Specifies that the output artifacts should be deployed to the specified target cell, node or server as part of the reposMigrate processing. If this option is not specified, one or more EAR files is created for later deployment.

[-fh]

Optional parameter. By default reposMigrate will continue processing the remaining artifacts in the JAR file, if an error occurs during the processing of a certain artifact. If this option is set, the processing will stop as soon as an error is detected. The artifact with the error and all subsequent artifacts are not processed and no deployment is performed.

[-lfLogFileName]

Optional parameter. Redirects migration messages to *LogFileName*. By default, error message are sent to standard out.

[-lv]

Optional parameter. Sets the log level to verbose.

[-sh]

Optional parameter. SOAP is used to communicate with the server to deploy artifacts. Use this parameter to override the default host name for SOAP access. The default is **localhost**.

[-sp]

Optional parameter. SOAP is used to communicate with the server to deploy artifacts. Use this parameter to override the default port number for SOAP access. The default is 8880.

[-sf]

Optional parameter. SOAP is used to communicate with the server to deploy artifacts. Use this parameter to specify the properties file to use for SOAP access.

[-ai]

Optional parameter. Warn on duplicate data-sources.

[-r]

Optional parameter. By default data sources are reused when possible. If this flag is specified, a unique authentication alias and data source will be created for each relationship that is converted.

[-ao]

Optional parameter. Create artifact jar files only. This option cannot be used with the [-s] option.

[-wi]

Optional parameter. If this option is set, all Java conversion warning messages are ignored.

Sample

This sample migrates existing WebSphere InterChange Server artifacts directly to a running WebSphere Process Server:

```
%WAS_HOME%\bin\reposMigrate.bat -iC:\ICSRepos.jar  
-oC:\IBM\WebSphere\MigratedArtifacts -scell=CellA1,node=Node4,server=Server1
```

Deprecated features

This section summarizes deprecated features in the product offerings comprising WebSphere Process Server version 6.0, which include the WebSphere Business Integration Server Foundation version 5.1 and WebSphere Application Server Enterprise Edition version 5.0. Deprecated features from other WebSphere Application Server version 5.x and 6.x product offerings are described in the documentation for those products. As they become available, links to additional information will be provided to help you migrate from deprecated features.

Deprecation list

This article describes the deprecated features in the following versions and releases:

- Deprecated features in version 6.0
- Deprecated features in version 5.1.1
- Deprecated features in version 5.1
- Deprecated features in version 5.0.2
- Deprecated features in version 5.0.1
- Deprecated features in version 5.0

The following tables summarize what is deprecated, by version and release. Each table reflects the version and release where the deprecation took effect and lists what is being deprecated, such as features, APIs, scripting interfaces, tools, wizards, publicly exposed configuration data, naming identifiers, and constants. Where possible, a recommended migration action is provided.

Deprecated features in version 6.0

Application programming model and container support features
<p>The BRBeans component is deprecated, and is being replaced with the new business rules.</p> <p>Recommended migration action:</p> <p>You must manually remove all usages of BRBeans and move to the new business rules.</p>
<p>Some BPEL business process modeling constructs have been syntactically changed in version 6. Only the new syntax is supported by WebSphere Integration Developer version 6.0. Migration is available for these constructs.</p> <p>Recommended migration action:</p> <p>Use the migration wizard provided by WebSphere Integration Developer to migrate WebSphere Business Integration Server Foundation version 5.1 service projects (including process definitions) to WebSphere Process Server version 6.0. After the migration wizard has finished, you must carry out some manual steps to complete the migration. For more information about migrating service projects, refer to the information center for WebSphere Integration Developer version 6.0.</p>
<p>In WebSphere Business Integration Server Foundation version 5.1, there is an option for the input of an undo service to implicitly provide a message that results from the merge of the input data of the compensable service overlaid by its output data. Given the enhanced compensation support provided by BPEL this functionality is deprecated.</p> <p>Recommended migration action:</p> <p>Use BPEL compensation for new business processes.</p>

Because of changes in the Business Flow Manager functionality In WebSphere Process Server version 6.0, the following methods are deprecated in the generic process API:

- The WorkList object has been renamed to StoredQuery; consequently, the following methods are deprecated on the BusinessFlowManager bean, and, if applicable, the methods you should now use WebSphere Process Server version 6.0 are given:
 - newWorkList(String workListName, String selectClause, String whereClause, String orderByClause, Integer threshold, TimeZone timezone)
Replace with: createStoredQuery(String storedQueryName, String selectClause, String whereClause, String orderByClause, Integer threshold, TimeZone timezone)
 - getWorkListNames()
Replace with: getStoredQueryNames()
 - deleteWorkList(String workListName)
Replace with: deleteStoredQuery(String storedQueryName)
 - getWorkList(String workListName)
Replace with: getStoredQuery(String storedQueryName)
 - executeWorkList(String workListName)
Replace with: query(String storedQueryName, Integer skipTuples)
 - getWorkListActions()
not supported.
- The WorkListData object is deprecated.
Use StoredQueryData instead.
- The following methods of the ProcessTemplateData object are no longer supported:
 - getInputMessageTypeSystemName()
 - getOutputMessageTypeSystemName()
- The following methods of the ProcessInstanceData object are no longer supported:
 - getInputMessageTypeSystemName()
 - getOutputMessageTypeSystemName()
- The following methods of the ActivityInstanceData object are no longer supported:
 - getInputMessageTypeSystemName()
 - getOutputMessageTypeSystemName()
- The following methods of the ActivityServiceTemplateData object are no longer supported:
 - getInputMessageTypeSystemName()

Recommended migration action:

Use the replacement methods, if any, that are given.

Because of changes in the Human Task Manager functionality In WebSphere Process Server version 6.0, the following methods are deprecated in the generic process API

- The following methods are deprecated on the HumanTaskManager bean, and their replacements for use in WebSphere Process Server version 6.0 are given:
 - createMessage(TKIID tkiid, String messageTypeName)
Use the specific methods createInputMessage(TKIID tkiid), createOutputMessage(TKIID tkiid), createFaultMessage(TKIID tkiid) instead.
 - createMessage(String tkiid, String messageTypeName)
Use the specific methods createInputMessage(String tkiid), createOutputMessage(String tkiid), createFaultMessage(String tkiid) instead.
- For the Task object, the following methods are no longer supported:
 - getInputMessageTypeNames()
 - getOutputMessageTypeNames()

Recommended migration action:

Use the replacement methods, if any, that are given.

Method forceTerminate(PIID piid, int invokeCompensation) with invokeCompensation set to INVOKE_COMPENSATION can still be applied to WebSphere Business Integration Server Foundation version 5.1 process instances in state failing; for new WebSphere Process Server version 6.0 processes this state is no longer supported.

Recommended migration action:

No action is required.

The following database views are deprecated:

- DESCRIPTION
- CUSTOM_PROPERTY

Recommended migration action:

For new applications use the TASK_DESC view for the DESCRIPTION view and the TASK_CPROP view for the CUSTOM_PROPERTY view.

Programming Model of Java Code Snippets

- In WebSphere Business Integration Server Foundation version 5.1, access to BPEL variables within inline Java code snippets (activities and conditions) is provided through getter and setter methods. These methods are not supported. The WSIFMessage method that is used to represent BPEL variables in Java code snippets is also not supported.
- Methods <typeOfP> getCorrelationSet<cs> Property<p>() are not supported, as they do not consider correlation sets declared at the scope level; they can only be used to access correlation sets declared at the process level.
- The WebSphere Business Integration Server Foundation version 5.1 methods to access custom properties within Java snippet activities are not supported.
- The following getPartnerLink methods are not supported. Because they do not consider partner links declared on the scope level, they can only be used to access partner links declared at the process level.
 - EndpointReference getPartnerLink();
 - EndpointReference getPartnerLink (int role);
 - void setPartnerLink (EndpointReference epr);

Recommended migration action:

Use the migration wizard provided by WebSphere Integration Developer 6.0 to migrate WebSphere Business Integration Server Foundation version 5.1 service projects (including process definitions) to WebSphere Process Server version 6.0. After the migration wizard has finished, you must carry out some manual steps to complete the migration. For more information about migrating service projects, refer to the information center for WebSphere Integration Developer version 6.0.

Application services features

The Extended Messaging Service feature and all of the EMS/CMM APIs and SPIs listed below are deprecated:

com/ibm/websphere/ems/CMMCorrelator
com/ibm/websphere/ems/CMMException
com/ibm/websphere/ems/CMMReplyCorrelator
com/ibm/websphere/ems/CMMRequest
com/ibm/websphere/ems/CMMResponseCorrelator
com/ibm/websphere/ems/ConfigurationException
com/ibm/websphere/ems/FormatException
com/ibm/websphere/ems/IllegalStateException
com/ibm/websphere/ems/InputPort
com/ibm/websphere/ems/OutputPort
com/ibm/websphere/ems/transport/jms/JMSRequest
com/ibm/websphere/ems/TimeoutException
com/ibm/websphere/ems/TransportException
com/ibm/ws/spi/ems/CMMFactory
com/ibm/ws/spi/ems/format/cmm/CMMFormatter
com/ibm/ws/spi/ems/format/cmm/CMMParser
com/ibm/ws/spi/ems/format/Formatter
com/ibm/ws/spi/ems/format/Parser
com/ibm/ws/spi/ems/transport/CMMReceiver
com/ibm/ws/spi/ems/transport/CMMReplySender
com/ibm/ws/spi/ems/transport/CMMSender
com/ibm/ws/spi/ems/transport/MessageFactory

Recommended migration action:

Instead of using the Extended Messaging Service and its associated tooling, you will need to use standard JMS APIs, or equivalent messaging technologies.

Deprecated features in WebSphere Business Integration Server Foundation version 5.1.1

WebSphere Business Integration Server Foundation version 5.1.1 has no deprecated features.

Deprecated features in WebSphere Business Integration Server Foundation version 5.1

Installation and migration tools

Business processes modeled with WebSphere Studio Application Developer Integration Edition version 5.0 or earlier are deprecated.

Recommended migration action:

Use the **Migrate** option provided with WebSphere Studio Application Developer Integration Edition version 5.1 to migrate business process to a BPEL-related process.

Several Business Process Choreographer API interfaces and methods used for business processes created with WebSphere Studio Application Developer Integration Edition version 5.0 or earlier.

Recommended migration action:

Refer to the Javadoc provided with Business Process Choreographer for a detailed list of these API interfaces and methods.

Application programming model and container support features

Business Rule Bean programming interfaces that include the following public classes, methods, and attributes are deprecated:

- Public classes:
 - com.ibm.websphere.brb.RuleImporter
 - com.ibm.websphere.brb.RuleExporter
- Public method:
 - getLocalRuleManager() on class com.ibm.websphere.brb.TriggerPoint
- Protected attribute:
 - ruleMgr on class com.ibm.websphere.brb.TriggerPoint

Recommended migration action:

No action is required.

The com.ibm.websphere.scheduler class programming interface scheduler.Scheduler methods are deprecated:

```
public BeanTaskInfo createBeanTaskInfo();  
public MessageTaskInfo createMessageTaskInfo();
```

Recommended migration action:

Use the following methods:

```
public Object createTaskInfo(Class taskInfoInterface) throws TaskInfoInvalid;  
BeanTaskInfo ti = (BeanTaskInfo) Scheduler.createTaskInfo(BeanTaskInfo.class);
```

The Web Services gateway customization API is deprecated.

Recommended migration action:

No action is required. However, where possible, use the Java API for XML-based Remote Procedure Call (JAX-RPC) handlers rather than Web Services gateway-specific interfaces, such as filters. The Web Services gateway API will be replaced in a future release. For more information, see the article 'JAX-RPC handlers - An alternative to gateway filters' in the WebSphere Business Integration Server Foundation information center.

Deprecated features in WebSphere Application Server Enterprise Edition version 5.0.2

Application programming model and container support features

The com.ibm.websphere.scheduler class interface scheduler.MessageTaskInfo is deprecated

```
public int setJMSPriority();
```

Recommended migration action:

Use the following method instead of the deprecated method:

```
public int getJMSPriority();
```

Deprecated features in WebSphere Application Server Enterprise Edition version 5.0.1

WebSphere Application Server Enterprise Edition version 5.0.1 has no deprecated features.

Deprecated features in WebSphere Application Server Enterprise Edition version 5.0

WebSphere Application Server Enterprise Edition version 5.0 has no deprecated features.

Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

IBM World Trade Asia Corporation Licensing
2-31 Roppongi 3-chome, Minato-ku
Tokyo 106-0032, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation
577 Airport Blvd., Suite 800
Burlingame, CA 94010
U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

Programming interface information

Programming interface information, if provided, is intended to help you create application software using this program.

General-use programming interfaces allow you to write application software that obtain the services of this program's tools.

However, this information may also contain diagnosis, modification, and tuning information. Diagnosis, modification and tuning information is provided to help you debug your application software.

Warning: Do not use this diagnosis, modification, and tuning information as a programming interface because it is subject to change.

Trademarks and service marks

The following terms are trademarks or registered trademarks of International Business Machines Corporation in the United States or other countries, or both:

i5/OS
IBM
the IBM logo
AIX
AIX 5L
CICS
CrossWorlds
DB2
DB2 Universal Database
Domino
HelpNow
IMS
Informix
iSeries
Lotus
Lotus Notes
MQIntegrator
MQSeries
MVS
Notes
OS/390
OS/400
Passport Advantage
pSeries
Redbooks
SupportPac
WebSphere
z/OS

Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Linux is a trademark of Linus Torvalds in the United States, other countries, or both.

Other company, product, or service names may be trademarks or service marks of others.

This product includes software developed by the Eclipse Project (<http://www.eclipse.org/>).



Your product name with version, e.g., WebSphere Process Server, Version 6.0



Printed in USA