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Preface

This guide provides instructions for installing and administering Oracle Communications Pricing Design Center (PDC) 12.0 and the patch sets.

Audience

This document is intended for system administrators, database administrators, and developers who install and configure PDC.

Before reading this guide, you should have familiarity with PDC. See PDC User’s Guide for more information.

PDC requires Oracle Database and Oracle WebLogic Server. See the documentation for those products for installation and configuration instructions.

Downloading Oracle Communications Documentation

Product documentation is located on Oracle Help Center:

http://docs.oracle.com

Additional Oracle Communications documentation is available from the Oracle software delivery Web site:

https://edelivery.oracle.com

Related Documents

For step-by-step instructions for tasks that you perform in PDC, log in to PDC and see the PDC Help.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

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## Document Revision History

The following table lists the revision history for this guide:

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<th>Version</th>
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<th>Description</th>
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<td>E91360-01</td>
<td>December 2017</td>
<td>Initial release.</td>
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<tr>
<td>E91360-02</td>
<td>September 2018</td>
<td>Documentation updates for PDC 12.0 Patch Set 1.</td>
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</tr>
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<td>• Installing the Patch Set on an Existing Pricing Design Center Installation</td>
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<td></td>
<td>• Pre-Installation Tasks for the PDC Patch Set Installation</td>
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<tr>
<td></td>
<td></td>
<td>• Configuring WebLogic Server to use SSL-Enabled DataSource</td>
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<td></td>
<td>• Configuring PDC to Connect to SSL-Enabled Database (Patch Set 1)</td>
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<td>• Pre-Installation Tasks for the PDC Software Upgrade</td>
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<td></td>
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<td>• Upgrading the PDC Database Schema</td>
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<td>E91360-03</td>
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<td>• Upgrading Pricing Design Center Software</td>
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<td></td>
<td>• Installing the Patch Set on an Existing Pricing Design Center Installation</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>• Software Requirements</td>
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Pricing Design Center Installation Overview

This chapter provides an overview of the installation procedure for Oracle Communications Pricing Design Center (PDC) 12.0 and 12.0 patch sets.

Overview of the PDC Installation Procedure

The following is an outline of the installation procedure for the PDC software:

1. Plan your installation. Planning your installation involves:
   • Determining the scale of your implementation (for example, is it a small test system or a large production system?)
   • Assessing how many physical computers you need and which software components to install on which computers
   • Planning the system topology
2. Review system requirements.
3. Perform the following pre-installation tasks:
   • Install and configure Oracle Database
   • Install and configure Oracle WebLogic Server
   • Install and configure Oracle Communications Billing and Revenue Management (BRM)
   • Install Java Runtime Environment (JRE)/Java Development Kit (JDK)
4. Install the complete PDC software.
5. Perform the post-installation configuration tasks.
6. Verify the installation.

Overview of the PDC Upgrade Procedure

The following is an outline of the procedure for the PDC upgrade or the patch set installation:

1. Plan your installation.
2. Review system requirements.
3. Perform the following pre-installation tasks:
   • Shut down the current instance.
   • Back up your existing PDC installation.
   • Install compatible version of ECE.
   • Install compatible version of BRM.
   • Upgrade the PDC database.
4. Install PDC 12.0 or the 12.0 patch set in a different location on the machine on which the existing PDC installation is installed.
5. Perform the post-installation configuration tasks.
6. Verify the installation.

Ensuring a Successful PDC Installation

Oracle recommends that the installation and configuration of the Oracle database be performed by an experienced database administrator.

To ensure that the PDC installation is successful, follow these guidelines:

• As you install each component (for example, the Oracle Database and WebLogic Server), verify that the component installed successfully before continuing the installation process.
• Pay close attention to the system requirements. Before you begin installing the application, ensure that your system has the required base software. In addition, ensure that you know all the required configuration values, such as host names and port numbers.
• Make a note of any new configuration values as you create them. You will be required to enter configuration values later in the procedure.
Pricing Design Center System Requirements

This chapter describes the software and hardware requirements for installing Oracle Communications Pricing Design Center (PDC) 12.0 and 12.0 patch sets.

Software Requirements

PDC is an application that is deployed in an Oracle WebLogic Server domain. You must install and connect all required software for optimal performance. For more information on the supported operating systems, additional software required, and compatible software versions, see “PDC Software Compatibility” in *BRM Compatibility Matrix*.

Hardware Requirements

The number and configuration of the computers that you employ for your PDC installation depend on the scale and the kind of deployment you have planned according to your networks.

*Table 2-1* provides the minimal hardware requirement for PDC installed on a single managed server in a WebLogic Server domain.

<table>
<thead>
<tr>
<th>Component</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard disk</td>
<td>1.5 GB of free disk space</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong>: A minimum of 1.5 GB should be free in the Oracle WebLogic Server domain home.</td>
</tr>
<tr>
<td>Processor</td>
<td>Oracle recommends using twin cores, each running at 1.5 GHz CPU.</td>
</tr>
<tr>
<td>Memory</td>
<td>A minimum of 4 GB physical memory and 4 GB swap.</td>
</tr>
<tr>
<td></td>
<td>If you plan to have the database installed on the same server as PDC, the minimum memory requirements increase to 6 GB physical memory and 6 GB swap.</td>
</tr>
</tbody>
</table>

Information Requirements

This section describes the information that you will be required to provide during the PDC installation procedure. You define some of these configuration values when you install and configure Oracle Database and WebLogic Server.
Information Requirements for the PDC Software Installation

This section describes the information that you will be required to provide during the PDC software installation procedure.

Pricing Design Center WebLogic Server Connection Information

Table 2-2 lists the details for the WebLogic Server domain (the domain on which you deploy PDC) that are required during the PDC software installation.

Table 2-2   Pricing Design Center WebLogic Server Connection Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host Name</td>
<td>The IP address or the host name of the machine on which the WebLogic Server domain is configured.</td>
<td>-</td>
</tr>
<tr>
<td>Port Number</td>
<td>The port number assigned to the WebLogic Server domain administration server.</td>
<td>-</td>
</tr>
<tr>
<td>User Name</td>
<td>The WebLogic Server domain administrator user name.</td>
<td>-</td>
</tr>
<tr>
<td>Password</td>
<td>The WebLogic Server domain administrator user password.</td>
<td>-</td>
</tr>
<tr>
<td>WebLogic Home</td>
<td>The path of the directory in which the WebLogic Server software is installed. For example, MW_Home/wlserver, where MW_Home is the directory in which the Oracle Middleware components are installed.</td>
<td>-</td>
</tr>
</tbody>
</table>

PDC Database Connection Information

Table 2-3 lists PDC database details that are required during the PDC software installation.

Table 2-3   PDC Database Connection Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host Name</td>
<td>The IP address or the host name of the machine on which the PDC database is configured.</td>
<td>-</td>
</tr>
<tr>
<td>Port Number</td>
<td>The port number assigned to the PDC database service.</td>
<td>-</td>
</tr>
</tbody>
</table>
Table 2-3 (Cont.) PDC Database Connection Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Name</td>
<td>The PDC database user name. This user should have the following capabilities on the PDC database: create user, grant any role, grant any privileges, select any table for Enterprise edition, and DBA for XE.</td>
<td>-</td>
</tr>
<tr>
<td>Password</td>
<td>The database user password.</td>
<td>-</td>
</tr>
<tr>
<td>Service Name</td>
<td>The name of the PDC database service.</td>
<td>-</td>
</tr>
<tr>
<td>Wallet Location</td>
<td>The directory in which the database wallet is located.</td>
<td>-</td>
</tr>
<tr>
<td>Wallet Type</td>
<td>Type of the wallet, such as SSO and PKCS12.</td>
<td>-</td>
</tr>
<tr>
<td>Wallet Password</td>
<td>The database wallet password.</td>
<td>-</td>
</tr>
</tbody>
</table>

PDC Schema Information

Table 2-4 lists the tablespace details that are required to create the PDC schema during the PDC software installation.

Table 2-4 PDC Schema Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDC Tablespace</td>
<td>The name of the tablespace for the PDC schema. This field is case-sensitive.</td>
<td>-</td>
</tr>
<tr>
<td>Temp Tablespace</td>
<td>The name of the temporary tablespace for the PDC schema. This field is case-sensitive.</td>
<td>-</td>
</tr>
</tbody>
</table>

BRM Server Information

Table 2-5 lists the BRM server details that are required during the PDC BRM Integration Pack installation.

Table 2-5 BRM Server Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRM</td>
<td>The path to the directory in which BRM is installed. The path is defined in the $PIN_HOME environment variable.</td>
<td>-</td>
</tr>
<tr>
<td>BRM Pipeline</td>
<td>The path to the directory in which Pipeline Manager is installed. The path is defined in the $IFW_HOME environment variable.</td>
<td>-</td>
</tr>
<tr>
<td>Perl Home</td>
<td>The path to the directory in which the Perl libraries are installed.</td>
<td>-</td>
</tr>
</tbody>
</table>
BRM Pipeline Manager Database Information

Table 2-6 lists the Pipeline Manager database details that are required during the PDC BRM Integration Pack installation.

**Table 2-6  BRM Pipeline Database Information**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host Name</td>
<td>The IP address or the host name of the machine on which the BRM pipeline database is configured.</td>
<td>-</td>
</tr>
<tr>
<td>Port Number</td>
<td>The port number assigned to the BRM pipeline database service.</td>
<td>-</td>
</tr>
<tr>
<td>User Name</td>
<td>The BRM pipeline database schema user name.</td>
<td>-</td>
</tr>
<tr>
<td>Password</td>
<td>The BRM pipeline database schema user password.</td>
<td>-</td>
</tr>
<tr>
<td>Service Name</td>
<td>The name of the BRM pipeline database service.</td>
<td>-</td>
</tr>
<tr>
<td>Wallet Location</td>
<td>The directory in which the database wallet is located.</td>
<td>-</td>
</tr>
<tr>
<td>Wallet Type</td>
<td>The directory in which the database wallet is located.</td>
<td>-</td>
</tr>
<tr>
<td>Wallet Password</td>
<td>The database wallet password.</td>
<td>-</td>
</tr>
</tbody>
</table>

Transformation Cross-Reference Database Information

Table 2-7 lists transformation cross-reference database details that are required during the PDC BRM Integration Pack installation.

**Table 2-7  Transformation Cross-Reference Database Information**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hostname</td>
<td>The IP address or the host name of the machine on which the transformation cross-reference database is configured.</td>
<td>-</td>
</tr>
<tr>
<td>Port number</td>
<td>The port number assigned to the transformation cross-reference database service.</td>
<td>-</td>
</tr>
<tr>
<td>User name</td>
<td>The transformation cross-reference database user name. This user should have the following capabilities on the transformation cross-reference database: create user, grant any role, grant any privileges, select any table for Enterprise edition, and DBA for XE.</td>
<td>-</td>
</tr>
<tr>
<td>Password</td>
<td>The transformation cross-reference database user password.</td>
<td>-</td>
</tr>
<tr>
<td>Service Name</td>
<td>The name of the transformation cross-reference database service.</td>
<td>-</td>
</tr>
</tbody>
</table>
Table 2-7 (Cont.) Transformation Cross-Reference Database Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wallet Location</td>
<td>The directory in which the database wallet is located.</td>
<td>-</td>
</tr>
<tr>
<td>Wallet Type</td>
<td>Type of the wallet, such as SSO and PKCS12.</td>
<td>-</td>
</tr>
<tr>
<td>Wallet Password</td>
<td>The database wallet password.</td>
<td>-</td>
</tr>
</tbody>
</table>

Transformation Cross-Reference Schema Information

Table 2-8 lists the tablespace details that are required to create the transformation cross-reference schema during the PDC BRM Integration Pack installation.

Table 2-8 Transformation Cross-Reference Schema Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDC Tablespace</td>
<td>The name of the PDC tablespace for the transformation cross-reference schema. This field is case-sensitive.</td>
<td>-</td>
</tr>
<tr>
<td>Temp Tablespace</td>
<td>The name of the temporary tablespace for the transformation cross-reference schema. This field is case-sensitive.</td>
<td>-</td>
</tr>
</tbody>
</table>

Migration Cross-Reference Database Information

Table 2-9 lists the migration cross-reference database details that are required during the PDC BRM Integration Pack installation.

Note:
The migration cross-reference database details are required only if you want to migrate pricing and setup components from the BRM database to the PDC database.

Table 2-9 Migration Cross-Reference Database Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host Name</td>
<td>The IP address or the host name of the machine on which the migration cross-reference database is configured.</td>
<td>-</td>
</tr>
<tr>
<td>Port Number</td>
<td>The port number assigned to the migration cross-reference database service.</td>
<td>-</td>
</tr>
<tr>
<td>User Name</td>
<td>The migration cross-reference database user name.</td>
<td>-</td>
</tr>
<tr>
<td>Password</td>
<td>The migration cross-reference database user password.</td>
<td>-</td>
</tr>
</tbody>
</table>
Table 2-9  (Cont.) Migration Cross-Reference Database Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Name</td>
<td>The name of the migration cross-reference database service.</td>
<td>-</td>
</tr>
<tr>
<td>Wallet Location</td>
<td>The directory in which the database wallet is located.</td>
<td>-</td>
</tr>
<tr>
<td>Wallet Type</td>
<td>Type of the wallet, such as SSO and PKCS12.</td>
<td>-</td>
</tr>
<tr>
<td>Wallet Password</td>
<td>The database wallet password.</td>
<td>-</td>
</tr>
</tbody>
</table>

Migration Cross-Reference Schema Information

Table 2-10 lists the tablespace details that are required to create the migration cross-reference schema during PDC BRM Integration Pack installation.

Note:
The migration cross-reference schema details are required only if you want to migrate price lists from the BRM database to the PDC database.

Table 2-10  Migration Cross-Reference Schema Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDC Tablespace</td>
<td>The name of the PDC tablespace for the migration cross-reference schema. This field is case-sensitive.</td>
<td>-</td>
</tr>
<tr>
<td>Temp Tablespace</td>
<td>The name of the temporary tablespace for the migration cross-reference schema. This field is case-sensitive.</td>
<td>-</td>
</tr>
</tbody>
</table>
Pricing Design Center Pre-Installation Tasks

This chapter describes the tasks that you perform before installing Oracle Communications Pricing Design Center (PDC).

• If you are installing PDC for the first time, see "Pre-Installation Tasks for the PDC Software Installation".

Note:
PDC 12.0 patch sets are cumulative. The latest PDC 12.0 patch set includes all the changes introduced since 12.0. You can install PDC 12.0 or directly install the PDC 12.0 patch sets.

• If you are installing PDC on an existing PDC 11.1 or 11.2 installation, see "Pre-Installation Tasks for the PDC Software Upgrade".

• If you are installing PDC 12.0 patch sets on an existing PDC 12.0 installation, see "Pre-Installation Tasks for the PDC Patch Set Installation".

Pre-Installation Tasks for the PDC Software Installation

Before installing the complete PDC 12.0 or 12.0 patch set software, do the following:

• Install and configure Oracle Database. See "Installing and Configuring Oracle Database" for more information.

• Configure the PDC database. See "Configuring the PDC Database" for more information.

• Install Java Runtime Environment (JRE)/Java Development Kit (JDK). See "Installing JRE/JDK" for more information.

• Install and configure Oracle WebLogic Server. See "Installing and Configuring Oracle WebLogic Server" for more information.

• Set the JAVA_HOME environment variable. See "Setting the JAVA_HOME Environment Variable" for more information.

• Enable JRE permissions. See "Enabling JRE Permissions" for more information.

• Enable compatibility view for PDC in Internet Explorer 11. See "Enabling Compatibility View in Internet Explorer 11" for more information.

• Install and configure Oracle Communications Billing and Revenue Management (BRM). See "Installing and Configuring BRM" for more information.
Installing and Configuring Oracle Database

Oracle recommends that the installation and configuration of Oracle Database be performed by an experienced database administrator. To install and configure Oracle Database, see the Oracle Database installation documentation.

When you install the software, do the following:

- Install Oracle Database Enterprise Edition.
- Create the PDC database.
- Create a database to store the transformation cross-reference tables, or use the PDC database to store the transformation cross-reference tables.
- Create a database to store the migration cross-reference tables, or use the PDC database or the transformation cross-reference database to store the migration cross-reference tables.
- (Optional) Create PDC tablespaces and temporary tablespaces for the following:
  - The PDC schema, to store the pricing and setup components.
  - The transformation cross-reference schema, to store tables that map pricing and setup components in PDC to the corresponding component in a target rating engine.
  - The migration cross-reference schema, to store tables that map the pricing and setup components that are migrated from the BRM database to the corresponding component in a target rating engine.

Oracle recommends that you create separate PDC tablespaces and temporary tablespaces for each schema. However, you can use a single PDC tablespace and temporary tablespace to create all the schemas.

Configuring the PDC Database

This section describes procedures relating to configuring the PDC database.

Setting the Database Time Zone

The PDC database must have the appropriate local time zone setting.

For more information on setting the time zone, see the Oracle Database Globalization Support Guide.

Note:

Ensure that the BRM database and the PDC database are in the same time zone.

After PDC has been installed, the database time zone cannot be changed. Ensure the time zone is correctly set before installing PDC.
Tuning the Database

Table 3-1 and Table 3-2 provide recommended database parameters for tuning your database for the PDC installation. These are the minimum requirements for PDC.

**Table 3-1 Database Creation Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Recommended Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGA+PGA</td>
<td>At least 4 GB in total. Oracle recommends that you use as much memory as you have available in the machine, and also use Automatic Memory Management.</td>
</tr>
<tr>
<td>Processes</td>
<td>2000</td>
</tr>
<tr>
<td>Connection mode</td>
<td>Dedicated server</td>
</tr>
<tr>
<td>Redo log file size</td>
<td>1024 MB minimum</td>
</tr>
</tbody>
</table>

**Table 3-2 Database Initialization Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Recommended Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>db_file_multiblock_read_count</td>
<td>16</td>
</tr>
<tr>
<td>distributed_lock_timeout</td>
<td>7200</td>
</tr>
<tr>
<td>dml_locks</td>
<td>9700</td>
</tr>
<tr>
<td>job_queue_processes</td>
<td>10</td>
</tr>
<tr>
<td>log_buffer</td>
<td>31457280</td>
</tr>
<tr>
<td>open Cursors</td>
<td>5000</td>
</tr>
<tr>
<td>parallel_max_servers</td>
<td>640</td>
</tr>
<tr>
<td>plsql_code_type</td>
<td>NATIVE</td>
</tr>
</tbody>
</table>

Configuring SSL for the PDC Database

If you are installing PDC 12.0 patch set, you can configure secure sockets layer (SSL) for the Oracle database by creating wallets for storing certificates and then modifying the following configuration files:

- sqlnet.ora
- tnsnames.ora
- listener.ora

You can use the Orapki utility to create the wallets.

For information about configuring SSL for the Oracle database, see the Oracle Database documentation.
Installing JRE/JDK

Install the recommended version of JRE/JDK on the machine on which you want to deploy PDC. See "PDC Software Compatibility" in *BRM Compatibility Matrix* for the recommended version of JRE/JDK.

To verify the JRE/JDK version:

1. Go to the command prompt on the machine on which you want to deploy PDC.
2. Enter the following command:

   ```
   java -version
   ```

   The Java version is displayed. For example:

   ```
   java version "1.8.0_221"
   ```

   If the version displayed does not start with 1.8.0_, JRE/JDK 1.8 is not installed.

   For information about installing JRE/JDK, see the Oracle Java documentation.

Installing and Configuring Oracle WebLogic Server

This section describes procedures relating to installing Oracle WebLogic Server and configuring the WebLogic Server domain in which you will deploy PDC.

Downloading and Installing Oracle WebLogic Server

WebLogic Server is a component of the Oracle Fusion Middleware 12c media pack. Oracle Fusion Middleware includes Oracle WebLogic Server. For the compatible version of WebLogic Server, see "PDC Software Compatibility" in *BRM Compatibility Matrix*.

For information on installing Oracle WebLogic Server and the patches (if any), see the Oracle WebLogic Server documentation on the Oracle Help Center:

http://docs.oracle.com

Installing Oracle Application Development Runtime

Oracle Application Development Runtime must be installed on the machine on which you will install PDC. For more information on the compatible version, see "PDC Software Compatibility" in *BRM Compatibility Matrix*.

Download Oracle Application Development Runtime from the Oracle Software Delivery Web site:

http://edelivery.oracle.com

Download Oracle Application Development Runtime patch from the My Oracle Support Web site:

http://support.oracle.com

For information on installing Oracle Application Development Runtime and the patch, see *Oracle Fusion Middleware Installation Guide for Application Developer 12c Release 2*. 
The Oracle Fusion Middleware Application Developer Installer installs Oracle Application Development Runtime and Oracle Enterprise Manager.

Creating the Oracle WebLogic Server Domain

Before creating a WebLogic Server domain, use the Oracle Fusion Middleware Repository Creation Utility (RCU) to create the required Oracle Identity and Access Management (IAM) database schema. See Fusion Middleware Repository Creation Utility User's Guide for more information on RCU.

To create a WebLogic Server domain in which to deploy PDC, see the description of using the Configuration Wizard in the Oracle WebLogic Server documentation. You can use the Configuration Wizard in graphical mode or console mode.

Note:
If you are migrating the PDC pricing data from a source PDC system to a target PDC system that supports ECE, ensure that you create the WebLogic Server domain for the target PDC system on the same machine on which the WebLogic Server domain for the source PDC system exists.

Table 3-3 shows the values to choose when creating the WebLogic Server domain for PDC.

Create the WebLogic Server domain with at least one managed server configured along with the administration server because Oracle recommends that you deploy PDC on a managed server in the production environment.

### Table 3-3  Oracle WebLogic Server Domain Configuration Values

<table>
<thead>
<tr>
<th>Configuration Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain source</td>
<td>Select <strong>Generate a domain configured automatically to support the following products.</strong> From the list, select <strong>Oracle JRF - 12.2.1.2.0 [oracle_common]</strong>.</td>
</tr>
<tr>
<td>Domain Mode Configuration</td>
<td>Select <strong>Production Mode</strong>.</td>
</tr>
<tr>
<td>JDK Selection</td>
<td>From the <strong>Available JDKs</strong> list, select the JDK version required for installing PDC. For more information, see <strong>BRM Compatibility Matrix</strong>.</td>
</tr>
</tbody>
</table>
Table 3-3  (Cont.) Oracle WebLogic Server Domain Configuration Values

<table>
<thead>
<tr>
<th>Configuration Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional Configuration</td>
<td>Select the following:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Administration Server</strong>. Select this option to configure the Oracle WebLogic Server domain administration server.</td>
</tr>
<tr>
<td></td>
<td>• (Optional) <strong>Managed Servers, Clusters and Machines</strong>. Select this option if you want to configure only WebLogic Server domain managed servers or machines that host WebLogic servers.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> PDC does not support WebLogic cluster deployment.</td>
</tr>
<tr>
<td></td>
<td>• (Optional) <strong>Deployments and Services</strong>. Select this option if you want to target your deployments to servers.</td>
</tr>
<tr>
<td>Administration Server Listen Address</td>
<td>Use a listen address that is equal to a resolvable DNS host or IP address.</td>
</tr>
<tr>
<td>Administration Server Listen Port</td>
<td>Enter a free port number.</td>
</tr>
<tr>
<td>Managed Server Listen Address</td>
<td>(Optional) Enter a listen address that is equal to a resolvable DNS host or IP address.</td>
</tr>
<tr>
<td>Managed Server Listen Port</td>
<td>(Optional) Enter a free port number.</td>
</tr>
<tr>
<td>Target Deployments to Clusters or Servers</td>
<td>(Optional) Add all libraries to the managed server target and to the administration server.</td>
</tr>
<tr>
<td>Target Services to Clusters or Servers</td>
<td>(Optional) Add all services to the managed server target.</td>
</tr>
<tr>
<td>SSL Listen Port Enabled</td>
<td>Select the <strong>SSL Listen Port Enabled</strong> check box.</td>
</tr>
<tr>
<td>SSL Listen Port</td>
<td>Enter a free port number.</td>
</tr>
</tbody>
</table>

See *Oracle Fusion Middleware Installation Guide for Oracle Enterprise Content Management Suite 12c Release 2* for more information on WebLogic Server domains.

You can now start the administration server manually and log in to WebLogic Administration Console.

### Configuring SSL for the WebLogic Server Domain

If you want to enable secure communication for PDC, you must configure SSL for the WebLogic Server domain in which you deploy PDC.

To configure SSL for the WebLogic Server domain:

1. Generate the server-side keystore file by using the recommended version of the JRE/JDK **keytool** utility. See *Key and Certificate Management Tool* for more information.

2. Export the public certificate from the server-side keystore file by using the recommended version of the JRE/JDK **keytool** utility. See *Key and Certificate Management Tool* for more information.

3. Generate the client-side keystore file from the exported public certificate by using the recommended version of the JRE/JDK **keytool** utility. See *Key and Certificate Management Tool* for more information.
4. Configure SSL for the server on which you want to deploy PDC in WebLogic Server Administration Console. See the Oracle WebLogic Administration Console Help for more information.

5. Enable Java Secure Socket Extension-based SSL for the server on which you want to deploy PDC in WebLogic Server Administration Console. See the Oracle WebLogic Server Administration Console Help for more information.

Configuring the SSL Protocol Version

In a production environment, Oracle recommends the TLSv1 protocol for sending and receiving messages in an SSL connection.

Note:

You need to set the same protocol version for managed servers and the administration server. Ensure that all the managed servers are down when making changes to the administration server for setting up the protocol. Oracle recommends to set the properties in the administration server and then the managed server.

To set the minimum protocol version to **TLS V1**, specify the following as a command-line option in the WebLogic Server startup parameters:

```
-Dweblogic.security.SSL.minimumProtocolVersion=TLSv1.0
```

Note:

When you set a minimum protocol version, the TLS protocol that is enabled depend on the protocols that are configured in the SSL implementation.

See the discussion about specifying the version of the SSL protocol in the Oracle WebLogic Server documentation for more information.

Setting the JDBC Path for the WebLogic Server Domain

For the Oracle Database 12c Release 2, you must obtain the **ojdbc8.jar** file and set the path to this file for the WebLogic Server domain.

To set the JDBC path for the WebLogic Server domain:
1. Download the `ojdbc8.jar` file and copy it to the `Domain_home/lib` directory, where `Domain_home` is the directory in which the WebLogic Server domain is created. You can download this file from the following page on Oracle Technology Network Web site in the “Oracle Database 12c Release 2 (12.2.0.1) JDBC Drivers & UCP” section:


2. Go to the `MW_Home/user_projects/domains/bin` directory, where `MW_Home` is the directory in which the Oracle Middleware components are installed.

3. Open the `setDomainEnv.sh` file in a text editor.

4. Add or modify the following entry to point to `ojdbc8.jar`:

   ```bash
   setDomainEnv.sh CLASSPATH=${Domain_home}/lib/ojdbc8.jar:${CLASSPATH}
   export CLASSPATH
   ```

5. Save and close the file.

### Configuring WebLogic Server to use SSL-Enabled Data Source

You can use the Secure Sockets Layer (SSL)-enabled data source in Oracle WebLogic Server for secured communications.

You must configure WebLogic Server before configuring the data sources. For more information on configuring WebLogic Server, see the discussion about using SSL with data sources and Oracle drivers in the Oracle Weblogic Server documentation and the following page on the Oracle Technology Network Web site:


### Updating JDBC LLR Table Name

(If you are upgrading or installing the PDC 12.0 Patch Set 2 or a later release) When using an existing database schema during installation, the Logging Last Resource (LLR) table name must be changed to avoid errors.

To change the LLR table name:

1. Log in to WebLogic Server Administration Console.
2. In the Domain Structure section, expand Environment and select Servers. The Summary of Servers page appears.
3. Select the server for which you want to change the LLR table name.
4. Click the Configuration tab.
5. Click the General subtab.
6. Click Advanced to show the advanced configuration options.
7. Set JDBC LLR Table Name to a different name.
8. Click Save.

For more information on LLR, see the discussion about administrative considerations and limitations for LLR data sources in the WebLogic Server documentation.
Setting the JAVA_HOME Environment Variable

Set the JAVA_HOME environment variable to the recommended version of JRE/JDK before running any PDC processes.

Set the JAVA_HOME environment variable on the machine on which you want to deploy PDC. For example, in C-shell:

1. Open the .cshrc file in a text editor.
2. Add or modify the following entries:
   ```
   setenv JAVA_HOME jre/jdk_path
   ```
   where jre/jdk_path is the absolute path to the directory in which JRE/JDK is installed.
   
   For example:
   ```
   setenv JAVA_HOME /pinhome/jre/1.8.0_144
   ```
3. Save and close the file.
4. Update the environment by running the following command:
   ```
   source .cshrc
   ```
5. Verify the Java version by running the following command:
   ```
   $JAVA_HOME/bin/java -version
   ```
   The Java version is displayed. For example:
   ```
   java version "1.8.0_144" Java(TM) SE Runtime Environment (build 1.8.0_144-b07) Java HotSpot(TM) 64-Bit Server VM (build 20.60-b01, mixed mode)
   ```

To set the JAVA_HOME environment variable for the WebLogic Server domain:

1. Go to the MW_Home/user_projects/domains/bin directory, where MW_Home is the directory in which the Oracle Middleware components are installed.
2. Open the setDomain.sh file in a text editor.
3. Add or modify the following entries before the EXTRA_JAVA_PROPERTIES entry:
   ```
   JAVA_HOME="${JAVA_HOME}"
   export JAVA_HOME
   ```
4. Save and close the file.

Enabling JRE Permissions

To enable JRE permissions:

1. Go to the jre/jdk_path/lib/security directory.
2. Open the java.policy file in a text editor.
3. Add the following entries to the file:
   ```
   grant {// JMX Java Management eXtensions permission
   javax.management.MBeanTrustPermission "register";};
   ```
4. Save and close the file.

Enabling Compatibility View in Internet Explorer 11

To enable compatibility view in Internet Explorer 11:

1. On Windows 10, open Internet Explorer 11.
2. Press ALT or F10.
3. From the Tools menu, select **Compatibility View settings**. The Compatibility View Settings dialog box appears.
4. In the Add this website field, enter oracle.com.
5. Click Add.
6. Click Close.

Installing and Configuring BRM

**Note:**
You cannot use PDC 12.0 patch sets with BRM 7.4 or 7.5.

Install the compatible version of BRM on the machine on which you will install PDC BRM Integration Pack. See “BRM Suite Compatibility” in *BRM Compatibility Matrix* for the compatible version of BRM.

To install BRM 12.0:

1. Download BRM 12.0 from the Oracle Software Delivery Web site: http://edelivery.oracle.com
2. Install BRM and Pipeline Manager. For more information, see *BRM Installation Guide*.

To install the BRM patch set:

1. Download BRM 12.0 from the Oracle Software Delivery Web site: http://edelivery.oracle.com
2. Install BRM and Pipeline Manager. For more information, see *BRM Installation Guide*.
3. Download the BRM 12.0 patch set from the My Oracle Support Web site: http://support.oracle.com
4. Install the BRM 12.0 patch set. For more information, see the *BRM 12.0 Patch Set Installation Guide*.

Enabling BRM-PDC Integration

After installing BRM, enable the BRM-PDC integration in BRM. This enables PDC to transform and transfer pricing components configured in PDC to BRM. See the
discussion about the PDC and BRM integration process flow in PDC User’s Guide for more information.

To enable the BRM-PDC integration:

1. Go to BRM_Home/sys/data/config and run the following command, which creates an editable XML file from the pricing instance of the /config/business_params object, where BRM_Home is the directory in which BRM is installed.

   BRM_Home/bin/pin_bus_params -r BusParamsPricing bus_params_pricing.xml

   This directory includes the support files used by the pin_bus_params utility. To run it from a different directory, see the discussion about the pin_bus_params utility in the BRM documentation.

   This command creates the XML file named bus_params_pricing.xml.out in your working directory. If you do not want this file in your working directory, specify the path as part of the file name.

2. Search the bus_params_pricing.xml.out file for the following line:

   <PriceDesignCenterInst>disabled</PriceDesignCenterInst>

3. Change disabled to enabled.

4. Save the file as bus_params_pricing.xml.

5. Run the following command, which loads the updated file into the /config/business_params object:

   BRM_Home/bin/pin_bus_params bus_params_pricing.xml

6. Read the object with the testnap utility or Object Browser to verify that all fields are correct. See the discussion about reading an object and fields in BRM Developer’s Guide.

7. Stop and restart the Connection Manager (CM).

   For more information, see the discussion about starting and stopping the BRM system in BRM System Administrator’s Guide.

Pre-Installation Tasks for the PDC Software Upgrade

Before upgrading to PDC 12.0 or 12.0 Patch Set 1, do the following:

- Shut down the current PDC instance. See "Shutting Down the Current Instance" for more information.
- Make a complete offline backup of your existing PDC installation. See "Backing Up the Current Installation" for more information.
- If you are using Oracle Communications Billing and Revenue Management Elastic Charging Engine (ECE) for usage rating, install the compatible version of ECE on the machine on which ECE is installed. See "Installing ECE" for more information.

Note:

When upgrading to PDC 12.0 or 12.0 patch sets, see the discussion about supported PDC Upgrades in BRM Compatibility Matrix.
• Install the compatible version of BRM on the machine on which BRM is installed. For upgrading BRM, see "Installing BRM" for more information.

• Install the recommended version of JRE/JDK on the machine on which PDC is installed. If you are See "Installing JRE/JDK“ for more information.

• Upgrade the PDC database. If you have created separate database for migration and transformation, upgrade the migration cross-reference database and the transformation cross-reference database. For instructions to upgrade the database, see the Oracle Database upgrade documentation.

• If you are upgrading to PDC 12.0 Patch Set 1, configure SSL for the PDC database to ensure secure communications between the PDC application and the database. See “Configuring SSL for the PDC Database“ for more information.

• If you have installed PDC and BRM Integration Pack on different machines, copy the client-side keystore (client.jks) file that you generated to the machine on which BRM Integration Pack is installed.

• Undeploy the existing PDC installation deployed on the WebLogic Server domain. For instructions, see the discussion about undeploying applications in the Oracle WebLogic Server Administration Console Help.

• Install the recommended version of WebLogic Server (on the machine on which PDC is installed). See “Downloading and Installing Oracle Weblogic Server” for more information.

• For secured communication, use SSL-enabled data source in Oracle WebLogic Server. See “Configuring WebLogic Server to use SSL-Enabled Data Source” for more information.

• If you are upgrading to PDC 12.0 Patch Set 2, update the JDBC LLR Table Name. See “Updating JDBC LLR Table Name” for more information.

• Set the JAVA_HOME environment variable. See “Setting the JAVA_HOME Environment Variable” for more information.

• Enable JRE permissions. See "Enabling JRE Permissions“ for more information.

• Enable compatibility view for PDC in Internet Explorer 11. See "Enabling Compatibility View in Internet Explorer 11“ for more information.

• Upgrade Oracle Application Development Runtime (on the machine on which PDC 11.1 is installed) to the recommended version. See "Installing Oracle Application Development Runtime“ for more information.

• Enable the SSL port for the WebLogic Server domain in which the existing PDC 11.1 patch set is deployed, if it is not enabled during the WebLogic Server domain creation. See "Enabling the SSL Port for the WebLogic Server Domain“ for more information.

• Configure the minimum SSL protocol version that is enabled for SSL connection, if it is not configured during the WebLogic Server domain creation. See "Configuring the SSL Protocol Version“ for more information.

Shutting Down the Current Instance

To shut down the current PDC instance:

1. Ensure that no users are logged in.
Users include customers, client applications, customer service representatives (CSRs), and so on.

2. Stop all PDC processes.
   Only the PDC database instance should be running during the PDC patch installation.

Backing Up the Current Installation

To prevent any data loss and minimize the impact of software or hardware failure during the patch installation, back up your existing installation.

Before installing BRM 12.0 Patch Set 1, make a complete offline backup of the following:

- The WebLogic server **domains** directory; by default, `MW_Home/user_projects/domains`.
- The PDC installation directory and its content: `PDC_Home`.
- The Oracle Inventory (**oraInventory**) directory. Open the `/etc/oraInst.loc` (Linux) file or the `/var/opt/oracle/OraInst.loc` (Solaris) file to find the default location of the **oraInventory** directory.
- The PDC database schema. See your database documentation for more information on performing full database backups.
- The transformation cross-reference database schema. See your database documentation for more information on performing full database backups.

**Note:**
Store this backup in a safe location. The data in these files will become necessary if you encounter any issues in the installation process.

- The migration cross-reference database schema if installed. See your database documentation for more information on performing full database backups.

Installing ECE

You must install the compatible version of ECE on the machine on which ECE is installed. See “Pricing Design Center (PDC) 12.0 Compatibility Matrix” in **BRM Compatibility Matrix** for the compatible version of ECE.

To install ECE:

1. Stop Pricing Updater.
2. Download the compatible version of ECE from the My Oracle Support Web site: `http://support.oracle.com`
3. Install ECE. For more information, see **ECE Installation Guide**.
Installing BRM

Install the compatible version of BRM on the machine on which you will install PDC BRM Integration Pack. See “BRM Suite Compatibility” in BRM Compatibility Matrix for the compatible version of BRM.

To install BRM 12.0:

1. Download BRM 12.0 from the Oracle Software Delivery Web site:
   http://edelivery.oracle.com
2. Install BRM and Pipeline Manager. For more information, see BRM Installation Guide.

To install BRM 12.0 Patch Set 1:

1. Download BRM 12.0 from the Oracle Software Delivery Web site:
   http://edelivery.oracle.com
2. Install BRM and Pipeline Manager. For more information, see BRM Installation Guide.
3. Download BRM 12.0 Patch Set 1 from the My Oracle Support Web site:
   http://support.oracle.com
4. Install BRM 12.0 Patch Set 1. For more information, see BRM 12.0 Patch Set 1 Installation Guide.

Enabling the SSL Port for the WebLogic Server Domain

Before installing PDC 12.0 Patch Set 1, enable the SSL port for the WebLogic Server domain in which you deployed PDC, if it is not enabled during the WebLogic Server domain creation. You must enable the SSL port even if you are not configuring SSL for the WebLogic Server domain.

To enable the SSL port for the WebLogic Server domain:

1. Start the WebLogic Server domain.
2. Log in to WebLogic Server Administration Console.
3. In the Environment tree, click Servers.
   The Summary of Servers pane appears.
4. Select the server in which you want to deploy PDC.
5. Click the Configuration tab.
6. Click the General subtab.
7. Select the SSL Listen Port Enabled check box.
8. In the SSL Listen Port field, enter a free port number.
9. Click Save.
10. Log out of WebLogic Server Administration Console.
11. Restart the WebLogic Server domain.
See the discussion about enabling the SSL port in the Oracle WebLogic Server Administration Console Help for more information.

Pre-Installation Tasks for the PDC Patch Set Installation

Before installing PDC 12.0 Patch Set 1 on an existing PDC 12.0 installation, do the following:

- Shut down the current PDC instance. See "Shutting Down the Current Instance" for more information.
- Make a complete offline backup of your existing PDC installation. See "Backing Up the Current Installation" for more information.
- If you are using Oracle Communications Billing and Revenue Management Elastic Charging Engine (ECE) for usage rating, install ECE 11.3 Patch Set 8 on the machine on which ECE is installed. See "Installing the ECE Patch Set" for more information.
- Install the BRM patch set on the machine on which BRM is installed. See "Installing the BRM Patch Set" for more information.
- Configure SSL for the PDC database to ensure secure communications between the PDC application and the database. See "Configuring SSL for the PDC Database" for more information.
- For secured communication, use SSL-enabled data source in Oracle WebLogic Server. See "Configuring WebLogic Server to use SSL-Enabled Data Source" for more information.
- If you are upgrading to PDC 12.0 Patch Set 2, update the JDBC LLR Table Name. See "Updating JDBC LLR Table Name" for more information.
- If you have installed PDC and BRM Integration Pack on different machines, copy the client-side keystore (client.jks) file that you generated to the machine on which BRM Integration Pack is installed.

Installing the ECE Patch Set

You must install the compatible version of ECE on the machine on which ECE is installed. See BRM Compatibility Matrix for the compatible version of ECE.

To install the ECE patch set:

1. Stop Pricing Updater.
2. Download the compatible version of the ECE 11.3 patch set from the My Oracle Support Web site:
   http://support.oracle.com
3. Install the ECE 11.3 patch set. For more information, see ECE Installation Guide.

Installing the BRM Patch Set

Install the compatible version of BRM on the machine on which you will install PDC BRM Integration Pack. See "BRM Suite Compatibility" in BRM Compatibility Matrix for the compatible version of BRM.

To install the BRM patch set:
1. Download BRM 12.0 from the Oracle Software Delivery Web site:
   http://edelivery.oracle.com

2. Install BRM and Pipeline Manager. For more information, see *BRM Installation Guide*.

3. Download the BRM 12.0 patch set from the My Oracle Support Web site:
   http://support.oracle.com

4. Install the BRM 12.0 patch set. For more information, see *BRM 12.0 Patch Set Installation Guide*. 
Installing Pricing Design Center Software

This chapter describes how to install Oracle Communications Pricing Design Center (PDC). Before installing PDC, read the following:

Note:

You can install PDC 12.0 or directly the PDC 12.0 patch set.

- Overview of the PDC Installation Procedure
- Pricing Design Center System Requirements
- Pre-Installation Tasks for the PDC Software Installation

About Installing PDC

You can install PDC by using GUI or in the silent mode. Upgrading PDC in the silent mode lets you perform a noninteractive install of PDC. You can use the silent mode to install PDC quickly.

PDC install must be performed by a user who has permissions to write to the oraInventory directory and the MW_Home/user_projects/domains directory, where MW_Home is the directory in which the Oracle Middleware components are installed.

For installation instructions, see the following sections:

- Installing PDC by Using GUI
- Installing PDC in Silent Mode

Obtaining the PDC Software

You can obtain and install the PDC 12.0 or PDC 12.0 patch set complete software.

Obtaining the PDC 12.0 Software

To obtain the PDC 12.0 software:

1. On the machine hosting the Oracle WebLogic Server domain, create a temporary directory (temp_dir).
2. Go to the Oracle software delivery Web site:
   http://edelivery.oracle.com
3. Sign in with your user name and password.
4. Search for the PDC software pack and select the PDC 12.0 software pack from the search results.
5. From the **Platform** list, select the platform.
6. Download the PDC server software pack to `temp_dir`.
7. Unzip the PDC server software pack and extract the contents to `temp_dir`.

**Obtaining the PDC 12.0 Patch Set Software**

To obtain the PDC 12.0 Patch Set software:

1. Create a temporary directory (`temp_dir`).
2. Go to the My Oracle Support Web site: [https://support.oracle.com](https://support.oracle.com)
3. Sign in with your user name and password.
4. Click the **Patches & Updates** tab.
5. From the list, select **Patch Name or Number**.
6. In the text field, enter the **PatchNumber** and click **Search**, where **PatchNumber** is:
   - **28630301** for Patch Set 1
   - **30094516** for Patch Set 2
   The Patch Search Results page appears.
7. Click the patch name.
   The patch details appear.
8. From the **Platform** list, select the **platform** and click **Download**, where **platform** is **linux** or **solaris**.
   The File Download dialog box appears.
9. Download the appropriate **pPatchNumber_PatchVersion_Generic.zip** file to `temp_dir`, where **PatchVersion** is the release number. For example, it is **120010** for PDC 12.0 Patch Set 1 and **120020** for PDC 12.0 Patch Set 2.

**Installing PDC by Using GUI**

The steps for installing PDC by using GUI depend on the PDC components you choose to install:

- To install both PDC and BRM Integration Pack, select the **Complete** installation option.
  See "Installing PDC and BRM Integration Pack" for more information.
- To install only PDC, select the **Pricing Design Center** installation option.
  This option installs only PDC. See "Installing PDC" for more information.
- To install only BRM Integration Pack, select the **BRM Integration Pack** installation option.
  This option installs only BRM Integration Pack. See "Installing BRM Integration Pack" for more information.
Installing PDC and BRM Integration Pack

To install both the PDC software and BRM Integration Pack on the same machine:

1. Obtain the PDC software. See "Obtaining the PDC Software".

2. Start the Oracle WebLogic Server domain administration server or the WebLogic Server domain managed server on which you want to deploy PDC, if it is not already started.

3. Ensure that the PDC database is running.

**Note:**

Ensure that the Oracle Database server is in Running state. The Installer connects to the Oracle Database server to verify the information you entered is valid.

4. Go to the temp_dir directory, and run one of the following commands:

   - To start the GUI installer:
     
     ```
     Java_home/bin/java -jar jarfile
     ```

     where:

     - `Java_home` is the directory in which you installed the latest supported Java version.
     - `jarfile` is `pdcserver-12.0.0.0.0_generic.jar` for PDC 12.0 and `pdcserver-12.0.0.x.0_generic_full.jar` for PDC 12.0 patch sets. For example, `pdcserver-12.0.0.1.0_generic_full.jar` for PDC 12.0 Patch Set 1 and `pdcserver-12.0.0.2.0_generic_full.jar` for PDC 12.0 Patch Set 2.

   - To start the GUI installer and install PDC using the `oraInventory` directory in a different location:
     
     ```
     Java_home/bin/java -jar jarfile -invPtrLoc FilePath/oraInst.loc
     ```

     where `FilePath` is the path to the directory in which the `oraInst.loc` file is located.

   - To start the GUI installer and create a silent installer response file during the installation:
     
     ```
     Java_home/bin/java -jar jarfile -record -destinationFile path
     ```

     where `path` is the response file location and name.

     The Welcome screen appears.

5. Click Next.

The Specify Inventory Directory and Credentials screen appears if the `oraInst.loc` file is corrupt or not present. The default location of the `oraInventory` directory is in the `/etc/oraInst.loc` (Linux) file or the `/var/opt/oracle/oraInst.loc` (Solaris) file.

This screen displays the path to the default inventory directory and the default operating system group name.
6. (Optional) To change the default inventory directory details, do the following:
   a. Enter the full path of the inventory directory.
   b. Specify the name of the operating system group that has write permission to the inventory directory.

7. Click Next.
   The Installation Location screen appears.

8. Enter the full path or browse to the directory in which to install PDC.

9. Click Next.
   The Select Installation Type screen appears.

10. Select Complete and click Next.
    If you are installing PDC 12.0 or 12.0 Patch Set 1, the WebLogic Administration Server Connection screen appears. Proceed to step 13.
    If you are installing PDC 12.0 Patch Set 2, the PDC Pre-requisite Libraries Location screen appears.

11. In the OJDBC Location field, enter the full path or browse to the directory in which the OJDBC jar is located.

12. Click Next.
    The WebLogic Administration Server Connection screen appears.

13. Enter the following details for the WebLogic Server domain in which you want to deploy PDC:
   a. In the Host Name field, enter the IP address or the host name of the machine on which the WebLogic Server domain is configured.
   b. In the Port Number field, enter the port number assigned to the WebLogic Server domain administration server.
   c. In the User Name field, enter the WebLogic Server domain administrator user name.
   d. In the Password field, enter the WebLogic Server domain administrator user password.
   e. In the WebLogic Home field, enter the path to the directory in which the WebLogic Server software is installed. For example, MW_Home/wlserver.
   f. Do one of the following:
      If you do not want to enable secure communication for PDC, deselect the Use SSL? (Recommended) check box.
      To enable secure communication for PDC, leave the Use SSL? (Recommended) check box selected, and in the KeyStore Location field, enter the path of the client-side keystore file generated from the exported public certificate using the keytool utility.
      For more information, see "Configuring SSL for the WebLogic Server Domain".

14. Click Next.
    The WebLogic Server/Cluster screen appears.

15. Do one of the following:
• To deploy PDC on a WebLogic Server domain administration server, select a WebLogic Server domain administration server from the list.

• To deploy PDC on a WebLogic Server domain managed server, select a WebLogic Server domain managed server from the list.

**Note:**
Oracle recommends that you deploy PDC on a WebLogic Server managed server. If you select a WebLogic Server managed server, ensure that the WebLogic Server managed server and the node manager are running.

16. Click Next.

The PDC Wallet Location and Password screen appears.

17. Enter the following details for the PDC wallet:
   a. In the **Wallet Location** field, enter the path to the directory in which the PDC wallet is located or is to be installed.
   b. In the **Wallet Password** field, enter the PDC wallet password.
   c. In the **Confirm Wallet Password** field, enter the PDC wallet password again.

18. Click Next.

If you are installing PDC 12.0, the Pricing Design Center System Database Connection screen appears. Proceed to step 21.

If you are installing PDC 12.0 Patch Set 1, the Pricing Design Center Schema User screen appears.

19. Do one of the following:
   a. If you want to create a PDC schema user during installation, select Yes and proceed to step 20.
   b. If you want to use an existing PDC schema user, select No and proceed to the step 24.

20. Click Next.

The Pricing Design Center System Database Connection screen appears.

21. Enter the following information required to connect to the PDC database:
   a. In the **Host Name** field, enter the IP address or the host name of the machine on which the PDC database is configured.
   b. In the **Port Number** field, enter the port number assigned to the PDC database service.

   **Note:**
   If you are installing PDC 12.0 patch set and the database is SSL-enabled, enter the SSL port number in the **Port Number** field.

   c. In the **User Name** field, enter the PDC database user name.
This user should be the SYSDBA user or should have the following capabilities on the PDC database: grant create user, grant any role, grant any privileges, select any table to username, and grant sysdba to username.

d. In the Password field, enter the PDC database user password.

e. In the Service Name field, enter the name of the PDC database service.

Note:

Ensure that the Oracle Database server is in Running state. The Installer connects to the Oracle Database server to verify the information you entered is valid.

f. (From PDC 12.0 Patch Set 2 only) Do one of the following:

If you do not want to enable secure communication for the PDC database, leave the SSL Enabled check box deselected. This is deselected by default.

To enable secure communication for the PDC database, select the SSL Enabled check box.

g. If you selected SSL Enabled, do the following:

In the Wallet Location field, enter the full path or browse to the directory in which the database wallet is located. For example, wallet_home/cwallet.sso or wallet_home/ewallet.p12.

From the Wallet Type list, select the wallet type.

In the Wallet Password field, enter the database wallet password if the wallet type is PKCS12.

22. Click Next.

The Pricing Design Center Schema screen appears.

23. Enter the following information required to create the PDC schema in the PDC database and proceed to step 26:

a. In the User Name field, enter a PDC schema user name.

b. In the Password field, enter a PDC schema user password.

c. (PDC 12.0 Patch Set Installation only) In the Confirm Password field, enter the PDC schema user password again.

d. In the PDC Tablespace field, enter the name of the tablespace for the PDC schema.

e. In the Temp Tablespace field, enter the name of the temporary tablespace for the PDC schema.

f. If you want to use the existing schema data for installing PDC on the secondary instances, select the Use the existing schema data check box. This is deselected by default.

24. Click Next.

The Pricing Design Center Schema screen appears.

25. Enter the following information required to connect to the PDC schema:
a. In the Host Name field, enter the IP address or the host name of the machine on which the PDC database is configured.

b. In the Port Number field, enter the port number assigned to the PDC database service.

Note:
If you are installing PDC 12.0 patch set and the database is SSL-enabled, enter the SSL port number in the Port Number field.

c. In the Service Name field, enter the name of the PDC database service.

Note:
Ensure that the Oracle Database server is in Running state. The Installer connects to the Oracle Database server to verify the information you entered is valid.

d. In the User Name field, enter the PDC schema user name.

e. In the Password field, enter the PDC schema user password.

f. If you want to use the existing schema data for installing PDC on the secondary instances, select Use the existing schema data.
   This option is deselected by default.

g. (From PDC 12.0 Patch Set 2 only) Do one of the following:
   If you do not want to enable secure communication for the PDC database, leave the SSL Enabled check box deselected. This is deselected by default.
   To enable secure communication for the PDC database, select the SSL Enabled check box.

h. If you selected SSL Enabled, do the following:
   In the Wallet Location field, enter the full path or browse to the directory in which the database wallet is located. For example, wallet_home/cwallet.sso or wallet_home/ewallet.p12.
   From the Wallet Type list, select the wallet type.
   In the Wallet Password field, enter the database wallet password if the wallet type is PKCS12.

26. Click Next.
   The Pricing Design Center System User screen appears.

27. Enter the following information to create a PDC user to access the PDC GUI:
   a. In the User Name field, enter a PDC user name.
   b. In the Password field, enter a PDC user password.
Note:
The PDC user password can be a maximum of 12 characters long and should contain at least one non-alphabetic character. For example, Weblogic123.
The user name must not be a part of the password.

c. In the Confirm Password field, enter the PDC user password again.

28. Click Next.

The Select Charging Engine for Usage Rating appears.

29. Do one of the following:
   • To use Oracle Communications Billing and Revenue Management (BRM) Elastic Charging Engine (ECE) for usage rating, select Elastic Charging Engine.
   • To use BRM real-time rating and batch rating engines for usage rating, select Realtime Rating and Batch Rating Engines.

30. Click Next.

If you are installing PDC 12.0 or 12.0 Patch Set 1, the Migration Option screen appears. Proceed to step 33.

If you are installing PDC 12.0 Patch Set 2, the PDC Pre-requisite Libraries Location screen appears.

31. In the OJDBC Location field, enter the full path or browse to the directory in which the OJDBC jar is located.

32. Click Next.

The Migration Option screen appears.

33. Do one of the following:
   • If you do not want to migrate data, select Do not install Migration Utility and proceed to step 38.
   • To migrate the BRM real-time and batch rating engines pricing data to a PDC system that supports BRM real-time and batch rating engines, select Migrate RRE and BRE Pricing Data to PDC and proceed to step 38.
   • To migrate the BRM real-time and batch rating engines pricing data to a PDC system that supports ECE, select Migrate RRE and BRE Pricing Data to PDC with ECE and proceed to step 38.
   • To migrate the PDC pricing data to a PDC system that supports ECE, select Migrate PDC Pricing Data to PDC with ECE and continue with the next step.

34. Click Next.

The Source Pricing Design Center WebLogic Server Connection screen appears.

35. If you are migrating the PDC pricing data to a PDC system that supports ECE, enter the following details for the WebLogic Server domain in which you deployed the source PDC system:
a. In the **Host Name** field, enter the IP address or the host name of the machine on which the WebLogic Server domain for the source PDC system is configured.

b. In the **Port Number** field, enter the port number assigned to the WebLogic Server domain administration server.

   **Note:**
   
   If you selected a WebLogic Server domain managed server in step 15, enter the port number to the managed server.

c. In the **User Name** field, enter the WebLogic Server domain administrator user name.

d. In the **Password** field, enter the WebLogic Server domain administrator user password.

e. Do one of the following.

   If you do not want to enable secure communication for PDC, deselect the **Use SSL?** check box.

   To enable secure communication for PDC, leave the **Use SSL?** check box selected, and in the **KeyStore Location** field, enter the path of the client-side keystore file generated from the exported public certificate using the `keytool` utility.

   For more information, see "Configuring SSL for the WebLogic Server Domain".

36. Click **Next**.

   The Target Pricing Design Center WebLogic Server Connection screen appears.

37. If you are migrating the PDC pricing data to a PDC system that supports ECE, enter the following details for the WebLogic Server domain in which you deployed the target PDC system:

   a. In the **Host Name** field, enter the IP address or the host name of the machine on which the WebLogic Server domain for the target PDC system is configured.

   b. In the **Port Number** field, enter the port number assigned to the WebLogic Server domain administration server.

   c. In the **User Name** field, enter the WebLogic Server domain administrator user name.

   d. In the **Password** field, enter the WebLogic Server domain administrator user password.

   e. Do one of the following.

      If you do not want to enable secure communication for PDC, deselect the **Use SSL?** check box.

      To enable secure communication for PDC, leave the **Use SSL?** check box selected, and in the **KeyStore Location** field, enter the path of the client-side keystore file generated from the exported public certificate using the `keytool` utility.

      For more information, see "Configuring SSL for the WebLogic Server Domain".
38. Click **Next**.

The Pricing Design Center WebLogic Server Connection screen appears.

39. Enter the following details for the WebLogic Server domain in which you deployed PDC:
   a. In the **Host Name** field, enter the IP address or the host name of the machine on which the WebLogic Server domain is configured.
   b. In the **Port Number** field, enter the port number assigned to the WebLogic Server domain administration server.
   c. In the **User Name** field, enter the WebLogic Server domain administrator user name.
   d. In the **Password** field, enter the WebLogic Server domain administrator user password.
   e. Do one of the following.
      - If you do not want to enable secure communication for PDC, deselect the **Use SSL?** check box.
      - To enable secure communication for PDC, leave the **Use SSL?** check box selected, and in the **KeyStore Location** field, enter the path of the client-side keystore file generated from the exported public certificate using the **keytool** utility.
      
      For more information, see "Configuring SSL for the WebLogic Server Domain".

40. Click **Next**.

The BRM Integration Pack Wallet Location and Password screen appears.

41. Enter the following details for the BRM Integration Pack wallet:
   a. In the **Wallet Location** field, enter the path to the directory in which the BRM Integration Pack wallet is located or is to be installed.
   b. In the **Wallet Password** field, enter the BRM Integration Pack wallet password.
   c. In the **Confirm Wallet Password** field, enter the BRM Integration Pack wallet password again.

42. Click **Next**.

The BRM Server Location screen appears.

43. Enter the BRM batch and real-time rating engine details:
   a. In the **BRM** field, enter the full path or browse to the directory in which BRM is installed.
   b. In the **BRM Pipeline** field, enter the full path or browse to the directory in which Pipeline Manager is installed.
   c. In the **Perl Home** field, enter the full path or browse to the directory in which the Perl libraries for BRM are installed.

44. Click **Next**.

The BRM Pipeline Manager Database Connection Screen appears.

45. Enter the following information required to connect to the BRM database:
a. In the **Host Name** field, enter the IP address or the host name of the machine on which the Pipeline Manager database is configured.

b. In the **Port Number** field, enter the port number assigned to the Pipeline Manager database service.

Note: If you are installing PDC 12.0 patch set and the database is SSL-enabled, enter the SSL port number in the **Port Number** field.

c. In the **User Name** field, enter the Pipeline Manager database schema user name.

d. In the **Password** field, enter the Pipeline Manager database schema user password.

e. In the **Service Name** field, enter the name of the Pipeline Manager database service.

f. (From PDC 12.0 Patch Set 2 only) Do one of the following:

   - If you do not want to enable secure communication for the BRM database, leave the **SSL Enabled** check box deselected. This is deselected by default.
   - To enable secure communication for the BRM database, select the **SSL Enabled** check box.

g. If you selected **SSL Enabled**, do the following:

   - In the **Wallet Location** field, enter the full path or browse to the directory in which the database wallet is located. For example, \wallet_home\cwallet.sso or \wallet_home\ewallet.p12.
   - From the **Wallet Type** list, select the wallet type.
   - In the **Wallet Password** field, enter the database wallet password if the wallet type is PKCS12.

46. Click **Next**.

   If you are installing 12.0, the Transformation Cross-Reference Database Connection screen appears. Proceed to step 49.

   If you are installing 12.0 Patch Set 1, the PDC Cross-Reference Schema User screen appears.

47. Do one of the following:

   - If you want to create a transformation cross-reference schema user during installation, select **Yes** and proceed to step 48.
   - If you want to use an existing transformation cross-reference schema user, select **No** and proceed to step 52.

48. Click **Next**.

   The Transformation Cross-Reference Database Connection screen appears.

49. Enter the following information required to connect to the transformation cross-reference database:
a. In the **Host Name** field, enter the IP address or the host name of the machine on which the transformation cross-reference database is configured.

b. In the **Port Number** field, enter the port number assigned to the transformation cross-reference database service.

**Note:**

If you are installing PDC 12.0 patch set and the database is SSL-enabled, enter the SSL port number in the **Port Number** field.

c. In the **User Name** field, enter the transformation cross-reference database user name.

This user should be the SYSDBA user or should have the following capabilities on the PDC database: grant create user, grant any role, grant any privileges, select any table to `username`, and grant sysdba to `username`.

d. In the **Password** field, enter the transformation cross-reference database user password.

e. In the **Service Name** field, enter the name of the transformation cross-reference database service.

f. (From PDC 12.0 Patch Set 2 only) Do one of the following:

   If you do not want to enable secure communication for the transformation cross-reference database, leave the **SSL Enabled** check box deselected. This is deselected by default.

   To enable secure communication for the transformation cross-reference database, select the **SSL Enabled** check box.

g. If you selected **SSL Enabled**, do the following:

   In the **Wallet Location** field, enter the full path or browse to the directory in which the database wallet is located. For example, `wallet_home/cwallet.sso` or `wallet_home/ewallet.p12`.

   From the **Wallet Type** list, select the wallet type.

   In the **Wallet Password** field, enter the database wallet password if the wallet type is **PKCS12**.

50. Click **Next**.

   The Transformation Cross-Reference Schema screen appears.

51. Enter the following information required to create the transformation cross-reference schema in the transformation cross-reference database and proceed to step 54:

**Note:**

If you are migrating the pricing data from a source PDC system to a target PDC system that supports ECE, provide the details of the transformation cross-reference schema that you created for the source PDC system.
a. In the **User Name** field, enter a transformation cross-reference schema user name.

b. In the **Password** field, enter a transformation cross-reference schema user password.

c. (PDC 12.0 Patch Set 1 installation only) In the **Confirm Password** field, enter the transformation cross-reference schema user password again.

d. In the **PDC Tablespace** field, enter the name of the tablespace for the transformation cross-reference schema.

e. In the **Temp Tablespace** field, enter the name of the temporary tablespace for the transformation cross-reference schema.

52. Click **Next**.

The Transformation Cross-Reference Schema screen appears.

53. Enter the following information required to connect to the transformation cross-reference database:

<table>
<thead>
<tr>
<th>Note:</th>
</tr>
</thead>
<tbody>
<tr>
<td>If you are migrating the pricing data from a source PDC system to a target PDC system that supports ECE, provide the details of the transformation cross-reference schema that you created for the source PDC system.</td>
</tr>
</tbody>
</table>

| a. In the **Host Name** field, enter the IP address or the host name of the machine on which the transformation cross-reference database is configured. |
| b. In the **Port Number** field, enter the port number assigned to the transformation cross-reference database service. |

<table>
<thead>
<tr>
<th>Note:</th>
</tr>
</thead>
<tbody>
<tr>
<td>If you are installing PDC 12.0 patch set and the database is SSL-enabled, enter the SSL port number in the <strong>Port Number</strong> field.</td>
</tr>
</tbody>
</table>

| c. In the **Service Name** field, enter the name of the transformation cross-reference database service. |
| d. In the **User Name** field, enter the transformation cross-reference schema user name. |
| e. In the **Password** field, enter the transformation cross-reference schema user password. |
| f. (From PDC 12.0 Patch Set 2 only) Do one of the following: |

- If you do not want to enable secure communication for the transformation cross-reference database, leave the **SSL Enabled** check box deselected. This is deselected by default.
- To enable secure communication for the transformation cross-reference database, select the **SSL Enabled** check box. |
g. If you selected **SSL Enabled**, do the following:

   In the **Wallet Location** field, enter the full path or browse to the directory in which the database wallet is located. For example, *wallet_home/cwallet.sso* or *wallet_home/ewallet.p12*.

   From the **Wallet Type** list, select the wallet type.

   In the **Wallet Password** field, enter the database wallet password if the wallet type is **PKCS12**.

54. Click **Next**.

   The PDC User screen appears.

55. Enter the PDC user information.

   a. In the **User Name** field, enter the PDC user name.

   b. In the **Password** field, enter the PDC user password.

56. Do one of the following:

   • Click **Next**.

      The Migration Cross-Reference Database Connection screen appears.

   • If you selected **Do not install Migration utility** in step 13, proceed to step 66.

57. Enter the following information required to connect to the migration cross-reference database:

   a. In the **Host Name** field, enter the IP address or the host name of the machine on which the migration cross-reference database is configured.

   b. In the **Port Number** field, enter the port number assigned to the migration cross-reference database service.

   c. In the **User Name** field, enter the migration cross-reference database user name.

   d. In the **Password** field, enter the migration cross-reference database user password.

   e. In the **Service Name** field, enter the name of the migration cross-reference database service.

   f. (From PDC 12.0 Patch Set 2 only) Do one of the following:

      If you do not want to enable secure communication for the migration cross-reference database, leave the **SSL Enabled** check box deselected. This is deselected by default.

      To enable secure communication for the migration cross-reference database, select the **SSL Enabled** check box.

   g. If you selected **SSL Enabled**, do the following:

   

Note:

If you are installing PDC 12.0 patch set and the database is SSL-enabled, enter the SSL port number in the **Port Number** field.

   c. In the **User Name** field, enter the migration cross-reference database user name.

   d. In the **Password** field, enter the migration cross-reference database user password.

   e. In the **Service Name** field, enter the name of the migration cross-reference database service.

   f. (From PDC 12.0 Patch Set 2 only) Do one of the following:

      If you do not want to enable secure communication for the migration cross-reference database, leave the **SSL Enabled** check box deselected. This is deselected by default.

      To enable secure communication for the migration cross-reference database, select the **SSL Enabled** check box.

   g. If you selected **SSL Enabled**, do the following:
In the **Wallet Location** field, enter the full path or browse to the directory in which the database wallet is located. For example, `wallet_home/cwallet.sso` or `wallet_home/ewallet.p12`.

From the **Wallet Type** list, select the wallet type.

In the **Wallet Password** field, enter the database wallet password if the wallet type is **PKCS12**.

58. Click **Next**.

The Migration Cross-Reference Schema screen appears.

59. Enter the following information required to create the migration cross-reference schema in the migration cross-reference database:
   a. In the **User Name** field, enter a migration cross-reference schema user name.
   b. In the **Password** field, enter a migration cross-reference schema user password.
   c. In the **PDC Tablespace** field, enter the name of the PDC tablespace for the migration cross-reference schema.
   d. In the **Temp Tablespace** field, enter the name of the temporary tablespace for the migration cross-reference schema.

60. Do one of the following:
   - Click **Next**.
     The Migration User screen appears.
   - If you are migrating the PDC pricing data to a PDC system that supports ECE, proceed to 62.

61. Enter the migration user details and proceed to 66.
   a. In the **User Name** field, enter a migration user name.
   b. In the **Password** field, enter a migration user password.
   c. (PDC 12.0 Patch Set 1 Installation only) In the **Confirm Password** field, enter the migration user password again.

62. Click **Next**.

The Source Migration User screen appears.

63. If you are migrating the PDC pricing data to a PDC system that supports ECE, enter the migration user details that you use to run the migration utility in the source PDC system:
   a. In the **User Name** field, enter the migration user name.
   b. In the **Password** field, enter the migration user password.
   c. (PDC 12.0 Patch Set 1 Installation only) In the **Confirm Password** field, enter the migration user password again.

64. Click **Next**.

The Target Migration User screen appears.

65. If you are migrating the PDC pricing data to a PDC system that supports ECE, enter the migration user details that you want to use to run the migration utility in the target PDC system:
   a. In the **User Name** field, enter the migration user name.
b. In the **Password** field, enter the migration user password.

66. Click **Next**.

The Installation Summary screen appears.

67. Review the selections you have made in the preceding screens, and click **Install**.

The Installation Progress screen appears.

**Note:**

After the installation begins, clicking **Stop installation** stops the installation process, but the files that are already copied are not removed.

68. When the installation is done, click **Next**, the Installation Complete screen appears.

Note down the provided URL. You use this URL to access PDC.

69. Click **Finish** to complete and exit.

See "Verifying the Pricing Design Center Installation" for information on verifying the successful installation of PDC.

See "About Installation Logs" for information on PDC Installer logs.

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**Installing PDC**

To install the PDC software:

1. Obtain the PDC software. See "Obtaining the PDC Software".

2. Start the Oracle WebLogic Server domain administration server or the WebLogic Server domain managed server on which you want to deploy PDC, if it is not already started.

3. Ensure that the PDC database is running.

**Note:**

Ensure that the Oracle Database server is in Running state. The Installer connects to the Oracle Database server to verify the information you entered is valid.

4. Go to the `temp_dir` directory, and run one of the following commands:

   - To start the GUI installer:
     
     ```bash
     java_home/bin/java -jar jarfile
     ```

     where:

     `Java_home` is the directory in which you installed the latest supported Java version.
jarfile is `pdcserver-12.0.0.0.0_generic.jar` for PDC 12.0 and `pdcserver-12.0.0.x.0_generic_full.jar` for PDC 12.0 patch sets. For example, `pdcserver-12.0.0.1.0_generic_full.jar` for PDC 12.0 Patch Set 1 and `pdcserver-12.0.0.2.0_generic_full.jar` for PDC 12.0 Patch Set 2.

- To start the GUI installer and install PDC using the `oraInventory` directory in a different location:

  ```shell
  Java_home/bin/java -jar jarfile -invPtrLoc FilePath/oraInst.loc
  ```

  where `FilePath` is the path to the directory in which the `oraInst.loc` file is located.

- To start the GUI installer and create a silent installer response file during the installation:

  ```shell
  Java_home/bin/java -jar jarfile -record -destinationFile path
  ```

  where `path` is the response file location and name.

The Welcome screen appears.

5. Click **Next**.

The Specify Inventory Directory and Credentials screen appears if the `oraInst.loc` file is corrupt or not present. The default location of the `oraInventory` directory is in the `/etc/oraInst.loc` (Linux) file or the `/var/opt/oracle/oraInst.loc` (Solaris) file.

This screen displays the path to the default inventory directory and the default operating system group name.

6. (Optional) To change the default inventory directory details, do the following:

   a. Enter the full path of the inventory directory.

   b. Specify the name of the operating system group that has write permission to the inventory directory.

7. Click **Next**.

The Installation Location screen appears.

8. Enter the full path or browse to the directory in which to install PDC.

9. Click **Next**.

The Select Installation Type screen appears.

10. Select **Pricing Design Center** and click **Next**.

The WebLogic Administration Server Connection screen appears.

11. Enter the following details for the WebLogic Server domain in which you want to deploy PDC:

   a. In the **Host Name** field, enter the IP address or the host name of the machine on which the WebLogic Server domain is configured.

   b. In the **Port Number** field, enter the port number assigned to the WebLogic Server domain administration server.

   c. In the **User Name** field, enter the WebLogic Server domain administrator user name.

   d. In the **Password** field, enter the WebLogic Server domain administrator user password.
e. In the **WebLogic Home** field, enter the path to the directory in which the WebLogic Server software is installed. For example, `MW_Home/wlserver`.

f. Do one of the following:

   - If you do not want to enable secure communication for PDC, deselect the **Use SSL? (Recommended)** check box.

   - To enable secure communication for PDC, leave the **Use SSL? (Recommended)** check box selected, and in the **KeyStore Location** field, enter the path of the client-side keystore file generated from the exported public certificate using the **keytool** utility.

   For more information, see "Configuring SSL for the WebLogic Server Domain".

12. Click **Next**.

   The PDC Wallet Location and Password screen appears.

13. Enter the following details for the PDC wallet:

   a. In the **Wallet Location** field, enter the path to the directory in which the PDC wallet is located or is to be installed.

   b. In the **Wallet Password** field, enter the PDC wallet password.

   c. In the **Confirm Wallet Password** field, enter the PDC wallet password again.

14. Click **Next**.

   The WebLogic Server screen appears.

15. Do one of the following:

   - To deploy PDC on a WebLogic Server domain administration server, select a WebLogic Server domain administration server from the list.

   - To deploy PDC on a WebLogic Server domain managed server, select a WebLogic Server domain managed server from the list.

   **Note:**

   Oracle recommends that you deploy PDC on a WebLogic Server managed server. If you select a WebLogic Server managed server, ensure that the WebLogic Server managed server and the node manager are running.

16. Click **Next**.

   If you are installing PDC 12.0, the Pricing Design Center System Database Connection screen appears. Proceed to step 18.

   If you are installing PDC 12.0 Patch Set 1, the Pricing Design Center Schema User screen appears.

17. Do one of the following:

   - If you want to create a PDC schema user during installation, select **Yes** and proceed to step 18.

   - If you want to use an existing PDC schema user, select **No** and proceed to the step 22.

18. Click **Next**.
The Pricing Design Center System Database Connection screen appears.

19. Enter the following information required to connect to the PDC database:

a. In the **Host Name** field, enter the IP address or the host name of the machine on which the PDC database is configured.

b. In the **Port Number** field, enter the port number assigned to the PDC database service.

Note: If you are installing PDC 12.0 patch set and the database is SSL-enabled, enter the SSL port number in the **Port Number** field.

c. In the **User Name** field, enter the PDC database user name. This user should be the SYSDBA user or should have the following capabilities on the PDC database: grant create user, grant any role, grant any privileges, select any table to *username*, and grant sysdba to *username*.

d. In the **Password** field, enter the PDC database user password.

e. In the **Service Name** field, enter the name of the PDC database service.

Note: Ensure that the Oracle Database server is in Running state. The Installer connects to the Oracle Database server to verify the information you entered is valid.

f. (From PDC 12.0 Patch Set 2 only) Do one of the following:

   If you do not want to enable secure communication for the PDC database, leave the **SSL Enabled** check box deselected. This is deselected by default.

   To enable secure communication for the PDC database, select the **SSL Enabled** check box.

g. If you selected **SSL Enabled**, do the following:

   In the **Wallet Location** field, enter the full path or browse to the directory in which the database wallet is located. For example, *wallet_home/cwallet.sso* or *wallet_home/ewallet.p12*.

   From the **Wallet Type** list, select the wallet type.

   In the **Wallet Password** field, enter the database wallet password if the wallet type is **PKCS12**.

20. Click **Next**.

   The Pricing Design Center Schema screen appears.

21. Enter the following information required to create the PDC schema in the PDC database and proceed to step 24:

   a. In the **User Name** field, enter a PDC schema user name.

   b. In the **Password** field, enter a PDC schema user password.
c. (PDC 12.0 Patch Set Installation only) In the Confirm Password field, enter the PDC schema user password again.

d. In the PDC Tablespace field, enter the name of the tablespace for the PDC schema.

e. In the Temp Tablespace field, enter the name of the temporary tablespace for the PDC schema.

f. If you want to use the existing schema data for installing PDC on the secondary instances, select the Use the existing schema data check box. This is deselected by default.

22. Click Next.

The Pricing Design Center Schema screen appears.

23. Enter the following information required to connect to the PDC schema:

a. In the Host Name field, enter the IP address or the host name of the machine on which the PDC database is configured.

b. In the Port Number field, enter the port number assigned to the PDC database service.

   **Note:**

   If you are installing PDC 12.0 patch set and the database is SSL-enabled, enter the SSL port number in the Port Number field.

c. In the Service Name field, enter the name of the PDC database service.

   **Note:**

   Ensure that the Oracle Database server is in Running state. The Installer connects to the Oracle Database server to verify the information you entered is valid.

d. In the User Name field, enter the PDC schema user name.

e. In the Password field, enter the PDC schema user password.

f. If you want to use the existing schema data for installing PDC on the secondary instances, select Use the existing schema data.

   This option is deselected by default.

g. (From PDC 12.0 Patch Set 2 only) Do one of the following:

   If you do not want to enable secure communication for the PDC database, leave the SSL Enabled check box deselected. This is deselected by default.

   To enable secure communication for the PDC database, select the SSL Enabled check box.

h. If you selected SSL Enabled, do the following:
In the **Wallet Location** field, enter the full path or browse to the directory in which the database wallet is located. For example, `wallet_home/cwallet.sso` or `wallet_home/ewallet.p12`.

From the **Wallet Type** list, select the wallet type.

In the **Wallet Password** field, enter the database wallet password if the wallet type is **PKCS12**.

24. Click **Next**.

The Pricing Design Center System Database Connection screen appears.

25. Enter the following information required to connect to the PDC database:

   a. In the **Host Name** field, enter the IP address or the host name of the machine on which the PDC database is configured.

   b. In the **Port Number** field, enter the port number assigned to the PDC database service.

   **Note:**
   
   If you are installing PDC 12.0 patch set and the database is SSL-enabled, enter the SSL port number in the **Port Number** field.

   c. In the **User Name** field, enter the PDC database user name.

   This user should be the SYSDBA user or should have the following capabilities on the PDC database: grant create user, grant any role, grant any privileges, select any table to `username`, and grant sysdba to `username`.

   d. In the **Password** field, enter the PDC database user password.

   e. In the **Service Name** field, enter the name of the PDC database service.

   **Note:**
   
   Ensure that the Oracle Database server is in Running state. The Installer connects to the Oracle Database server to verify the information you entered is valid.

   f. (From PDC 12.0 Patch Set 2 only) Do one of the following:

   If you do not want to enable secure communication for the PDC database, leave the **SSL Enabled** check box deselected. This is deselected by default.

   To enable secure communication for the PDC database, select the **SSL Enabled** check box.

   g. If you selected **SSL Enabled**, do the following:

   In the **Wallet Location** field, enter the full path or browse to the directory in which the database wallet is located. For example, `wallet_home/cwallet.sso` or `wallet_home/ewallet.p12`.

   From the **Wallet Type** list, select the wallet type.
In the **Wallet Password** field, enter the database wallet password if the wallet type is **PKCS12**.

26. Click **Next**.

The Pricing Design Center Schema screen appears.

27. Enter the following information required to create the PDC schema in the PDC database:
   a. In the **User Name** field, enter a PDC schema user name.
   b. In the **Password** field, enter a PDC schema user password.
   c. In the **PDC Tablespace** field, enter the name of the tablespace for the PDC schema.
   d. In the **Temp Tablespace** field, enter the name of the temporary tablespace for the PDC schema.
   e. If you want to use the existing schema data for installing PDC on the secondary instances, select the **Use the existing schema data** check box. This is deselected by default.

28. Click **Next**.

The Pricing Design Center System User screen appears.

29. Enter the following information to create a PDC user to access the PDC GUI:
   a. In the **User Name** field, enter a PDC user name.
   b. In the **Password** field, enter a PDC user password.

   ![Note:](#)

   The PDC user password can be a maximum of 12 characters long and should contain at least one non-alphabetic character. For example, Weblogic123.

   The user name must not be a part of the password.

   c. In the **Confirm Password** field, enter the PDC user password again.

30. Click **Next**.

The Select Charging Engine for Usage Rating appears.

31. Do one of the following:
   • To use Oracle Communications Billing and Revenue Management (BRM) Elastic Charging Engine (ECE) for usage rating, select **Elastic Charging Engine**.
   • To use BRM real-time rating and batch rating engines for usage rating, select **Realtime Rating and Batch Rating Engines**.

32. Click **Next**.

The Installation Summary screen appears.

33. Review the selections you have made in the preceding screens, and click **Install**.

The Installation Progress screen appears.
34. When the installation is done, click **Next**, the Installation Complete screen appears.

Note down the provided URL. You use this URL to access PDC.

35. Click **Finish** to complete and exit.

See "Verifying the Pricing Design Center Installation" for information on verifying the successful installation of PDC.

See "About Installation Logs" for information on PDC Installer logs.

## Installing BRM Integration Pack

BRM Integration Pack is a set of utilities that transform and transfer pricing components configured in PDC to the BRM system. If BRM and Pipeline Manager are installed on different machines, you must also install Pipeline Configuration Manager. For instructions on how to install Pipeline Configuration Manager, see *BRM Installation Guide*.

### Note:

BRM Integration Pack installation must be performed as the UNIX user who installed BRM; for example, **pin_user**.

To install BRM Integration Pack:

1. Obtain the PDC software. See "Obtaining the PDC Software".

2. Start the Oracle WebLogic Server domain administration server or the managed server on which you want to deploy PDC, if it is not already started.

3. Verify that you are able to connect to the BRM database.

4. Go to the **temp_dir** directory, and run one of the following commands:
   - To start the GUI installer:
     ```
     Java_home/bin/java -jar jarfile
     ```
   
   where:

   *Java_home* is the directory in which you installed the latest supported Java version.

   *jarfile* is **pdcserver-12.0.0.0.0Generic.jar** for PDC 12.0 and **pdcserver-12.0.0.x.0GenericFull.jar** for PDC 12.0 patch sets. For example, **pdcserver-12.0.0.1.0GenericFull.jar** for PDC 12.0 Patch Set 1 and **pdcserver-12.0.0.2.0GenericFull.jar** for PDC 12.0 Patch Set 2.
• To start the GUI installer and install PDC using the **oralinventory** directory in a different location:

```
Java_home/bin/java -jar jarfile -invPtrLoc FilePath/oraInst.loc
```

where *FilePath* is the path to the directory in which the *oraInst.loc* file is located.

• To start the GUI installer and create a silent installer response file during the installation:

```
Java_home/bin/java -jar jarfile -record -destinationFile path
```

where *path* is the response file location and name.

The Welcome screen appears.

5. Click **Next**.

The Specify Inventory Directory and Credentials screen appears if the *oraInst.loc* file is corrupt or not present. The default location of the *oralinventory* directory is in the */etc/oraInst.loc* (Linux) file or the */var/opt/oracle/oraInst.loc* (Solaris) file.

This screen displays the path to the default inventory directory and the default operating system group name.

6. (Optional) To change the default inventory directory details, do the following:
   a. Enter the full path of the inventory directory.
   b. Specify the name of the operating system group that has write permission to the inventory directory.

7. Click **Next**.

The Installation Location screen appears.

8. Enter the full path or browse to the directory in which to install BRM Integration Pack.

9. Click **Next**.

The Select Installation Type screen appears.

10. Select **BRM Integration Pack** and click **Next**.

    If you are installing PDC 12.0 or 12.0 Patch Set 1, the Migration Option screen appears. Proceed to step 13.

    If you are installing PDC 12.0 Patch Set 2, the BRM Integration Pack Pre-requisite Libraries Location screen appears.

11. In the **OJDBC Location** field, enter the full path or browse to the directory in which the OJDBC jar is located.

12. Click **Next**.
The Migration Option screen appears.

13. Do one of the following:

- If you do not want to migrate data, select **Do not install Migration Utility** and proceed to step 18.
- To migrate the BRM real-time and batch rating engines pricing data to a PDC system that supports BRM real-time and batch rating engines, select **Migrate RRE and BRE Pricing Data to PDC** and proceed to step 18.
- To migrate the BRM real-time and batch rating engines pricing data to a PDC system that supports ECE, select **Migrate RRE and BRE Pricing Data to PDC with ECE** and proceed to step 18.
- To migrate the PDC pricing data to a PDC system that supports ECE, select **Migrate PDC Pricing Data to PDC with ECE** and proceed to step 14.

14. Click **Next**.

The Source Pricing Design Center WebLogic Server Connection screen appears.

15. If you are migrating the PDC pricing data to a PDC system that supports ECE, enter the following details for the WebLogic Server domain in which you deployed the source PDC system:

   a. In the **Host Name** field, enter the IP address or the host name of the machine on which the WebLogic Server domain for the source PDC system is configured.
   
   b. In the **Port Number** field, enter the port number assigned to the WebLogic Server domain administration server.

   
   **Note:**

   If you selected a WebLogic Server domain managed server during the PDC installation, enter the port number to the managed server.

   c. In the **User Name** field, enter the WebLogic Server domain administrator user name.
   
   d. In the **Password** field, enter the WebLogic Server domain administrator user password.
   
   e. Do one of the following.

      If you do not want to enable secure communication for PDC, deselect the **Use SSL?** check box.

      To enable secure communication for PDC, leave the **Use SSL?** check box selected, and in the **KeyStore Location** field, enter the path of the client-side keystore file generated from the exported public certificate using the **keytool** utility.

      For more information, see "Configuring SSL for the WebLogic Server Domain".

16. Click **Next**.

The Target Pricing Design Center WebLogic Server Connection screen appears.
17. If you are migrating the PDC pricing data to a PDC system that supports ECE, enter the following details for the WebLogic Server domain in which you deployed the target PDC system:
   a. In the Host Name field, enter the IP address or the host name of the machine on which the WebLogic Server domain for the target PDC system is configured.
   b. In the Port Number field, enter the port number assigned to the WebLogic Server domain administration server.
   c. In the User Name field, enter the WebLogic Server domain administrator user name.
   d. In the Password field, enter the WebLogic Server domain administrator user password.
   e. Do one of the following.
      If you do not want to enable secure communication for PDC, deselect the Use SSL? check box.
      To enable secure communication for PDC, leave the Use SSL? check box selected, and in the KeyStore Location field, enter the path of the client-side keystore file generated from the exported public certificate using the keytool utility.
      For more information, see "Configuring SSL for the WebLogic Server Domain".
18. Click Next.
   The Pricing Design Center WebLogic Server Connection screen appears.
19. Enter the following details for the WebLogic Server domain in which you deployed PDC:
   a. In the Host Name field, enter the IP address or the host name of the machine on which the WebLogic Server domain is configured.
   b. In the Port Number field, enter the port number assigned to the WebLogic Server domain administration server.
   c. In the User Name field, enter the WebLogic Server domain administrator user name.
   d. In the Password field, enter the WebLogic Server domain administrator user password.
   e. Do one of the following.
      If you do not want to enable secure communication for PDC, deselect the Use SSL? check box.
      To enable secure communication for PDC, leave the Use SSL? check box selected, and in the KeyStore Location field, enter the path of the client-side keystore file generated from the exported public certificate using the keytool utility.
      For more information, see "Configuring SSL for the WebLogic Server Domain".
20. Click Next.
   The BRM Integration Pack Wallet Location and Password screen appears.
21. Enter the following details for the BRM Integration Pack wallet:
a. In the **Wallet Location** field, enter the path to the directory in which the BRM Integration Pack wallet is located or is to be installed.

b. In the **Wallet Password** field, enter the BRM Integration Pack wallet password.

c. In the **Confirm Wallet Password** field, enter the BRM Integration Pack wallet password again.

22. Click **Next**.

The BRM Server Location screen appears.

23. Enter the BRM batch and real-time rating engine details:

a. In the **BRM** field, enter the path to the directory in which BRM is installed.

b. In the **BRM Pipeline** field, enter the path to the directory in which Pipeline Manager is installed.

c. In the **Perl Home** field, enter the path to the directory in which the Perl libraries are installed.

24. Click **Next**.

The BRM Pipeline Manager Database Connection Screen appears.

25. Enter the following information required to connect to the BRM database:

a. In the **Host Name** field, enter the IP address or the host name of the machine on which the Pipeline Manager database is configured.

b. In the **Port Number** field, enter the port number assigned to the Pipeline Manager database service.

   **Note:**

   If you are installing PDC 12.0 patch set and the database is SSL-enabled, enter the SSL port number in the **Port Number** field.

   c. In the **User Name** field, enter the Pipeline Manager database schema user name.

   d. In the **Password** field, enter the Pipeline Manager database schema user password.

   e. In the **Service Name** field, enter the name of the Pipeline Manager database service.

   f. (From PDC 12.0 Patch Set 2 only) Do one of the following:

      If you do not want to enable secure communication for the BRM database, leave the **SSL Enabled** check box deselected. This is deselected by default.

      To enable secure communication for the BRM database, select the **SSL Enabled** check box.

   g. If you selected **SSL Enabled**, do the following:

      In the **Wallet Location** field, enter the full path or browse to the directory in which the database wallet is located. For example, `wallet_home/cwallet.sso` or `wallet_home/ewallet.p12`.

      From the **Wallet Type** list, select the wallet type.
In the **Wallet Password** field, enter the database wallet password if the wallet type is **PKCS12**.

26. Click **Next**.

If you are installing 12.0, the Transformation Cross-Reference Database Connection screen appears. Proceed to step 28.

If you are installing 12.0 Patch Set 1, the PDC Cross-Reference Schema User screen appears.

27. Do one of the following:
   - If you want to create a transformation cross-reference schema user during installation, select **Yes** and proceed to step 28.
   - If you want to use an existing transformation cross-reference schema user, select **No** and proceed to step 32.

28. Click **Next**.

The Transformation Cross-Reference Database Connection screen appears.

29. Enter the following information required to connect to the transformation cross-reference database:
   a. In the **Host Name** field, enter the IP address or the host name of the machine on which the transformation cross-reference database is configured.
   b. In the **Port Number** field, enter the port number assigned to the transformation cross-reference database service.

   ![Note:]
   If you are installing PDC 12.0 patch set and the database is SSL-enabled, enter the SSL port number in the **Port Number** field.

   c. In the **User Name** field, enter the transformation cross-reference database user name.

   This user should be the SYSDBA user or should have the following capabilities on the PDC database: grant create user, grant any role, grant any privileges, select any table to **username**, and grant sysdba to **username**.

   d. In the **Password** field, enter the transformation cross-reference database user password.

   e. In the **Service Name** field, enter the name of the transformation cross-reference database service.

   f. (From PDC 12.0 Patch Set 2 only) Do one of the following:
      - If you do not want to enable secure communication for the transformation cross-reference database, leave the **SSL Enabled** check box deselected. This is deselected by default.
      - To enable secure communication for the transformation cross-reference database, select the **SSL Enabled** check box.

   g. If you selected **SSL Enabled**, do the following:
In the **Wallet Location** field, enter the full path or browse to the directory in which the database wallet is located. For example, `wallet_home/cwallet.sso` or `wallet_home/ewallet.p12`.

From the **Wallet Type** list, select the wallet type.

In the **Wallet Password** field, enter the database wallet password if the wallet type is **PKCS12**.

30. Click **Next**.

The Transformation Cross-Reference Schema screen appears.

31. Enter the following information required to create the transformation cross-reference schema in the transformation cross-reference database and proceed to step 34:

   ```
   **Note:**
   
   If you are migrating the pricing data from a source PDC system to a target PDC system that supports ECE, provide the details of the transformation cross-reference schema that you created for the source PDC system.
   
   a. In the **User Name** field, enter a transformation cross-reference schema user name.
   b. In the **Password** field, enter a transformation cross-reference schema user password.
   c. (PDC 12.0 Patch Set 1 installation only) In the **Confirm Password** field, enter the transformation cross-reference schema user password again.
   d. In the **PDC Tablespace** field, enter the name of the tablespace for the transformation cross-reference schema.
   e. In the **Temp Tablespace** field, enter the name of the temporary tablespace for the transformation cross-reference schema.
   
   32. Click **Next**.

   The Transformation Cross-Reference Schema screen appears.

33. Enter the following information required to connect to the transformation cross-reference database:

   ```
   **Note:**
   
   If you are migrating the pricing data from a source PDC system to a target PDC system that supports ECE, provide the details of the transformation cross-reference schema that you created for the source PDC system.
   
   a. In the **Host Name** field, enter the IP address or the host name of the machine on which the transformation cross-reference database is configured.
b. In the **Port Number** field, enter the port number assigned to the transformation cross-reference database service.

Note: If you are installing PDC 12.0 patch set and the database is SSL-enabled, enter the SSL port number in the **Port Number** field.

c. In the **Service Name** field, enter the name of the transformation cross-reference database service.

d. In the **User Name** field, enter the transformation cross-reference schema user name.

e. In the **Password** field, enter the transformation cross-reference schema user password.

f. (From PDC 12.0 Patch Set 2 only) Do one of the following:

   If you do not want to enable secure communication for the transformation cross-reference database, leave the **SSL Enabled** check box deselected. This is deselected by default.

   To enable secure communication for the transformation cross-reference database, select the **SSL Enabled** check box.

g. If you selected **SSL Enabled**, do the following:

   In the **Wallet Location** field, enter the full path or browse to the directory in which the database wallet is located. For example, `wallet_home/cwallet.sso` or `wallet_home/ewallet.p12`.

   From the **Wallet Type** list, select the wallet type.

   In the **Wallet Password** field, enter the database wallet password if the wallet type is **PKCS12**.

34. Click **Next**.

   The PDC User screen appears.

35. Enter the PDC user information.

   a. In the **User Name** field, enter the PDC user name.

   b. In the **Password** field, enter the PDC user password.

36. Do one of the following:

   • Click **Next**.

   The Migration Cross-Reference Database Connection screen appears.

   • If you selected **Do not install Migration Utility** in step 13, proceed to step 46.

37. Enter the following information required to connect to the migration cross-reference database:

   a. In the **Host Name** field, enter the IP address or the host name of the machine on which the migration cross-reference database is configured.

   b. In the **Port Number** field, enter the port number assigned to the migration cross-reference database service.
If you are installing PDC 12.0 patch set and the database is SSL-enabled, enter the SSL port number in the Port Number field.

c. In the User Name field, enter the migration cross-reference database user name.

This user should be the SYSDBA user or should have the following capabilities on the PDC database: grant create user, grant any role, grant any privileges, select any table to username, and grant sysdba to username.

d. In the Password field, enter the migration cross-reference database user password.

e. In the Service Name field, enter the name of the migration cross-reference database service.

f. (From PDC 12.0 Patch Set 2 only) Do one of the following:

If you do not want to enable secure communication for the migration cross-reference database, leave the SSL Enabled check box deselected. This is deselected by default.

To enable secure communication for the migration cross-reference database, select the SSL Enabled check box.

g. If you selected SSL Enabled, do the following:

In the Wallet Location field, enter the full path or browse to the directory in which the database wallet is located. For example, wallet_home/cwallet.sso or wallet_home/ewallet.p12.

From the Wallet Type list, select the wallet type.

In the Wallet Password field, enter the database wallet password if the wallet type is PKCS12.

38. Click Next.

The Migration Cross-Reference Schema screen appears.

39. Enter the following information required to create the migration cross-reference schema in the migration cross-reference database:

a. In the User Name field, enter a migration cross-reference schema user name.

b. In the Password field, enter a migration cross-reference schema user password.

c. In the PDC Tablespace field, enter the name of the PDC tablespace for the migration cross-reference schema.

d. In the Temp Tablespace field, enter the name of the temporary tablespace for the migration cross-reference schema.

40. Do one of the following:

- Click Next.

   The Migration User screen appears.

- If you are migrating the PDC pricing data to a PDC system that supports ECE, proceed to 42.
41. Enter the migration user details and proceed to 46.
   a. In the User Name field, enter a migration user name.
   b. In the Password field, enter a migration user password.

42. Click Next.
    The Source Migration User screen appears.

43. If you are migrating the PDC pricing data to a PDC system that supports ECE, enter the migration user details that you use to run the migration utility in the source PDC system:
   a. In the User Name field, enter the migration user name.
   b. In the Password field, enter the migration user password.
   c. (PDC 12.0 Patch Set 1 Installation only) In the Confirm Password field, enter the migration user password again.

44. Click Next.
    The Target Migration User screen appears.

45. If you are migrating the PDC pricing data to a PDC system that supports ECE, enter the migration user details that you want to use to run the migration utility in the target PDC system:
   a. In the User Name field, enter the migration user name.
   b. In the Password field, enter the migration user password.
   c. (PDC 12.0 Patch Set 1 Installation only) In the Confirm Password field, enter the migration user password again.

46. Click Next.
    The Installation Summary screen appears.

47. Review the selections you have made in the preceding screens, and click Install.
    The Installation Progress screen appears.

   **Note:**
   After the installation begins, clicking Stop installation stops the installation process, but the files that are already copied are not removed.

48. When the installation is done, click Next, the Installation Complete screen appears.

49. Click Finish to complete and exit.

See "Verifying the Pricing Design Center Installation" for information on verifying the successful installation of BRM Integration Pack.

See "About Installation Logs" for information on PDC Installer logs.
Installing PDC in Silent Mode

Use silent install mode when you are installing PDC using the same configuration repeatedly. Silent install mode does not use the GUI and it runs in the background.

In this mode, you use a response file template that contains a predefined set of values to install PDC and BRM Integration Pack. You can generate a response file that contains the parameters and values during the PDC GUI installation.

Creating a Response File

To create a response file:

1. Create the response file by doing one of the following:
   - Create a copy of the response file that was generated during the GUI installation. See "Installing PDC and BRM Integration Pack" for more information.
   - Create a response file using the template by running the following command:

     ```
     Java_home/bin/java -jar jarfile -getResponseFileTemplates
     ```

     where:
     - `Java_home` is the directory in which you installed the latest supported Java version.
     - `jarfile` is `pdcserver-12.0.0.0.0_generic.jar` for PDC 12.0 and `pdcserver-12.0.0.x.0_generic_full.jar` for PDC 12.0 patch sets. For example, `pdcserver-12.0.0.1.0_generic_full.jar` for PDC 12.0 Patch Set 1 and `pdcserver-12.0.0.2.0_generic_full.jar` for PDC 12.0 Patch Set 2.

     The following response file is created with the default values.
     - `oracle.communications.pdc.PricingDesignCenter.rsp`

     Use this file template if you are installing PDC and BRM Integration Pack.

     You can create as many response files as needed.

2. Open the file in a text editor.

3. Modify the response file you copied by specifying the key-value information for the parameters you want in your installation.
Installing PDC and BRM Integration Pack in Silent Mode

To install PDC in silent mode:

1. Create the response file. See "Creating a Response File".

2. Copy the response file you created to the machine on which you run the silent installation.

3. On the machine on which you run the silent installation, go to the `temp_dir` directory to which you have downloaded the PDC server software pack, and run the following command:

   ```
   Java_home/bin/java -jar jarfile -debug -invPtrLoc Inventory_home/oraInventory/oraInst.loc [parameter=value] -responseFile path -silent
   ```

   where:
   - `Java_home` is the directory in which you installed the latest supported Java version.
   - `jarfile` is `pdcserver-12.0.0.0.0_generic.jar` for PDC 12.0 and `pdcserver-12.0.0.x.0_generic_full.jar` for PDC 12.0 patch sets. For example, `pdcserver-12.0.0.1.0_generic_full.jar` for PDC 12.0 Patch Set 1 and `pdcserver-12.0.0.2.0_generic_full.jar` for PDC 12.0 Patch Set 2.
   - `parameter` is the name of an installation parameter.
   - `value` is the value of the installation parameter.
   - `path` is the absolute path to the response file.

   For example:

   ```
   Java_home/bin/java -jar pdcserver-12.0.0.2.0_generic_full.jar -debug -invPtrLoc Inventory_home/oraInventory/oraInst.loc INSTALL_TYPE=Complete -responseFile /tmp/oracle.communications.pdc.PricingDesignCenter.rsp -silent
   ```

   The installation runs silently in the background.

To install BRM Integration Pack in silent mode:

1. Create the response file. See "Creating a Response File".

2. Copy the response file you created to the machine on which you run the silent installation.

3. On the machine on which you run the silent installation, go to the `temp_dir` directory to which you have downloaded the BRM Integration Pack, and run the following command:
Java_home/bin/java -jar jarfile -debug -invPtrLoc Inventory_home/oraInventory/oraInst.loc [parameter=value] -responseFile path -silent

where:

• Java_home is the directory in which you installed the latest supported Java version.

• jarfile is pdcserven-12.0.0.0.0_generic.jar for PDC 12.0 and pdcserven-12.0.0.x.0_generic_full.jar for PDC 12.0 patch sets. For example, pdcserven-12.0.0.1.0_generic_full.jar for PDC 12.0 Patch Set 1 and pdcserven-12.0.0.2.0_generic_full.jar for PDC 12.0 Patch Set 2.

• parameter is the name of an installation parameter.

• value is the value of the installation parameter.

• path is the absolute path to the response file.

For example:

Java_home/bin/java -jar pdcserven-12.0.0.2.0_generic_full.jar -debug -invPtrLoc Inventory_home/oraInventory/oraInst.loc INSTALL_TYPE=Complete -responseFile /tmp/oracle.communications.pdc.PricingDesignCenter.rsp -silent

The installation runs silently in the background.

See "Verifying the Pricing Design Center Installation" for information on verifying the successful installation of PDC and BRM Integration Pack.

See "About Installation Logs" for information on the PDC Installer logs.

About Installation Logs

The installation logs are used for debugging purposes. You can check the log files in the oraInventory/logs directory. The default location of the oraInventory directory is in the /etc/oraInst.loc (Linux) file or the /var/opt/oracle/oraInst.loc (Solaris) file.

You use the following log files to monitor installation and post installations:

• installAction TimeStamp.log
• orainstTimeStampl.err
• orainstTimeStampl.out
• dbScriptstamp TimeStamp.log (for the scripts executed using SQL*Plus and JDBC)
• silentInstall TimeStamp.log (for silent mode installation)

where TimeStamp is the date and time the log file was created.
Upgrading Pricing Design Center Software

This chapter describes how to upgrade an Oracle Communications Pricing Design Center (PDC) installation. Before upgrading PDC, read the following:

- Overview of the PDC Upgrade Procedure
- Pricing Design Center System Requirements
- Pre-Installation Tasks for the PDC Software Upgrade

About Upgrading PDC

You can upgrade PDC by using GUI or in the silent mode. Upgrading PDC in the silent mode lets you perform a noninteractive upgrade of PDC. You can use the silent mode to upgrade PDC quickly.

- Overview of the PDC Upgrade Procedure
- Pricing Design Center System Requirements
- Pre-Installation Tasks for the PDC Software Upgrade

About Upgrading PDC

You can upgrade PDC by using GUI or in the silent mode. Upgrading PDC in the silent mode lets you perform a noninteractive upgrade of PDC. You can use the silent mode to upgrade PDC quickly.

Note:

When upgrading to PDC 12.0 or 12.0 patch sets, see the discussion about supported PDC Upgrades in BRM Compatibility Matrix.

PDC upgrade must be performed by a user who has permissions to write to the oraInventory directory and the MW_Home/user_projects/domains directory, where MW_Home is the directory in which the Oracle Middleware components are installed.

For upgrade instructions, see the following sections:

- Upgrading PDC by Using GUI
- Upgrading PDC in Silent Mode

Upgrading PDC by Using GUI

The steps for upgrading PDC by using GUI depend on the PDC components you choose to upgrade:

- To upgrade the existing PDC and BRM Integration Pack installed on the same machine, select the Upgrade-Complete installation option.
  See “Upgrading PDC and BRM Integration Pack” for more information.
• To upgrade only PDC, select the Pricing Design Center Upgrade installation option.
  This option upgrades only PDC to the 12.0 release.
  See "Upgrading PDC" for more information.
• To upgrade only BRM Integration Pack, select the BRM Integration Pack Upgrade installation option.
  This option upgrades only BRM Integration Pack to the 12.0 release.
  See "Upgrading BRM Integration Pack" for more information.

Upgrading PDC and BRM Integration Pack

To upgrade an existing PDC and BRM Integration Pack installation:

1. Obtain the PDC software. See “Obtaining the PDC Software”.
2. Start the Oracle WebLogic Server domain administration server or the WebLogic Server domain managed server on which the existing PDC installation was deployed, if it is not already started.
3. Ensure that the PDC database is running.

   Note:

   Ensure that the Oracle Database server is in Running state. The Installer connects to the Oracle Database server to verify the information you entered is valid.

4. Go to the temp_dir directory, and run one of the following commands:
   • To start the GUI installer:

   ```
   Java_home/bin/java -jar jarfile
   ```

   where:

   `Java_home` is the directory in which you installed the latest supported Java version.

   `jarfile` is `pdcserver-12.0.0.0.0_generic.jar` for PDC 12.0 and `pdcserver-12.0.0.x.0_generic_full.jar` for PDC 12.0 patch sets. For example, `pdcserver-12.0.0.1.0_generic_full.jar` for PDC 12.0 Patch Set 1 and `pdcserver-12.0.0.2.0_generic_full.jar` for PDC 12.0 Patch Set 2.

   • To start the GUI installer and install PDC using the oracleInventory directory in a different location:

   ```
   Java_home/bin/java -jar jarfile -invPtrLoc FilePath/oraInst.loc
   ```

   where `FilePath` is the path to the directory in which the `oraInst.loc` file is located.

   • To start the GUI installer and create a silent installer response file during the installation:

   ```
   Java_home/bin/java -jar jarfile -record -destinationFile path
   ```
where path is the response file location and name.

The Welcome screen appears.

5. Click Next.

The Installation Location screen appears.

6. Enter the full path or browse to the directory in which you want to install PDC and BRM Integration Pack for PDC 12.0 or the 12.0 patch set.

**Note:**

Ensure that you do not enter the path to the same directory in which PDC 11.1 or 11.2 is installed. You can install PDC 12.0 or the 12.0 patch set in a different directory on the same machine.

7. Click Next.

The Select Installation Type screen appears.

8. Select Upgrade Complete and click Next.

The WebLogic Administration Server Connection screen appears.

9. Click Next.

10. Enter the WebLogic Server domain (the domain on which you deployed the existing PDC installation) information.
   a. In the Host Name field, enter the IP address or the host name of the machine on which the WebLogic Server domain is configured.
   b. In the Port Number field, enter the port number assigned to the WebLogic Server domain administration server.
   c. In the User Name field, enter the WebLogic Server domain administrator user name.
   d. In the Password field, enter the WebLogic Server domain administrator user password.
   e. In the WebLogic Home field, enter the path to the directory in which the WebLogic Server software is installed. For example, MW_Home/wlsserver.
   f. Do one of the following.
   
   If you do not want to enable secure communication for PDC, deselect the Use SSL? check box.
   
   To enable secure communication for PDC, leave the Use SSL? check box selected, and, in the KeyStore Location field, enter the path of the client-side keystore file generated from the exported public certificate using the keytool utility.
   
   For more information, see "Configuring SSL for the WebLogic Server Domain".

11. Click Next.

The WebLogic Server screen appears.

12. Do one of the following:
• If the existing PDC installation is deployed on the WebLogic Server domain administration server, select a WebLogic Server domain administration server from the list.

• If the existing PDC installation is deployed on the WebLogic Server domain managed server, select a WebLogic Server domain managed server from the list.

13. Enter the following details for the PDC wallet:
   a. In the **Wallet Location** field, enter the path to the directory in which the PDC wallet is located or is to be installed.
   b. In the **Wallet Password** field, enter the PDC wallet password.
   c. In the **Confirm Wallet Password** field, enter the PDC wallet password again.

14. Click **Next**.
    The Pricing Design Center Schema screen appears.

15. Enter the existing PDC schema information.
   a. In the **Host Name** field, enter the IP address or the host name of the machine on which the PDC database is configured.
   b. In the **Port Number** field, enter the port number assigned to the PDC database service.

   **Note:**
   If you are upgrading to PDC 12.0 patch set and the database is SSL-enabled, enter the SSL port number in the **Port Number** field.

   c. In the **User Name** field, enter the PDC schema user name.
   d. In the **Password** field, enter the PDC schema user password.
   e. In the **Service Name** field, enter the name of the PDC database service.

   **Note:**
   Ensure that the Oracle Database server is in Running state. The Installer connects to the Oracle Database server to verify that the information you entered is valid.

   f. (From PDC 12.0 Patch Set 2 only) Do one of the following:
      If you do not want to enable secure communication for the PDC database, leave the **SSL Enabled** check box deselected. This is deselected by default.
      To enable secure communication for the PDC database, select the **SSL Enabled** check box.

   g. If you selected **SSL Enabled**, do the following:
      In the **Wallet Location** field, enter the full path or browse to the directory in which the database wallet is located. For example, `wallet_home/cwallet.sso` or `wallet_home/ewallet.p12`.
From the **Wallet Type** list, select the wallet type.

In the **Wallet Password** field, enter the database wallet password if the wallet type is **PKCS12**.

16. Click **Next**.

The Pricing Design Center System User screen appears.

17. Enter the existing PDC user information.

   a. In the **User Name** field, enter the name of the PDC user that you created during the PDC 11.1 or 11.2 installation.

   b. In the **Password** field, enter the password of the PDC user that you created during the PDC 11.1 or 11.2 installation.

18. Do one of the following:

   - If you selected Oracle Communications Billing and Revenue Management Elastic Charging Engine (ECE) for usage rating during the PDC 11.1 or 11.2 installation, select **Elastic Charging Engine**.

   - If you selected BRM real-time rating and batch rating engines for usage rating during the PDC 11.1 or 11.2 installation, select **Realtime Rating and Batch Rating Engines**.

   **Note:**

   If you are using real-time and batch rating engines for usage rating, and you want to use ECE for usage rating, after the PDC upgrade, install PDC with ECE and then migrate the pricing data from the source PDC database into the target PDC database.

   See the discussion about migrating PDC pricing data to PDC With ECE in *BRM Upgrade Guide*.

19. Click **Next**.

   The Migration Option screen appears.

20. Do one of the following:

   **Note:**

   Ensure that you select the same option that you selected during the PDC 11.1 or 11.2 installation.

   - If you do not want to install the migration utility, select **Do not install Migration Utility**.

   - To migrate the BRM real-time and batch rating engines pricing data to a PDC system that supports BRM real-time and batch rating engines, select **Migrate RRE and BRE Pricing Data to PDC**.

   - To migrate the BRM real-time and batch rating engines pricing data to a PDC system that supports ECE, select **Migrate RRE and BRE Pricing Data to PDC with ECE**.
To migrate the PDC pricing data to a PDC system that supports ECE, select **Migrate PDC Pricing Data to PDC with ECE**.

21. Click **Next**.

   The Pricing Design Center WebLogic Server Connection screen appears.

22. Enter the WebLogic Server domain (the domain on which you deployed the existing PDC installation) information.
   
   a. In the **Host Name** field, enter the IP address or the host name of the machine on which the WebLogic Server domain is configured.
   
   b. In the **Port Number** field, enter the port number assigned to the WebLogic Server domain administration server.

   ![Note:]

   If you selected a WebLogic Server domain managed server in step 12, enter the port number to the managed server.

   c. In the **User Name** field, enter the WebLogic Server domain administrator user name.
   
   d. In the **Password** field, enter the WebLogic Server domain administrator password.
   
   e. In the **WebLogic Home** field, enter the path to the directory in which the WebLogic Server software is installed.

   f. Do one of the following:
      
      If you do not want to enable secure communication for PDC, deselect the **Use SSL?** check box.

      To enable secure communication for PDC, leave the **Use SSL?** check box selected, and, in the **Keystore Location** field, enter the path of the client-side keystore file generated from the exported public certificate using the **keytool** utility.

      For more information, see "Configuring SSL for the WebLogic Server Domain".

23. Click **Next**.

   The BRM Integration Pack Wallet Location and Password screen appears.

24. Enter the following details for the BRM Integration Pack wallet:
   
   a. In the **Wallet Location** field, enter the path to the directory in which the BRM Integration Pack wallet is located or is to be installed.
   
   b. In the **Wallet Password** field, enter the BRM Integration Pack wallet password.
   
   c. In the **Confirm Wallet Password** field, enter the BRM Integration Pack wallet password again.

25. Click **Next**.

   The BRM Server Location screen appears.

26. Enter the existing BRM batch and real-time rating engine details.
   
   a. In the **BRM** field, enter the path to the directory in which BRM is installed.
b. In the **BRM Pipeline** field, enter the path to the directory in which Pipeline Manager is installed.

c. In the **Perl Home** field, enter the path to the directory in which the Perl libraries are installed.

27. Click **Next**.

The BRM Pipeline Manager Database Connection Screen appears.

28. Enter the following information required to connect to the existing Pipeline Manager database:

   a. In the **Host Name** field, enter the IP address or the host name of the machine on which the Pipeline Manager database is configured.

   b. In the **Port Number** field, enter the port number assigned to the Pipeline Manager database service.

   ![Note:
   If you are installing PDC 12.0 patch set and the database is SSL-enabled, enter the SSL port number in the Port Number field.

   c. In the **User Name** field, enter the Pipeline Manager database schema user name.

   d. In the **Password** field, enter the Pipeline Manager database schema password.

   e. In the **Service Name** field, enter the name of the Pipeline Manager database service.

   f. (From PDC 12.0 Patch Set 2 only) Do one of the following:

      If you do not want to enable secure communication for the Pipeline Manager database, leave the **SSL Enabled** check box deselected. This is deselected by default.

      To enable secure communication for the Pipeline Manager database, select the **SSL Enabled** check box.

   g. If you selected **SSL Enabled**, do the following:

      In the **Wallet Location** field, enter the full path or browse to the directory in which the database wallet is located. For example, `wallet_home/cwallet.sso` or `wallet_home/ewallet.p12`.

      From the **Wallet Type** list, select the wallet type.

      In the **Wallet Password** field, enter the database wallet password if the wallet type is **PKCS12**.

29. Click **Next**.

The Transformation Cross-Reference Schema screen appears.

30. Enter the existing transformation cross-reference schema information.

   a. In the **Host Name** field, enter the IP address or the host name of the machine on which the transformation cross-reference database is configured.
b. In the **Port Number** field, enter the port number assigned to the transformation cross-reference database service.

---

**Note:**

If you are installing PDC 12.0 patch set and the database is SSL-enabled, enter the SSL port number in the **Port Number** field.

c. In the **User Name** field, enter the name of the transformation cross-reference schema user that you created during the PDC 11.1 or 11.2 installation.

d. In the **Password** field, enter the password of the transformation cross-reference schema user that you created during the PDC 11.1 or 11.2 installation.

e. In the **Service Name** field, enter the name of the transformation cross-reference database service.

f. (From PDC 12.0 Patch Set 2 only) Do one of the following:

   - If you do not want to enable secure communication for the transformation cross-reference database, leave the **SSL Enabled** check box deselected. This is deselected by default.
   
   To enable secure communication for the transformation cross-reference database, select the **SSL Enabled** check box.

   g. If you selected **SSL Enabled**, do the following:

      - In the **Wallet Location** field, enter the full path or browse to the directory in which the database wallet is located. For example, `wallet_home/cwallet.sso` or `wallet_home/ewallet.p12`.
      
      From the **Wallet Type** list, select the wallet type.
      
      In the **Wallet Password** field, enter the database wallet password if the wallet type is **PKCS12**.

31. Click **Next**.

   The Pricing Design Center System User screen appears.

32. Enter the existing PDC user information.

   a. In the **User Name** field, enter the name of the PDC user that you created during the PDC 11.1 or 11.2 installation.
   
   b. In the **Password** field, enter the password of the PDC user that you created during the PDC 11.1 or 11.2 installation.

33. Click **Next**.

   The Migration Cross-Reference Schema screen appears. If you selected **Do not install Migration Utility** in step 20, proceed to step 37.

34. Enter the migration cross-reference schema information.

   a. In the **Host Name** field, enter the IP address or the host name of the machine on which the migration cross-reference database is configured.
   
   b. In the **Port Number** field, enter the port number assigned to the migration cross-reference database service.
c. In the **User Name** field, enter the name of the migration cross-reference schema user that you created during the PDC 11.1 installation.

d. In the **Password** field, enter the password of the migration cross-reference schema user that you created during the PDC 11.1 installation.

e. In the **Service Name** field, enter the name of the migration cross-reference database service.

f. (From PDC 12.0 Patch Set 2 only) Do one of the following:

   If you do not want to enable secure communication for the migration cross-reference database, leave the **SSL Enabled** check box deselected. This is deselected by default.

   To enable secure communication for the migration cross-reference database, select the **SSL Enabled** check box.

g. If you selected **SSL Enabled**, do the following:

   In the **Wallet Location** field, enter the full path or browse to the directory in which the database wallet is located. For example, `wallet_home/cwallet.sso` or `wallet_home/ewallet.p12`.

   From the **Wallet Type** list, select the wallet type.

   In the **Wallet Password** field, enter the database wallet password if the wallet type is **PKCS12**.

35. Click **Next**.

   The Migration User screen appears.

36. Enter the migration user information.

   a. In the **User Name** field, enter the migration user name.

   b. In the **Password** field, enter the migration user password.

37. Click **Next**.

   The Installation Summary screen appears.

38. Review the selections you have made in the preceding screens, and click **Install**.

   The Installation Progress screen appears.

   **Note:**

   After the installation begins, clicking **Stop installation** stops the installation process, but the files that are already copied are not removed.

39. When the installation is done, click **Next**, the Installation Complete screen appears.

   Note down the provided URL. You use this URL to access PDC.

40. Click **Finish** to complete and exit.

   See "Verifying the Pricing Design Center Installation" for information on verifying the successful installation of PDC.

   See "About Installation Logs" for information on PDC Installer logs.
To upgrade an existing PDC 11.1 or 11.2 installation to PDC 12.0 or 12.0 patch set:

1. Obtain the PDC software. See "Obtaining the PDC Software".

2. Start the Oracle WebLogic Server domain administration server or the WebLogic Server domain managed server on which you PDC 11.1 was deployed, if it is not already started.

3. Ensure that the PDC database is running.

4. Go to the temp_dir directory, and run one of the following commands:
   - To start the GUI installer:
     ```
     Java_home/bin/java -jar jarfile
     ```
     where:
     - **Java_home** is the directory in which you installed the latest supported Java version.
     - **jarfile** is `pdcserver-12.0.0.0.0_generic.jar` for PDC 12.0 and `pdcserver-12.0.0.x.0_generic_full.jar` for PDC 12.0 patch sets. For example, `pdcserver-12.0.0.1.0_generic_full.jar` for PDC 12.0 Patch Set 1 and `pdcserver-12.0.0.2.0_generic_full.jar` for PDC 12.0 Patch Set 2.
   - To start the GUI installer and install PDC using the orainventory directory in a different location:
     ```
     Java_home/bin/java -jar jarfile -invPtrLoc FilePath/oraInst.loc
     ```
     where **FilePath** is the path to the directory in which the `oraInst.loc` file is located.
   - To start the GUI installer and create a silent installer response file during the installation:
     ```
     Java_home/bin/java -jar jarfile -record -destinationFile path
     ```
     where **path** is the response file location and name.

5. Click **Next**.

The Welcome screen appears.

6. Enter the full path or browse to the directory in which you want to install PDC 12.0.
7. Click Next.
   The Select Installation Type screen appears.
8. Select Pricing Design Center Upgrade and click Next.
   The WebLogic Administration Server Connection screen appears.
9. Click Next.
10. Enter the WebLogic Server domain (the domain on which you deployed the existing PDC installation) information.
    a. In the Host Name field, enter the IP address or the host name of the machine on which the WebLogic Server domain is configured.
    b. In the Port Number field, enter the port number assigned to the WebLogic Server domain administration server.
    c. In the User Name field, enter the WebLogic Server domain administrator user name.
    d. In the Password field, enter the WebLogic Server domain administrator user password.
    e. In the WebLogic Home field, enter the path to the directory in which the WebLogic Server software is installed. For example, MW_Home/wlserver.
    f. Do one of the following.
       If you do not want to enable secure communication for PDC, deselect the Use SSL? check box.
       To enable secure communication for PDC, leave the Use SSL? check box selected, and, in the KeyStore Location field, enter the path of the client-side keystore file generated from the exported public certificate using the keytool utility.
       For more information, see "Configuring SSL for the WebLogic Server Domain".
11. Enter the following details for the PDC wallet:
    a. In the Wallet Location field, enter the path to the directory in which the PDC wallet is located or is to be installed.
    b. In the Wallet Password field, enter the PDC wallet password.
    c. In the Confirm Wallet Password field, enter the PDC wallet password again.
12. Click Next.
   The WebLogic Server screen appears.
13. Do one of the following:
    • If the existing PDC installation is deployed on the WebLogic Server domain administration server, select a WebLogic Server domain administration server from the list.
• If the existing PDC installation is deployed on the WebLogic Server domain managed server, select a WebLogic Server domain managed server from the list.

14. Click **Next**.

The Pricing Design Center Schema screen appears.

15. Enter the existing PDC schema information:
   a. In the **Host Name** field, enter the IP address or the host name of the machine on which the PDC database is configured.
   b. In the **Port Number** field, enter the port number assigned to the PDC database service.

   **Note:**
   If you are upgrading to PDC 12.0 patch set and the database is SSL-enabled, enter the SSL port number in the **Port Number** field.

   c. In the **User Name** field, enter the PDC schema user name.
   d. In the **Password** field, enter the PDC schema user password.
   e. In the **Service Name** field, enter the name of the PDC database service.

   **Note:**
   Ensure that the Oracle Database server is in Running state. The Installer connects to the Oracle Database server to verify that the information you entered is valid.

   f. (From PDC 12.0 Patch Set 2 only) Do one of the following:
      If you do not want to enable secure communication for the PDC database, leave the **SSL Enabled** check box deselected. This is deselected by default.
      To enable secure communication for the PDC database, select the **SSL Enabled** check box.
   g. If you selected **SSL Enabled**, do the following:
      In the **Wallet Location** field, enter the full path or browse to the directory in which the database wallet is located. For example, `wallet_home/cwallet.sso` or `wallet_home/ewallet.p12`.
      From the **Wallet Type** list, select the wallet type.
      In the **Wallet Password** field, enter the database wallet password if the wallet type is **PKCS12**.

16. Click **Next**.

The Pricing Design Center System User screen appears.

17. Enter the existing PDC user information.
   a. In the **User Name** field, enter the name of the PDC user that you created during the PDC 11.1 installation.
b. In the **Password** field, enter the password of the PDC user that you created during the PDC 11.1 installation.

c. In the **Confirm Password** field, enter the PDC user password again.

18. Do one of the following:

- If you selected Oracle Communications Billing and Revenue Management Elastic Charging Engine (ECE) for usage rating during the PDC 11.1 installation, select **Elastic Charging Engine**.

- If you selected BRM real-time rating and batch rating engines for usage rating during the PDC 11.1 installation, select **Realtime Rating and Batch Rating Engines**.

> **Note:**

If you are using real-time and batch rating engines for usage rating, and you want to use ECE for usage rating, after the PDC upgrade, install PDC with ECE and then migrate the pricing data from the source PDC database into the target PDC database.

See the discussion about migrating PDC pricing data to PDC With ECE in *BRM Upgrade Guide*.

19. Click **Next**.

The Installation Summary screen appears.

20. Review the selections you have made in the preceding screens, and click **Install**.

The Installation Progress screen appears.

> **Note:**

After the installation begins, clicking **Stop installation** stops the installation process, but the files that are already copied are not removed.

21. When the installation is done, click **Next**, the Installation Complete screen appears.

Note down the provided URL. You use this URL to access PDC.

22. Click **Finish** to complete and exit.

See "Verifying the Pricing Design Center Installation" for information on verifying the successful installation of PDC.

See "About Installation Logs" for information on PDC Installer logs.
Upgrading BRM Integration Pack

Note:
The BRM Integration Pack installation must be performed as the UNIX user who installed BRM; for example, pin_user.

To upgrade BRM Integration Pack:

1. Obtain the PDC software. See "Obtaining the PDC Software".

2. Start the Oracle WebLogic Server domain administration server or the WebLogic Server domain managed server on which you PDC 11.1 was deployed, if it is not already started.

3. Verify that you are able to connect to the BRM database.

4. Go to the temp_dir directory, and run one of the following commands:
   - To start the GUI installer:
     ```bash
     Java_home/bin/java -jar jarfile
     ```
     where:
     - `Java_home` is the directory in which you installed the latest supported Java version.
     - `jarfile` is `pdcserver-12.0.0.0_generic.jar` for PDC 12.0 and `pdcserver-12.0.0.x_generic_full.jar` for PDC 12.0 patch sets. For example, `pdcserver-12.0.0.1.0_generic_full.jar` for PDC 12.0 Patch Set 1 and `pdcserver-12.0.0.2.0_generic_full.jar` for PDC 12.0 Patch Set 2.
   - To start the GUI installer and install PDC using the oraInventory directory in a different location:
     ```bash
     Java_home/bin/java -jar jarfile -invPtrLoc FilePath/oraInst.loc
     ```
     where `FilePath` is the path to the directory in which the `oraInst.loc` file is located.
   - To start the GUI installer and create a silent installer response file during the installation:
     ```bash
     Java_home/bin/java -jar jarfile -record -destinationFile path
     ```
     where `path` is the response file location and name.

      The Welcome screen appears.

5. Click Next.

   The Installation Location screen appears.

6. Enter the full path or browse to the directory in which you want to install BRM Integration Pack for the PDC 12.0 installation.
7. Click **Next**.
   The Select Installation Type screen appears.
8. Select **BRM Integration Pack Upgrade** and click **Next**.
   The Migration Option screen appears.
9. Do one of the following:

   **Note:**
   Ensure that you select the same option that you selected during the PDC 11.1 installation.

   • If you do not want to migrate data, select **Do not install Migration Utility**.
   • To migrate the BRM real-time and batch rating engines pricing data to a PDC system that supports BRM real-time and batch rating engines, select **Migrate RRE and BRE Pricing Data to PDC**.
   • To migrate the BRM real-time and batch rating engines pricing data to a PDC system that supports ECE, select **Migrate RRE and BRE Pricing Data to PDC with ECE**.
   • To migrate the PDC pricing data to a PDC system that supports ECE, select **Migrate PDC Pricing Data to PDC with ECE**.
10. Click **Next**.
    The Pricing Design Center WebLogic Server Connection screen appears.
11. Enter the WebLogic Server domain (the domain on which you deployed the existing PDC installation) information.
    a. In the **Host Name** field, enter the IP address or the host name of the machine on which the WebLogic Server domain is configured.
    b. In the **Port Number** field, enter the port number assigned to the WebLogic Server domain administration server.

   **Note:**
   If you selected a WebLogic Server domain managed server during the PDC installation, enter the port number of the managed server.
    c. In the **User Name** field, enter the WebLogic Server domain administrator user name.
    d. In the **Password** field, enter the WebLogic Server domain administrator password.
e. Do one of the following:

If you do not want to enable secure communication for PDC, deselect the Use SSL? check box.

To enable secure communication for PDC, leave the Use SSL? check box selected, and, in the Keystore Location field, enter the path of the client-side keystore file generated from the exported public certificate using the keytool utility.

For more information, see "Configuring SSL for the WebLogic Server Domain".

12. Click Next.

The BRM Server Location screen appears.

13. Enter the existing BRM batch and real-time rating engine details.

a. In the BRM field, enter the path to the directory in which BRM is installed.

b. In the BRM Pipeline field, enter the path to the directory in which Pipeline Manager is installed.

c. In the Perl Home field, enter the path to the directory in which the Perl libraries are installed.

14. Click Next.

The BRM Pipeline Manager Database Connection Screen appears.

15. Enter the following information required to connect to the existing Pipeline Manager database:

a. In the Host Name field, enter the IP address or the host name of the machine on which the Pipeline Manager database is configured.

b. In the Port Number field, enter the port number assigned to the Pipeline Manager database service.

c. In the User Name field, enter the Pipeline Manager database schema user name.

d. In the Password field, enter the Pipeline Manager database schema password.

e. In the Service Name field, enter the name of the Pipeline Manager database service.

f. (From PDC 12.0 Patch Set 2 only) Do one of the following:

If you do not want to enable secure communication for the Pipeline Manager database, leave the SSL Enabled check box deselected. This is deselected by default.

To enable secure communication for the Pipeline Manager database, select the SSL Enabled check box.

g. If you selected SSL Enabled, do the following:
In the **Wallet Location** field, enter the full path or browse to the directory in which the database wallet is located. For example, `wallet_home/cwallet.sso` or `wallet_home/ewallet.p12`.

From the **Wallet Type** list, select the wallet type.

In the **Wallet Password** field, enter the database wallet password if the wallet type is **PKCS12**.

16. Click Next.

The Transformation Cross-Reference Schema screen appears.

17. Enter the existing transformation cross-reference schema information.

   a. In the **Host Name** field, enter the IP address or the host name of the machine on which the transformation cross-reference database is configured.

   b. In the **Port Number** field, enter the port number assigned to the transformation cross-reference database service.

   ```
   **Note:**
   If you are installing PDC 12.0 patch set and the database is SSL-enabled, enter the SSL port number in the **Port Number** field.
   ```

   c. In the **User Name** field, enter the name of the transformation cross-reference schema user that you created during the PDC 11.1 or 11.2 installation.

   d. In the **Password** field, enter the password of the transformation cross-reference schema user that you created during the PDC 11.1 or 11.2 installation.

   e. In the **Service Name** field, enter the name of the transformation cross-reference database service.

   f. (From PDC 12.0 Patch Set 2 only) Do one of the following:

      If you do not want to enable secure communication for the transformation cross-reference database, leave the **SSL Enabled** check box deselected. This is deselected by default.

      To enable secure communication for the transformation cross-reference database, select the **SSL Enabled** check box.

   g. If you selected **SSL Enabled**, do the following:

      In the **Wallet Location** field, enter the full path or browse to the directory in which the database wallet is located. For example, `wallet_home/cwallet.sso` or `wallet_home/ewallet.p12`.

      From the **Wallet Type** list, select the wallet type.

      In the **Wallet Password** field, enter the database wallet password if the wallet type is **PKCS12**.

18. Click Next.

The Pricing Design Center System User screen appears.

19. Enter the existing PDC user information.
a. In the **User Name** field, enter the name of the PDC user that you created during the PDC 11.1 installation.

b. In the **Password** field, enter the password of the PDC user that you created during the PDC 11.1 installation.

20. Click **Next**.

The Migration Cross-Reference Schema screen appears. If you selected **Do not install Migration Utility** in 9, proceed to step 24.

21. Enter the migration cross-reference schema information.

a. In the **Host Name** field, enter the IP address or the host name of the machine on which the migration cross-reference database is configured.

b. In the **Port Number** field, enter the port number assigned to the migration cross-reference database service.

c. In the **User Name** field, enter the name of the migration cross-reference schema user that you created during the PDC 11.1 installation.

d. In the **Password** field, enter the password of the migration cross-reference schema user that you created during the PDC 11.1 installation.

e. In the **Service Name** field, enter the name of the migration cross-reference database service.

f. (From PDC 12.0 Patch Set 2 only) Do one of the following:

   If you do not want to enable secure communication for the migration cross-reference database, leave the **SSL Enabled** check box deselected. This is deselected by default.

   To enable secure communication for the migration cross-reference database, select the **SSL Enabled** check box.

   g. If you selected **SSL Enabled**, do the following:

      In the **Wallet Location** field, enter the full path or browse to the directory in which the database wallet is located. For example, `wallet_home/cwallet.sso` or `wallet_home/ewallet.p12`.

      From the **Wallet Type** list, select the wallet type.

      In the **Wallet Password** field, enter the database wallet password if the wallet type is PKCS12.

22. Click **Next**.

The Migration User screen appears.

23. Enter the migration user information.

a. In the **User Name** field, enter the name of the migration user that you created during the PDC 11.1 installation.

b. In the **Password** field, enter the password of the migration user that you created during the PDC 11.1 installation.

24. Click **Next**.

The Installation Summary screen appears.

25. Review the selections you have made in the preceding screens, and click **Install**.

The Installation Progress screen appears.
Note:
After the installation begins, clicking Stop installation stops the installation process, but the files that are already copied are not removed.

26. When the installation is done, click Next, the Installation Complete screen appears.

Note down the provided URL. You use this URL to access PDC.

27. Click Finish to complete and exit.

See "Verifying the Pricing Design Center Installation" for information on verifying the successful installation of BRM Integration Pack.

See "About Installation Logs" for information on PDC Installer logs.

Upgrading PDC in Silent Mode

Use silent install mode when you are upgrading PDC using the same configuration repeatedly. Silent install mode does not use the GUI and it runs in the background.

In this mode, you use a response file template that contains a predefined set of values to upgrade PDC and BRM Integration Pack. You can generate a response file that contains the parameters and values during the PDC GUI installation.

Creating a Response File

To create a response file:

1. Create the response file by doing one of the following:
   - Create a copy of the response file that was generated during the GUI upgrade. See "Upgrading PDC and BRM Integration Pack" for more information.
   - Create a response file using the template by running the following command:

     ```bash
     Java_home/bin/java -jar jarfile -getResponseFileTemplates
     ```

     where:
     - `Java_home` is the directory in which you installed the latest supported Java version.
     - `jarfile` is `pdcserver-12.0.0.0.0.generic.jar` for PDC 12.0 and `pdcserver-12.0.0.x.0.generic_full.jar` for PDC 12.0 patch sets. For example, `pdcserver-12.0.0.1.0.generic_full.jar` for PDC 12.0 Patch Set 1 and `pdcserver-12.0.0.2.0.generic_full.jar` for PDC 12.0 Patch Set 2.
The following response file is created with the default values.

– oracle.communications.pdc.PricingDesignCenter.rsp

Use this file template if you are installing PDC and BRM Integration Pack.

You can create as many response files as needed.

2. Open the file in a text editor.

3. Modify the response file you copied by specifying the key-value information for the parameters you want in your installation.

Note:

• The response file template contains guidelines and examples on how to enter the values in the parameters.

• The Installer treats incorrect context, format, and type values in a response file as if no value were specified.

4. Save and close the response file.

Upgrading PDC and BRM Integration Pack in Silent Mode

To upgrade PDC in silent mode:

1. Create the response file. See "Creating a Response File".

2. Copy the response file you created to the machine on which you run the silent installation.

3. On the machine on which you run the silent installation, go to the temp_dir directory to which you have downloaded the PDC server software pack, and run the following command:

   Java_home/bin/java -jar jarfile -debug -invPtrLoc Inventory_home/oraInventory/oraInst.loc [parameter=value] -responseFile path -silent

where:

• Java_home is the directory in which you installed the latest supported Java version.

• jarfile is pdcserver-12.0.0.0.0_generic.jar for PDC 12.0 and pdcserver-12.0.0.x_0_generic_full.jar for PDC 12.0 patch sets. For example, pdcserver-12.0.0.1.0_generic_full.jar for PDC 12.0 Patch Set 1 and pdcserver-12.0.0.2.0_generic_full.jar for PDC 12.0 Patch Set 2.

• parameter is the name of an installation parameter.

• value is the value of the installation parameter.

• path is the absolute path to the response file.

For example:

Java_home/bin/java -jar pdcserver-12.0.0.2.0_generic_full.jar -debug -invPtrLoc Inventory_home/oraInventory/oraInst.loc INSTALL_TYPE=Complete -responseFile /tmp/oracle.communications.pdc.PricingDesignCenter.rsp -silent
To upgrade BRM Integration Pack in silent mode:

1. Create the response file. See "Creating a Response File".
2. Copy the response file you created to the machine on which you run the silent installation.
3. On the machine on which you run the silent installation, go to the temp_dir directory to which you have downloaded the BRM Integration Pack, and run the following command:

   ```
   Java_home/bin/java -jar jarfile -debug -invPtrLoc Inventory_home/oraInventory/oraInst.loc [parameter=value] -responseFile path -silent
   ```

   where:
   
   - `Java_home` is the directory in which you installed the latest supported Java version.
   - `jarfile` is `pdcserver-12.0.0.0.0_generic.jar` for PDC 12.0 and `pdcserver-12.0.0.x.0_Generic_full.jar` for PDC 12.0 patch sets. For example, `pdcserver-12.0.0.1.0_Generic_full.jar` for PDC 12.0 Patch Set 1 and `pdcserver-12.0.0.2.0_Generic_full.jar` for PDC 12.0 Patch Set 2.
   - `parameter` is the name of an installation parameter.
   - `value` is the value of the installation parameter.
   - `path` is the absolute path to the response file.

   For example:

   ```
   Java_home/bin/java -jar pdcserver-12.0.0.2.0_Generic_full.jar -debug -invPtrLoc Inventory_home/oraInventory/oraInst.loc INSTALL_TYPE=Complete -responseFile /tmp/oracle.communications.pdc.PricingDesignCenter.rsp -silent
   ```

   The upgrade runs silently in the background.

   See "Verifying the Pricing Design Center Installation" for information on verifying the successful installation of PDC and BRM Integration Pack.

   See "About Installation Logs" for information on the PDC Installer logs.

---

**Restoring the Previous Installation**

If your upgrade is not successful, you must restore your system to the previous installation.

To restore the previous PDC 11.1 or 11.2 installation:

1. Restore the WebLogic server `domains` directory. Use the `domains` directory that you backed up before the patch installation to replace the following directory:

   ```
   MW_home/user_projects/domains
   ```

2. Restore the `oraInventory` directory. Use the `oraInventory` directory that you backed up before you installed PDC 12.0 or 12.0 Patch Set 1 to restore the `oraInventory` directory.

3. Restore the PDC database schema.

4. Restore the transformation cross-reference database schema.
5. Restore the migration cross-reference database schema.
Installing the Patch Set on an Existing Pricing Design Center Installation

This chapter describes how to install Oracle Communications Pricing Design Center (PDC) 12.0 Patch Set 1 on an existing PDC 12.0 installation. Before installing PDC12.0 Patch Set 1, read the following:

- Overview of the PDC Upgrade Procedure
- Pricing Design Center System Requirements
- Pre-Installation Tasks for the PDC Patch Set Installation

Installing the PDC and BRM Integration Pack Patch Set

**Note:**

If you have an existing installation of PDC integrated with Oracle Communications Billing and Revenue Management (BRM) and BRM Elastic Charging Engine (ECE), you must upgrade ECE and BRM before upgrading the PDC installation. See the discussion about the overview of upgrading to ECE 11.3 Patch Set 8 in *BRM Elastic Charging Engine Installation Guide* and installing BRM 12.0 Patch Set 1 in *BRM 12.0 Patch Set Installation Guide*.

To install the PDC and BRM Integration Pack patch set on an existing PDC 12.0 installation:

1. On the server on which PDC 12.0 is installed, create a temporary directory (*temp_dir*).
2. Go to the My Oracle Support Web site:
   
   [http://support.oracle.com](http://support.oracle.com)
3. Sign in with your user name and password.
4. Click the **Patches & Updates** tab.
5. From the list, select **Patch Name or Number**.
6. In the text field, enter the **PatchNumber**, where **PatchNumber** is:
   
   - **28630301** for Patch Set 1
   - **30094516** for Patch Set 2
7. Click **Search**.
   
   The Patch Search page appears.
8. Click the **Patch Name or Number**.
The patch details appear.

9. From the **Platform** list, select the **platform** and click **Download**, where **platform** is **linux** or **solaris**.

   The File Download dialog box appears.

10. Download the appropriate **pPatchNumber_PatchVersion_Generic.zip** file to **temp_dir**, where **PatchVersion** is the release number. For example, it is **120010** for PDC 12.0 Patch Set 1 and **120020** for PDC 12.0 Patch Set 2.


   The zip file includes the **pdcserver-12.0.0.x.0_generic.jar** file. For example, **pdcserver-12.0.0.1.0_generic.jar** for PDC 12.0 Patch Set 1 and **pdcserver-12.0.0.2.0_generic.jar** for PDC 12.0 Patch Set 2.

12. Start the Oracle WebLogic Server domain administration server or the WebLogic Server domain managed server on which PDC 12.0 was deployed, if it is not already started.

13. Ensure that the PDC database is running.

   **Note:**
   
   Ensure that the Oracle Database server is in Running state. The Installer connects to the Oracle Database server to verify the information you entered is valid.

   Take a backup of PDC database before proceeding with the patch set installation.

14. Go to the **temp_dir** directory, and run one of the following commands:

   - To start the GUI installer:
     
     ```bash
     Java_home/bin/java -jar pdcserver-12.0.0.x.0_generic.jar
     ```

     where:

     - **Java_home** is the directory in which you installed the latest supported Java version.

     - **x** is the PDC patch set version. For example, 1 is the version for PDC 12.0 Patch Set 1 and 2 is the version for PDC 12.0 Patch Set 2.

   - To start the GUI installer and create a silent installer response file during the installation:
     
     ```bash
     Java_home/bin/java -jar pdcserver-12.0.0.x.0_generic.jar -record -destinationFile path
     ```

     where:

     - **path** is the response file location and name.

     - **x** is the PDC patch set version. For example, 1 is the version for PDC 12.0 Patch Set 1 and 2 is the version for PDC 12.0 Patch Set 2.

   The Welcome screen appears.

15. Click **Next**.
The Installation Location screen appears.

16. Enter the full path to the directory in which you installed PDC 12.0.

17. Click Next.

The PDC Wallet Details screen appears.

18. Enter the following information required for accessing the PDC wallet:
   a. In the Wallet Location field, enter the path or browse to the directory in which the PDC wallet is located.
   b. In the Wallet Password field, enter the PDC wallet password.

19. Click Next.

The WebLogic Administration Server Connection screen appears.

20. Enter the WebLogic Server domain information.
   a. In the Host Name field, enter the IP address or the host name of the machine on which the WebLogic Server domain is configured.
   b. In the Port Number field, enter the port number assigned to the WebLogic Server domain administration server.
   c. In the User Name field, enter the WebLogic Server domain administrator user name.
   d. In the Password field, enter the WebLogic Server domain administrator user password.
   e. In the WebLogic Home field, enter the path to the directory in which the WebLogic Server software is installed. For example, MW_Home/wlsserver_10.3, where MW_Home is the directory in which the Oracle Middleware components are installed.
   f. If you enabled secure communication for PDC 12.0, leave the Use SSL? check box selected and in the KeyStore Location field, enter the path of the client-side keystore file generated from the exported public certificate using the keytool utility. Otherwise, deselect the check box.

21. Click Next.

If you are installing PDC 12.0 or 12.0 Patch Set 1, the BRM Integration Pack Wallet Details screen appears. Proceed to step 24.

If you are installing PDC 12.0 Patch Set 2, the BRM Integration Pack Pre-requisite Libraries Location screen appears.

22. In the OJDBC Location field, enter the full path or browse to the directory in which the OJDBC jar is located.

23. Click Next.

The BRM Integration Pack Wallet Details screen appears.

24. Enter the following details for the BRM Integration Pack wallet:
   a. In the Wallet Location field, enter the path to the directory in which the BRM Integration Pack wallet is located.
   b. In the Wallet Password field, enter the BRM Integration Pack wallet password.

25. Click Next.
The Installation Summary screen appears.

26. Review the selections you have made in the preceding screens, and click **Install**.
The Installation Progress screen appears.

**Note:**
After the installation begins, clicking **Stop installation** stops the installation process, but the files that are already copied are not removed.

27. When the installation is done, click **Next**, the Installation Complete screen appears.

   Note down the provided URL. You use this URL to access PDC.

28. Click **Finish** to complete and exit.

   See "Verifying the Pricing Design Center Installation" for information on verifying the successful installation of PDC.

   See "About Installation Logs" for information on PDC Installer logs.

---

### Installing the PDC Patch Set

To install the PDC patch set on an existing PDC 12.0 installation:

1. On the server on which PDC 12.0 is installed, create a temporary directory (**temp_dir**).

2. Go to the My Oracle Support Web site:
   
   http://support.oracle.com

3. Sign in with your user name and password.

4. Click the **Patches & Updates** tab.

5. From the list, select **Patch Name or Number**.

6. In the text field, enter the **PatchNumber**, where **PatchNumber** is:
   
   • **28630301** for Patch Set 1
   
   • **30094516** for Patch Set 2

7. Click **Search**.

   The Patch Search page appears.

8. Click the **Patch Name or Number**.

   The patch details appear.

9. From the **Platform** list, select the **platform** and click **Download**, where **platform** is **linux** or **solaris**.

   The File Download dialog box appears.

10. Download the appropriate **pPatchNumber_PatchVersion_Generic.zip** file to **temp_dir**.

12. Start the Oracle WebLogic Server domain administration server or the WebLogic Server domain managed server on which PDC 12.0 was deployed, if it is not already started.

13. Ensure that the PDC database is running.

**Note:**

Ensure that the Oracle Database server is in Running state. The Installer connects to the Oracle Database server to verify the information you entered is valid.

14. Go to the temp_dir directory, and run one of the following commands:

- To start the GUI installer:
  
  ```
  Java_home/​bin/​java -jar pdcserver-12.0.0.x.0_generic.jar
  ```

  where:
  
  - `Java_home` is the directory in which you installed the latest supported Java version.
  
  - `x` is the PDC patch set version. For example, 1 is the version for PDC 12.0 Patch Set 1 and 2 is the version for PDC 12.0 Patch Set 2.

- To start the GUI installer and create a silent installer response file during the installation:
  
  ```
  Java_home/​bin/​java -jar pdcserver-12.0.0.x.0_generic.jar -record -destinationFile path
  ```

  where:
  
  - `path` is the response file location and name.
  
  - `x` is the PDC patch set version. For example, 1 is the version for PDC 12.0 Patch Set 1 and 2 is the version for PDC 12.0 Patch Set 2.

  The Welcome screen appears.

15. Click Next.

  The Installation Location screen appears.

16. Enter the full path to the directory in which you installed PDC 12.0.

17. Click Next.

  The PDC Wallet Details screen appears.

18. Enter the following details for the PDC wallet:

   a. In the Wallet Location field, enter the path or browse to the directory in which the PDC wallet is located.

   b. In the Wallet Password field, enter the PDC wallet password.

19. Click Next.
The WebLogic Administration Server Connection screen appears.

20. Enter the WebLogic Server domain information.
   a. In the **Host Name** field, enter the IP address or the host name of the machine on which the WebLogic Server domain is configured.
   b. In the **Port Number** field, enter the port number assigned to the WebLogic Server domain administration server.
   c. In the **User Name** field, enter the WebLogic Server domain administrator user name.
   d. In the **Password** field, enter the WebLogic Server domain administrator user password.
   e. In the **WebLogic Home** field, enter the path to the directory in which the WebLogic Server software is installed. For example, `MW_Home/wlsServer_10.3`, where `MW_Home` is the directory in which the Oracle Middleware components are installed.
   f. If you enabled secure communication for PDC 12.0, leave the **Use SSL?** check box selected and in the **KeyStore Location** field, enter the path of the client-side keystore file generated from the exported public certificate using the `keytool` utility. Otherwise, deselect the check box.

21. Click **Next**.

The Installation Summary screen appears.

22. Review the selections you have made in the preceding screens, and click **Install**.

The Installation Progress screen appears.

**Note:**

After the installation begins, clicking **Stop installation** stops the installation process, but the files that are already copied are not removed.

23. When the installation is done, click **Next**, the Installation Complete screen appears.

   Note down the provided URL. You use this URL to access PDC.

24. Click **Finish** to complete and exit.

   See "Verifying the Pricing Design Center Installation" for information on verifying the successful installation of PDC.

   See "About Installation Logs" for information on PDC Installer logs.
Installing the BRM Integration Pack Patch Set

Note:
The BRM Integration Pack patch installation must be performed as the UNIX user who installed BRM; for example, pin_user.

To install the BRM Integration Pack patch set:

1. On the machine on which BRM Integration Pack is installed, create a temporary directory (temp_dir).
2. Go to the My Oracle Support Web site:
   http://support.oracle.com
3. Sign in with your user name and password.
4. Click the Patches & Updates tab.
5. From the list, select Patch Name or Number.
6. In the text field, enter the PatchNumber, where PatchNumber is:
   - 28630301 for Patch Set 1
   - 30094516 for Patch Set 2
7. Click Search.
   The Patch Search page appears.
8. Click the Patch Name or Number.
   The patch details appear.
9. From the Platform list, select the platform and click Download, where platform is linux or solaris.
   The File Download dialog box appears.
10. Download the appropriate pPatchNumber_PatchVersion_Generic.zip file to temp_dir.
    The zip file includes the pdcserver-12.0.0.x.0_generic.jar file. For example, pdcserver-12.0.0.1.0_generic.jar for PDC 12.0 Patch Set 1 and pdcserver-12.0.0.2.0_generic.jar for PDC 12.0 Patch Set 2.
12. Start the WebLogic Server domain administration server or the WebLogic Server domain managed server on which PDC 12.0 was deployed, if it is not already started.
13. (Optional) Ensure that the PDC database is running.
14. Ensure that the BRM database is running.

15. Go to the `temp_dir` directory, and run one of the following commands:

- To start the GUI installer:

  ```bash
  Java_home/bin/java -jar pdcserver-12.0.0.x.0_generic.jar
  ```

  where:
  - `Java_home` is the directory in which you installed the latest supported Java version.
  - `x` is the PDC patch set version. For example, 1 is the version for PDC 12.0 Patch Set 1 and 2 is the version for PDC 12.0 Patch Set 2.

- To start the GUI installer and create a silent installer response file during the installation:

  ```bash
  Java_home/bin/java -jar pdcserver-12.0.0.x.0_generic.jar -record -destinationFile path
  ```

  where:
  - `path` is the response file location and name.
  - `x` is the PDC patch set version. For example, 1 is the version for PDC 12.0 Patch Set 1 and 2 is the version for PDC 12.0 Patch Set 2.

16. Click **Next**.

The Installation Location screen appears.

17. Enter the full path to the directory in which you installed BRM Integration Pack.

18. Click **Next**.

If you are installing PDC 12.0 or 12.0 Patch Set 1, the BRM Integration Pack Wallet Details screen appears. Proceed to step 21.

If you are installing PDC 12.0 Patch Set 2, the BRM Integration Pack Pre-requisite Libraries Location screen appears.

19. In the **OJDBC Location** field, enter the full path or browse to the directory in which the OJDBC jar is located.

20. Click **Next**.

The BRM Integration Pack Wallet Details screen appears.

21. Enter the following details for the BRM Integration Pack wallet:

   a. In the **Wallet Location** field, enter the path to the directory in which the BRM Integration Pack wallet is located.

   b. In the **Wallet Password** field, enter the BRM Integration Pack wallet password.
22. Click **Next**.
   The Installation Summary screen appears.

23. Review the selections you have made in the preceding screens, and click **Install**.
   The Installation Progress screen appears.

   **Note:**
   After the installation begins, clicking **Stop installation** stops the installation process, but the files that are already copied are not removed.

24. When the installation is done, click **Next**, the Installation Complete screen appears.
   Note down the provided URL. You use this URL to access PDCPDC.

25. Click **Finish** to complete and exit.

See "Verifying the Pricing Design Center Installation" for information on verifying the successful installation of BRM Integration Pack.

See "About Installation Logs" for information on PDCPDC Installer logs.

---

## Installing the Patch Set on an Existing PDC Installation in Silent Mode

Use silent install mode when you are installing PDC using the same configuration repeatedly. Silent install mode does not use the GUI and it runs in the background.

In this mode, you use a response file template that contains a predefined set of values to install PDC and BRM Integration Pack. You can generate a response file that contains the parameters and values during the PDC GUI installation.

### Creating a Response File

To create a response file:

1. Create the response file by doing one of the following:
   - Create a copy of the response file that was generated during the GUI upgrade. See "Installing the BRM Integration Pack Patch Set" for more information.
   - Create a response file using the template by running the following command:
Java_home/bin/java -jar pdcserver_12.0.0.x.0_generic.jar -getResponseFileTemplates

where:

– Java_home is the directory in which you installed the latest supported Java version.

– x is the PDC patch set version. For example, 1 is the version for PDC 12.0 Patch Set 1 and 2 is the version for PDC 12.0 Patch Set 2.

The following response file is created with the default values.

– oracle.communications.pdc.PricingDesignCenter.rsp

Use this file template if you are installing PDC and BRM Integration Pack. You can create as many response files as needed.

2. Open the file in a text editor.

3. Modify the response file you copied by specifying the key-value information for the parameters you want in your installation.

“Note:”

• The response file template contains guidelines and examples on how to enter the values in the parameters.

• The Installer treats incorrect context, format, and type values in a response file as if no value were specified.

4. Save and close the response file.

Installing the PDC and BRM Integration Pack Patch Set in Silent Mode

To install PDC and BRM Integration Pack Patch Set in silent mode:

1. Create the response file. See "Creating a Response File".

2. Copy the response file to the machine on which you run the silent installation.

3. On the machine on which you run the silent installation, go to the temp_dir directory to which you have downloaded the PDC server software pack, and run the following command:

Java_home/bin/java -jar pdcserver-12.0.0.x.0_generic.jar -debug -invPtrLoc Inventory_home/oraInventory/oraInst.loc [parameter=value] -responseFile path -silent

where:

• path is the absolute path to the response file.

• parameter is the name of an installation parameter.

• value is the value of the installation parameter.

• x is the PDC patch set version. For example, 1 is the version for PDC 12.0 Patch Set 1 and 2 is the version for PDC 12.0 Patch Set 2.

For example:
Java_home/bin/java -jar pdcserv-12.0.0.2.0_generic.jar -debug -invPtrLoc
Inventory_home/oraInventory/oraInst.loc INSTALL_TYPE=Complete -responseFile /tmp/oracle.communications.pdc.PricingDesignCenter.rsp -silent

The installation runs silently in the background.

To install BRM Integration Pack in silent mode:

1. Create the response file. See "Creating a Response File".
2. Copy the response file to the machine on which you run the silent installation.
3. On the machine on which you run the silent installation, go to the temp_dir
directory to which you have downloaded the BRM Integration Pack, and run the
following command:

   Java_home/bin/java -jar pdcserv-12.0.0.x.0_generic.jar -debug -invPtrLoc
   Inventory_home/oraInventory/oraInst.loc [parameter=value] -responseFile path -silent

   where:
   • path is the absolute path to the response file.
   • parameter is the name of an installation parameter.
   • value is the value of the installation parameter.
   • x is the PDC patch set version. For example, 1 is the version for PDC 12.0
     Patch Set 1 and 2 is the version for PDC 12.0 Patch Set 2.

   For example:

   Java_home/bin/java -jar pdcserv-12.0.0.2.0_generic.jar -debug -invPtrLoc
   Inventory_home/oraInventory/oraInst.loc INSTALL_TYPE=Complete -responseFile /tmp/oracle.communications.pdc.PricingDesignCenter.rsp -silent

   The installation runs silently in the background.

   See "Verifying the Pricing Design Center Installation" for information on verifying
the successful installation of PDC and BRM Integration Pack.

   See "About Installation Logs" for information on the PDC Installer logs.

Restoring the Previous Installation

If your patch installation is not successful, you must restore your system to the
previous installation.

Note:
As a workaround, restore the previous installation by replacing the PDC 12.0
directories with the directories that you backed up.

To restore the previous PDC 12.0 installation:

1. Restore the WebLogic server domains directory. Use the domains directory that
   you backed up before the patch installation to replace the following directory:
   MW_home/user_projects/domains
2. Restore the PDC installation directory. Use the *PDC_Home* directory that you backed up before you installed PDC 12.0 installation to replace the *PDC_Home* directory.

3. Restore the *orainventory* directory. Use the *orainventory* directory that you backed up before you installed PDC 12.0 to replace the *orainventory* directory.

4. Restore the PDC database schema.

5. Restore the transformation cross-reference database schema.

6. Restore the migration cross-reference database schema.

---

### Rolling Back Patch Set Installation

After installing a patch set, you can roll back the patch set to the previous version if required; for example, you can roll back PDC 12.0 Patch Set 1 to PDC 12.0. You must run *./deinstall.sh* and *./rollback.sh* scripts to uninstall the current patch set and remove the patch set files.

To rollback the PDC patch set installation:

1. Ensure that you take an offline backup of the database with the data added after the patch set installation.

2. Go to the *PDC_home/oui/bin* directory.

3. Run the following command:

   ```bash
   ./deinstall.sh
   ```

   The Distribution to Uninstall screen appears.

4. Select the patch set and the components that you want to uninstall.

   **Note:**

   Do not use the Select All option to select the patch set or components. If you use this option, the initial release and the patch sets are selected for uninstallation.

5. Click **Uninstall**.

   The Welcome screen appears.

6. Click **Next**.

   The Uninstallation Summary screen appears.

7. Click **Uninstall**.

   The Uninstallation Progress screen appears.

8. Click **Next**.

   The Uninstallation Complete screen appears.

9. Click **Finish**.

10. Go to the *PDC_home/oui/bin* directory.

11. Run the following command:
./rollback.sh

**Note:**

The PDC application is rolled back to the previous version. When you roll back from the current patch set version to the earlier version, database entries that are created during the current patch set version are not rolled back.

12. Login to the PDC application and check if the components that you added after the patch set installation are removed.
Pricing Design Center Post-Installation Tasks

This chapter provides instructions for Oracle Communications Pricing Design Center (PDC) post-installation tasks.

- If you installed PDC 12.0 or PDC 12.0 patch set for the first time, see "Post-Installation Tasks for the PDC Installation".
- If you upgraded your existing PDC 11.1 or 11.2 installation to 12.0 or 12.0 patch set, see "Post-Installation Tasks for the PDC Upgrade".
- If you installed PDC 12.0 patch set on your existing PDC 12.0 installation, see "Post-Installation Tasks for the PDC Patch Set Installation".

Post-Installation Tasks for the PDC Installation

After installing the complete PDC software, do the following:

> **Note:**

Ensure that the BRM-PDC integration is enabled. See "Enabling BRM-PDC Integration" for more information.

- (Optional) Create a PDC user. You can create additional PDC users through Oracle WebLogic Server Administration Console. See "Creating a PDC User" for more information.
- Add the PDC user to a group. See "Adding the PDC User to a Group" for more information.
- Start the transformation engines. See "Starting the Transformation Engines" for more information.
- (Optional) Restrict the quota limit for a schema user in a tablespace. See "Restricting Tablespace Quota for a Schema User" for more information.
- If you installed PDC 12.0 Patch Set 1, configure PDC and Oracle WebLogic Server to use the secure sockets layer (SSL)-enabled data source. See "Configuring WebLogic Server to use SSL-Enabled Data Source" and "Configuring PDC to Connect to SSL-Enabled Database (Patch Set 1)" for more information.
- (Optional) Configure SAML to enable single-sign on (SSO) for PDC. See "Configuring SAML for SSO" for more information.

Additionally, do the following if you are not migrating the existing BRM pricing data to the PDC database:

- Clean up sample Oracle Communications Billing and Revenue Management (BRM) data. See "Cleaning up Sample BRM Data" for more information.
• Run the **SyncPDC** utility. Run **SyncPDC** to synchronize the setup components defined in other BRM components with PDC. See "Running SyncPDC" for more information.

• (Optional) Create prerequisite setup components such as balance elements. See **PDC User's Guide** for more information. For a quick start, load sample balance element IDs and ratable usage metrics (RUMs) provided with PDC. See "Loading Sample Data" for more information.

• Create a service-event map in the PDC UI. See "Creating Service-Event Maps" for more information.

Creating a PDC User

If you want to create additional PDC users, you must create the PDC users after the installation is complete.

To create a PDC user:

1. Log in to WebLogic Server Administration Console.
2. In the **Domain Structure** section, click the **Security Realms** link.
   
   The Summary of Security Realms page appears.
3. Click the **myrealm** link.
   
   The Settings for myrealm page appears.
4. Click the **Users and Groups** tab.
5. Click the **Users** subtab.
6. Click **New**.
   
   The Create a New User page appears.
7. Do the following:
   
   a. In the **Name** field, enter a name for the PDC user.
   
   b. (Optional) In the **Description** field, enter a brief description for the PDC user.
   
   c. In the **Password** field, enter a password for the PDC user.
   
   d. In the **Confirm Password** field, enter the password again, to confirm it.
8. Click **OK**.
   
   The user name appears in the User table.
9. Click **Save**.
   
   To access PDC, add the PDC user to a group based on the role of the user in the organization. See "Adding the PDC User to a Group" for more information.
Adding the PDC User to a Group

PDC is a role-based application that authenticates and authorizes users based on the group to which the user belongs. The role-based functionality of PDC is supported by the following WebLogic Server groups:

- **Pricing Design Admin**: The users belonging to this group have read and write access to the setup and pricing components.
- **Pricing Analyst**: The users belonging to this group have read access to the setup components and read and write access to the pricing components.
- **Pricing Reviewer**: The users belonging to this group have only read access to the setup and pricing components.
- **Migration Admin**: The users belonging to this group can migrate pricing data from the BRM database to the PDC database.

These groups are created by the PDC Installer during the PDC installation process. To access PDC, add the PDC user you created during the installation or after the installation is complete to a group based on the role of the user in the organization.

To add the user to the group:

1. Log in to WebLogic Server Administration Console.
2. In the **Domain Structure** section, click the **Security Realms** link.
   The Summary of Security Realms page appears.
3. Click the **myrealm** link.
   The Settings for myrealm page appears.
4. Click the **Users and Groups** tab.
5. Click the **Users** subtab.
6. Click the **username** link, where **username** is the name of the PDC user.
   The Settings screen for **username** page appears.
7. Click the **Groups** tab.
8. In the **Parent Groups** section, from the **Available** list, select the group to which you want to assign the user.
9. Move the selected item to the **Chosen** list.
10. Click **Save**.

Starting the Transformation Engines

The transformation engines do not automatically start when you start the PDC server, you must start them manually. See the discussion about starting the transformation engines in *BRM System Administrator's Guide* for more information.

Restricting Tablespace Quota for a Schema User

PDC grants unlimited tablespace quota to the following schema users:

- **PDC schema**
Transformation cross-reference schema
Migration cross-reference schema

You can restrict the quota limit for a schema user in a tablespace by using SQL*Plus.

To restrict the tablespace quota for a schema user:

1. Connect to your database using SQL*Plus:

   sqlplus user_name/password@database_name

   where:
   • user_name is the PDC database user name.
   • password is the PDC database user password.
   • database_name is the service name or database alias of the PDC database.

2. At the SQL*Plus prompt, enter the following command:

   alter user schema_user_name quota size on tablespace_name;

   where:
   • schema_user_name is the PDC schema user name.
   • size is the tablespace quota size.
   • tablespace_name is the name of the tablespace for the PDC schema user.

   For example:

   alter user pdcUser quota 500k on data_ts;

3. Enter the following command, which exits SQL*Plus:

   exit

Configuring WebLogic Server to use SSL-Enabled Data Source

To use the SSL-enabled data source in WebLogic Server:

1. Log in to WebLogic Server Administration Console.

2. In the Domain Structure panel, click Services and Datasources. The available data sources are displayed.

3. Select the following data sources for which you want to enable SSL:
   • PricingDB
   • JobDispatcherDS
   • JobDispatcherPersistentDS

4. In the Configuration tab, select Connection Pool.

5. Modify the connection URL:

   jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCPS)(HOST=hostname)(PORT=ssl-port))(CONNECT_DATA=(SERVICE_NAME=SID)))

   Where:
   • hostname is the name of the machine on which the database is installed.
6. Add the following properties:

   \texttt{javax.net.ssl.trustStore = path to client wallet}

   \texttt{javax.net.ssl.trustStoreType = wallet type}

   where:

   • \textit{path to client wallet} is the location of the client wallet that is used to connect to the database.

   • \textit{wallet type} is the type of the client wallet, such as SSO and PKCS12. If the extension of the client wallet is \texttt{.sso}, the \textit{wallet type} is \texttt{SSO} and if the extension of the client wallet is \texttt{.p12}, the \textit{wallet type} is \texttt{PKCS12}.

7. If \textit{wallet type} is \texttt{PKCS12}, add the following property:

   \texttt{javax.net.ssl.trustStorePassword = wallet password}

8. Restart the WebLogic Server domain.

9. Log in to the PDC application.

   If you cannot log in to the PDC application, verify the WebLogic Server configurations that you have performed.

### Configuring PDC to Connect to SSL-Enabled Database (Patch Set 1)

To connect to the SSL-enabled database securely for synchronizing, transforming, and migrating the PDC data, you must specify the SSL port number and the database trustStore details in the following configuration files:

- \texttt{SyncPDCConfiguration.xml}
- \texttt{TransformationConfiguration.xml}
- \texttt{MigrationConfiguration.xml}

To connect to the SSL-enabled database:

1. Open the \texttt{BRM_Integration_Pack_home/apps/configurationfile} file.

   where:

   • \texttt{BRM_Integration_Pack_home} is the directory in which BRM Integration Pack is installed.

   • \textit{configurationfile} is:

     - \texttt{SyncPDCConfiguration.xml}
     - \texttt{TransformationConfiguration.xml}
     - \texttt{MigrationConfiguration.xml}

2. Uncomment the \texttt{trustStore} and \texttt{trustStoreType} section to connect to the database securely:

   \begin{verbatim}
   <dbSSLConfiguration>
     <trustStore>databaseTruststoreLocation</trustStore>
     <trustStoreType>databaseTruststoreType</trustStoreType>
   </dbSSLConfiguration>
   \end{verbatim}
where:

- **databaseTruststoreLocation** is the path to the client wallet which is used to connect to the database securely.
- **databaseTruststoreType** is the type of the trustStore used to connect to the database securely:
  
  If **databaseTruststoreLocation** is **Wallet_Home/cwallet.sso**, the **databaseTruststoreType** is **SSO**.
  
  If **databaseTruststoreLocation** is **Wallet_Home/ewallet.p12**, the **databaseTruststoreType** is **PKCS12**.

3. Specify the SSL port number in the **connectionInfo** section for all the databases, such as the migration cross-reference database and transformation cross-reference database. For example:

   `<xrefDatabase>
   <connectionInfo>
   ...
   <port>SSL_Port</port>
   ...
   </connectionInfo></xrefDatabase>

4. Save and close the file.

5. Go to the **BRM_Integration_Pack_home/apps/bin** directory.

6. Run the following command, which updates the database trustStore password in the BRM Integration Pack wallet:

   ```bash
   ./PDCBRMWalletUtil.sh walletlocation walletpassword DB_TRUSTSTORE_PASSWORD password
   ```

   where:

   - **walletlocation** is the location in which the BRM Integration Pack wallet is located.
   - **walletpassword** is the BRM Integration Pack wallet password.
   - **password** is the database trustStore password.

7. At the command prompt, enter **Y**.

   The database **TrustStore** password is added to the BRM Integration Pack wallet.

---

### Cleaning up Sample BRM Data

When you install BRM, its installation scripts populate sample data, including setup and pricing components. When using PDC, this data should not be initiated in BRM, but it should be defined in PDC and published to the BRM database. To ensure that PDC and BRM are integrated properly, you must clean up the BRM sample data before you start using PDC.

To clean up sample BRM data:

1. Go to the **BRM_Integration_Pack_Home/apps/syncpdc/scripts** directory, where **BRM_Integration_Pack_Home** is the directory in which BRM Integration Pack is installed.

2. Enter the following command, which opens SQL*Plus:
sqlplus user_name/password@database_Name

where:

- **user_name** is the BRM database user name.
- **password** is the BRM database user password.
- **database_Name** is the service name or database alias of the BRM database.

3. Enter the following commands, which clean up BRM data:

   - To clean up real-time data:
     ```sql
     update_pin_tables.sql
     ```

   - To clean up batch-rating data:
     ```sql
     update_ifw_tables.sql
     ```

   **Note:**
   If PDC is integrated with ECE, do not run the `update_ifw_tables.sql` command.

   The sample BRM data is cleaned up.

4. Enter the following command, which exits SQL*Plus:

   ```sql
   exit
   ```

Running SyncPDC

You must run the **SyncPDC** utility to synchronize the setup components defined outside of PDC.

See the discussion about running **SyncPDC** in *PDC User's Guide* for more information.

Loading Sample Data

PDC provides sample XML files to create setup components. The sample files are located in the `PDC_Home/apps/Samples/Examples` directory.

The **Examples** directory contains the following sample files:

- **PDCSampleBE.xml**. Contains all currency balance elements and some frequently used non-currency balance elements. You can load this file to quickly create balance elements to use when configuring pricing.

- **PDCSampleRum.xml**. Contains commonly used ratable usage metrics (RUMs). You can load this file to quickly create RUMs to use when creating a service-event map and when configuring pricing.

- **OOB_ProfileSpecifications.xml**. Contains the profile attribute specifications referenced in the following custom rules: **Friends&Family**, **SpecialDay**, and **ClosedUserGroup**. This XML file references the names used in the provisioning tags provided by default with the BRM installation. See the discussion about configuring closed user groups in *PDC User's Guide* for more information.
• **OOB_CRS.xml.** Contains the custom rules: **Friends&Family, SpecialDay,** and **ClosedUserGroup.** You can use these custom rules in generic and charge selectors when configuring a charge based on a subscriber's Friends & Family, Special Day, or Closed User Group profile. You must load the **OOB_ProfileSpecifications.xml** file before loading this file. See the discussion about configuring closed user groups in *PDC User's Guide* for more information.

• **OOB_ItemTypeSelector.xml.** You must load this file if you are using ECE. This file provides the default billing item assignments that are supported by BRM without any additional configuration. See the discussion about loading the **OOB_ItemTypeSelector.xml** file in *PDC User's Guide* for more information.

---

**Note:**

Before loading this file into the PDC database, make a backup copy of the customized **config_item_tags.xml** and **config_item_types.xml** files in BRM if you have created custom bill items in BRM. When you load the **OOB_ItemTypeSelector.xml** file into the PDC database, it overwrites the existing item tag-to-item type mapping in the BRM database.

You can load the sample files by using the **ImportExportPricing** utility. See *PDC User's Guide* for more information.

---

**Note:**

The **Examples** directory also contains sample alias files and sample pricing profile files that are provided only for reference and for use as templates for creating custom alias events or pricing profiles. You should not load the sample alias files and sample pricing profile files after installing PDC.

---

**Creating Service-Event Maps**

A service-event map defines which events can be used for a service and which RUMs can be used for each service-event combination.

For example, you map the GSM Session event to the GSM service and the RUMs, Duration and Volume, to the GSM Session event.

You can create a service-event map in the PDC UI. See the PDC Help for more information.

---

**Configuring SAML for SSO**

You can use SAML 2.0 for enabling SSO in PDC. SSO feature allows you to login to the PDC application using a single user name and password combination. To enable SSO for PDC using SAML, refer the SAML documentation.
Post-Installation Tasks for the PDC Upgrade

After upgrading the existing PDC installation to PDC 12.0 or a PDC 12.0 patch set, do the following:

• Upgrade the PDC database schema to the PDC 12.0 or PDC 12.0 patch set schema. See "Upgrading the PDC Database Schema" for more information.

• Ensure that you migrate offer profiles from BRM into PDC. See "Migrating Offer Profiles from BRM into PDC" for more information.

• Start the transformation engines. See "Starting the Transformation Engines" for more information.

• Run the ReplaceResourceNameWithCode.sql upgrade script. See "Running the BRM Integration Pack Upgrade Script" for more information.

• (Optional) Restrict the quota limit for a schema user in a tablespace. See "Restricting Tablespace Quota for a Schema User" for more information.

• If upgraded to PDC 12.0 Patch Set 1, configure PDC and Oracle WebLogic Server to use the secure sockets layer (SSL)-enabled data source. See "Configuring WebLogic Server to use SSL-Enabled Data Source" and "Configuring PDC to Connect to SSL-Enabled Database (Patch Set 1)" for more information.

• (Optional) Configure SAML to enable single-sign on (SSO) for PDC. See "Configuring SAML for SSO" for more information.

Additionally, do the following if you are not migrating the existing BRM pricing data to the PDC database:

• Run the SyncPDC utility. Run SyncPDC to synchronize the setup components defined in other BRM components with PDC. See "Running SyncPDC" for more information.

Upgrading the PDC Database Schema

To upgrade the PDC database schema:

1. Go to the PDC_home/server/upgrade/schema/pdc directory.
2. Enter the following command, which opens SQL*Plus:

   sqlplus user_name/password@database_Name

   where:
   • user_name is the PDC database user name.
   • password is the PDC database user password.
   • database_Name is the service name or database alias of the PDC database.
3. Run the following command, which upgrades the PDC database schema:
4. If you are upgrading to PDC 12.0 Patch Set 1, do the following:
   a. Replace @PDC_SCHEMA_USER_NAME@ with the PDC schema user name in the 
PDC_home/PDC/sqlscripts/policyspecification/
   DatabaseLinkPrivilege.jdbc file.
   b. Run the following command as a SYS user:
      DatabaseLinkPrivilege.jdbc

5. Enter the following command, which exits SQL*Plus:
   exit

Migrating Offer Profiles from BRM into PDC

If you are upgrading from PDC 11.1 to PDC 12.0 patch sets, perform this task.

If you are using ECE for usage charging, ensure that you migrate the existing offer profile data from BRM into PDC and use only PDC for configuring policy specifications.

Note:

After you migrate the offer profile data into PDC, delete the existing offer profiles in BRM and do not create any new offer profiles in BRM.

To migrate offer profiles from BRM into PDC:

1. Open the PDC_home/PDC/sqlscripts/policyspecification/
   PolicySpecificationDataUpgrade.sql file in a text editor.

2. Specify the following parameters:

   CREATE DATABASE LINK brmpdcliink
   CONNECT TO brm_dbhost_username
   IDENTIFIED BY brm_dbhost_password
   USING '
   (DESCRIPTION =
   (ADDRESS = (PROTOCOL = TCP)(HOST = brm_schema_hostname)(PORT =
   brm_schema_port_number))
   (CONNECT_DATA =
   (SID = brm_schema_sid)
   )
   )';

   where:
   • brm_dbhost_username is the BRM database user name.
   • brm_dbhost_password is the BRM database user password.
   • brm_schema_hostname is the BRM schema host name.
   • brm_schema_port_number is the port number assigned to the BRM schema.
   • brm_schema_sid is the SID of the BRM schema.

3. Save and close the file.
4. Ensure that the BRM and PDC databases are running.

5. Connect to the PDC database using SQL*Plus:

   sqlplus user_name/password@database_Name

   where:
   • user_name is the PDC database user name.
   • password is the PDC database user password.
   • database_Name is the service name or database alias of the PDC database.

6. Migrate offer profiles into PDC by running the following command:

   @PolicySpecificationDataUpgrade.sql

   The offer profiles are migrated from BRM into PDC in the PDC format as policy specifications and policy labels.

7. Exit SQL*Plus by running the following command:

   exit


9. Export the policy specifications and policy labels to XML files by running the following command:

   ImportExportPricing -export FileNamePrefix -config POLICY_SPECIFICATION
   ImportExportPricing -export FileNamePrefix -config POLICY_LABEL

   where FileNamePrefix is the prefix to append to the beginning of the generated XML file name.

   The policy specifications and policy labels are exported to the respective XML files.

10. Verify the migrated data in the XML files and make any necessary changes if required.

11. If you make any changes in the XML files, import the policy specifications and policy labels into the PDC database by running the following command:

   ImportExportPricing -import -config POLICY_LABEL filename
   ImportExportPricing -import -config POLICY_SPECIFICATION filename

   where filename is the name of the XML file.

   The policy specifications and policy labels are imported into the PDC database.

12. Publish the required pricing and setup components to ECE by running the following command:

   ImportExportPricing -publish POLICY_SPECIFICATION -target ece
   ImportExportPricing -publish CHARGE_OFFERING -target ece
   ImportExportPricing -publish ALTERATION_OFFERING -target ece

   The policy specifications, charge offers, and discount offers are published to ECE.
Running the BRM Integration Pack Upgrade Script

If you are using Pipeline Manager for rating, you must update the resource names in the Pipeline Manager database tables by running the `ReplaceResourceNameWithCode.sql` script.

To run the BRM Integration Pack upgrade script:

1. Make a complete offline backup of the IFW_RESOURCE and IFW_PRICEMDL_STEP tables.
2. Go to the `BRM_Integration_Pack_Home/sqlscripts/pdc_brm` directory, where `BRM_Integration_Pack_Home` is the directory in which BRM Integration Pack is installed.
3. Enter the following command, which opens SQL*Plus:
   ```sql
   sqlplus user_name/password@database_Name
   ```
   where:
   - `user_name` is the SYSTEM or SYSDBA user name.
   - `password` is the SYSTEM or SYSDBA user password.
   - `database_Name` is the service name or database alias of the BRM database.
4. Grant database linking privilege to the Pipeline Manager database user by running the following command:
   ```sql
   GRANT CREATE DATABASE LINK TO pipeline_db_user;
   ```
   where `pipeline_db_user` is the name of the Pipeline Manager database user.
5. Open the `BRM_Integration_Pack_Home/sqlscripts/pdc_brm/ReplaceResourceNameWithCode.sql` file in a text editor.
6. Edit the following parameters with the actual values that are used to create the database link between Pipeline Manager and the BRM database.
   ```sql
   CREATE DATABASE LINK IFW_BRM_DB_LINK
   CONNECT TO brm_db_user
   IDENTIFIED BY brm_db_user_password
   USING ' (DESCRIPTION =
   (ADDRESS = (PROTOCOL = TCP)(HOST = brm_db_host)(PORT = brm_db_port))
   (CONNECT_DATA =
   (SID = brm_db_sid)
   )
   )';
   ```
where:

- `brm_db_user` is the BRM database user name.
- `brm_db_user_password` is the BRM database user password.
- `brm_db_host` is the BRM schema host name.
- `brm_db_port` is the port number assigned to the BRM schema.
- `brm_db_sid` is the SID of the BRM schema.

7. Save and close the file.

8. Exit SQL*Plus by running the following command:
   ```
   exit
   ```

9. Ensure that the BRM and Pipeline Manager databases are running.
   ```
   sqlplus user_name/password@database_Name
   ```
   where:
   - `user_name` is the Pipeline database user name.
   - `password` is the Pipeline database user password.
   - `database_Name` is the service name or database alias of the Pipeline database.

10. Update the resource names by running the following command:
    ```
    @ReplaceResourceNameWithCode.sql
    ```

11. Revoke the create database link privilege by running the following command as the SYSTEM or SYSDBA user:
    ```
    sqlplus user_name/password@database_Name
    REVOKE CREATE DATABASE LINK FROM pipeline_db_user;
    ```

**Post-Installation Tasks for the PDC Patch Set Installation**

After installing PDC 12.0 Patch Set 1 on the existing PDC 12.0 installation, do the following:

- Upgrade the PDC database schema to the PDC 12.0 schema. See "Upgrading the PDC Database Schema" for more information.
- Ensure that you migrate offer profiles from BRM into PDC. See "Migrating Offer Profiles from BRM into PDC" for more information.
- Start the transformation engines. See "Starting the Transformation Engines" for more information.
- (Optional) Restrict the quota limit for a schema user in a tablespace. See "Restricting Tablespace Quota for a Schema User" for more information.
- If upgraded to PDC 12.0 Patch Set 1, configure PDC and Oracle WebLogic Server to use the secure sockets layer (SSL)-enabled data source. See "Configuring WebLogic Server to use SSL-Enabled Data Source" and "Configuring PDC to Connect to SSL-Enabled Database (Patch Set 1)" for more information.
• (Optional) Configure SAML to enable single-sign on (SSO) for PDC. See "Configuring SAML for SSO" for more information.

Additionally, do the following if you are not migrating the existing BRM pricing data to the PDC database:

• Run the **SyncPDC** utility. Run **SyncPDC** to synchronize the setup components defined in other BRM components with PDC. See "Running SyncPDC" for more information.
Verifying the Pricing Design Center Installation

This chapter describes how to verify the Oracle Communications Pricing Design Center (PDC) installation.

Verifying the PDC Installation

You can verify that PDC is installed by checking the state of all installed components or by logging in to PDC.

To check the state of all installed components:

1. Log in to the PDC domain administration server.
2. In the Domain Structure section, click Deployments.
   The Summary of Deployments screen appears.
3. Ensure that all of the managed servers are running.
4. If PDC is installed successfully, the following deployments appear in Active state:
   • JobDispatcher
   • PricingDesignCenter

To log in to PDC:

1. Open a browser window.
2. Enter the URL provided by the Installer at the end of the installation.
   Note:
   You can also get the URL to access PDC from the PDC_Home/install/readme.txt file, where PDC_Home is the directory in which you installed PDC.
3. Click Go.
   The PDC login page appears.
4. Do the following:
   a. In the User Name field, enter the user name.
   b. In the Password field, enter the password.
   The PDC home page appears, verifying that PDC is installed successfully.

You can also verify the PDC installation by checking the version number in PDC_home/apps/bin/VERSION file.
Verifying the BRM Integration Pack Installation

By default, the Installer stores the sensitive information, such as account and database passwords, in the wallet and other configuration values in the respective configuration files.

You can verify that BRM Integration Pack is installed by checking the values entered during the PDC 12.0 BRM Integration Pack installation are stored in the following configuration files:

- `BRM_Integration_Pack_home/apps/syncpdc/SyncPDCConfiguration.xml`
- `BRM_Integration_Pack_home/apps/transformation/TransformationConfiguration.xml`
- (If you installed the Migration utility) `BRM_Integration_Pack_home/apps/migration/MigrationConfiguration.xml`

where `BRM_Integration_Pack_home` is the directory in which you installed BRM Integration Pack.

You can also verify the BRM Integration Pack installation by checking the version number in `BRM_Integration_Pack_home/apps/bin/VERSION` file.
Uninstalling Pricing Design Center

This chapter describes how to uninstall Oracle Communications Pricing Design Center (PDC).

Uninstalling PDC

You use Oracle Universal Installer to uninstall PDC. You can also uninstall other components of the PDC product using Oracle Universal Installer.

Note:

Oracle Universal Installer does not uninstall the PDC patch. You can restore the previous release installation by replacing the patch set directories using the backup copy of your previous release installation. See "Restoring the Previous Installation" for more information.

To uninstall PDC:

1. Go to the PDC_home/oui/bin directory, where PDC_home is the directory in which you installed PDC.

2. Clean up the WebLogic Server domain by running the following command:

```java
java -cp Weblogic_home/wiserver/server/lib/weblogic.jar weblogic.WLST
cleanup_weblogic_domain.py weblogic_username weblogic_password weblogic_host
weblogic_port weblogic_use_ssl pdc_username
```

where:

- `weblogic_home` is the directory in which WebLogic Server is installed.
- `weblogic_username` is the WebLogic Server domain administrator user name.
- `weblogic_password` is the WebLogic Server domain administrator user password.
- `weblogic_host` is the IP address or the host name of the machine on which the WebLogic Server domain is configured.
- `weblogic_port` is the port number assigned to the WebLogic Server domain administration server.
- `weblogic_use_ssl` is one of the following:
  - `true` if SSL is enabled for the WebLogic Server domain.
  - `false` if SSL is disabled for the WebLogic Server domain.
- `pdc_username` is the name of the PDC user.

For example:
3. Run the following command:

```
./deinstall.sh
```

The Distribution to Uninstall screen appears.

4. Select the components you want to uninstall.

5. Click **Uninstall**.

The Welcome screen appears.

6. Click **Next**.

The Uninstallation Summary screen appears.

7. Click **Uninstall**.

The Uninstallation Progress screen appears.

8. Click **Next**.

The Uninstallation Complete screen appears.

9. Click **Finish**.

The Installer removes all of the files except the log files. You must delete the log files manually.

You can check the log files in the `oraInventory/logs` directory. The default location of the `oraInventory` directory is in the `/etc/oraInst.loc` (Linux) file or the `/var/opt/oracle/oraInst.loc` (Solaris) file.

---

**Uninstalling BRM Integration Pack**

To uninstall Oracle Communications Billing and Revenue Management (BRM) Integration Pack:

1. Go to the `BRM_Integration_Pack_Home/oui/bin` directory, where `BRM_Integration_Pack_Home` is the directory in which you installed the BRM Integration Pack.

2. Run the following command:

```
./deinstall.sh
```

The Distribution to Uninstall screen appears.

3. Select the components you want to uninstall.

---

**Note:**

Oracle Universal Installer does not uninstall the BRM Integration Pack patch. You can restore the previous release installation by replacing the patch set directories using the backup copy of your previous release installation. See "Restoring the Previous Installation" for more information.
4. Click **Uninstall**.
   The Welcome screen appears.
5. Click **Next**.
   The Uninstallation Summary screen appears.
6. Click **Uninstall**.
   The Uninstallation Progress screen appears.
7. Click **Next**.
   The Uninstallation Complete screen appears.
8. Click **Finish**.
   The Installer removes all of the files except the log files. You must delete the log files manually.

You can check the log files in the `oraInventory/logs` directory. The default location of the `oraInventory` directory is in the `/etc/oraInst.loc` (Linux) file or the `/var/opt/oracle/oraInst.loc` (Solaris) file.

### Uninstalling PDC Using the Silent Mode

To uninstall PDC using the silent mode:

1. Go to the `PDC_home/oui/bin` directory.
2. Clean up the WebLogic Server domain by running the following command:
   ```
   java -cp Weblogic_home/wls/server/server/lib/weblogic.jar weblogic.WLST cleanup_weblogic_domain.py weblogic_username weblogic_password weblogic_host weblogic_port weblogic_use_ssl pdc_username
   ```
   where:
   - **weblogic_home** is the directory in which WebLogic Server is installed.
   - **weblogic_username** is the WebLogic Server domain administrator user name.
   - **weblogic_password** is the WebLogic Server domain administrator user password.
   - **weblogic_host** is the IP address or the host name of the machine on which the WebLogic Server domain is configured.
   - **weblogic_port** is the port number assigned to the WebLogic Server domain administration server.
   - **weblogic_use_ssl** is one of the following:
     - **true** if SSL is enabled for the WebLogic Server domain.
     - **false** if SSL is disabled for the WebLogic Server domain.
   - **pdc_username** is the name of the PDC user.

   For example:
   ```
   java -cp /home/usr/opt/Oracle/oracle_weblogic_12.2.1.2.0/wls/server/server/lib/weblogic.jar weblogic.WLST cleanup_weblogic_domain.py weblogic_password123 your.host.name.com 1234 false pdcuser
   ```
3. Run the following command:
./deinstall.sh -silent -responseFile path

where path is the location of the response file that you created during the GUI installation of PDC.

You receive a message indicating that PDC has been uninstalled successfully.

Uninstalling BRM Integration Pack Using the Silent Mode

To uninstall BRM Integration Pack using the silent mode:

1. Go to the BRM_Integration_Pack_Homeoui/bin directory.
2. Run the following command:

   ./deinstall.sh -silent -responseFile path

where path is the location of the response file that you created during the GUI installation of BRM Integration Pack.

You receive a message indicating that BRM Integration Pack has been uninstalled successfully.