ORACLE®

PRIMAVERA

**Upgrading and Configuring P6 EPPM
Release 15.1**

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Contents

About Automatically Upgrading and Configuring P6 EPPM

This guide tells you how to automatically upgrade and configure your applications. Before you begin, read through the *Prerequisites for P6 EPPM Configuration* (on page 18).

You will use **setup.exe** in the Primavera P6 Enterprise Project Portfolio Management physical media or download to install the following P6 EPPM applications:

> **Notes**: Before installing P6 EPPM, run the script, **manual_script_before_upgrade.sql** located in the **p6suite\database\scripts\install\PM_<release_level>**folder of the physical media to minimize the configuration change on the Oracle database server.

▸ You should upgrade all your applications to the latest version to ensure they work together.
▸ P6 (and its help and tutorials)
▸ P6 Team Member (includes P6 Team Member Web and E-mail Statusing Service)
▸ P6 mobile (includes P6 for iOS and P6 for Android)
▸ P6 Professional Cloud Connect
▸ P6 EPPM Web Services
▸ P6 Integration API

> **Note:** The wizard upgrades the remote P6 Integration API. If you want to use the local mode P6 Integration API, see the *P6 Integration API Configuration Guide*.

Once you have installed your applications, you will use the P6 EPPM Configuration Wizard to:

▸ Upgrade an Oracle or Microsoft SQL Server database
▸ Configure a WebLogic domain

> **Note**: If you are using WebSphere, you can still use the P6 EPPM Configuration Wizard to install or upgrade your database and connect BPM, BI Publisher, and the content repository to P6 EPPM; however, you must manually deploy your P6 EPPM applications in WebSphere. The wizard will not deploy the P6 EPPM applications into WebSphere.

If you installed the following applications, you can use the wizard to connect them to P6 EPPM:

▶ A Content Repository (Oracle Webcenter Content Core Capabilities, Microsoft Sharepoint, CMIS, or Oracle Database)
▶ BI Publisher
▶ BPM

Once you have configured your applications, you can begin using all of your applications.

Automatic Database Upgrade Considerations and Prerequisites

Read this chapter to upgrade your P6 EPPM database to R15.1 when version 6.2.1 or later is already installed. You need to upgrade your database if you want to preserve your project data to use with the new version of P6 EPPM. A wizard automatically upgrades your database for you.

Oracle recommends that you upgrade your database automatically; however, if you want to manually upgrade your database, use the *Manually Upgrading the P6 EPPM Database for Oracle* or the *Manually Upgrading the P6 EPPM Database for Microsoft SQL Server* guide.

> **Note:** Prior to 15.1, any user who was granted P6 Professional module access could access both P6 Professional and P6 Visualizer applications. When you upgrade your instance of P6 EPPM to the current release, users who have P6 Professional module access will also be granted a separate P6 Visualizer module access. For more information about module access right, see *P6 Reference Manual.*

In This Section

Database Upgrade Considerations For Version 6.2.1 or Later to R15.1

You can upgrade your existing P6 EPPM database (version 6.2.1 or later including service packs) to P6 EPPM R15.1. You must upgrade your P6 EPPM database so it will work with the new version. Use the P6 EPPM Configuration Wizard to upgrade your database automatically. The wizard runs the necessary scripts to upgrade the database structure and an upgrade program to add data required by the new version.

> **Note**: These upgrade instructions apply only if you are upgrading from 6.2.1 or later. If you are upgrading from a version earlier than 6.2.1, you cannot directly upgrade to R15.1. For example, if you are on version 5.0, you will need to upgrade to 7.0 before you can upgrade to R15.1.

All risk data fields are migrated when upgrading; existing fields are mapped to new fields and others will be mapped to text fields. See *Risks Migration* (on page 12) for more information.

> **Cautions:**
>
> - If you are a current Apache JackRabbit user and want to upgrade to P6 EPPM 15.1, JackRabbit documents data will not migrate automatically. Refer to My Oracle Support's Knowledge Articles for information on manually migrating JackRabbit documents to Oracle Universal Content Management. Oracle recommends that you migrate the data before upgrading to 15.1.
> - If you are a current jBPM user and want to upgrade to P6 EPPM R15.1, workflows and reviews data will not be available. You should close all workflows and reviews that are in progress before upgrading to P6 EPPM 15.1. You cannot migrate any of this data to 15.1.

Requirements to Upgrade R8 or later to R15.1

The following list summarizes the procedures in the order in which you are required to upgrade from P6 EPPM R8 or later to P6 EPPM R15.1:

- ▶ Back up your P6 EPPM database before beginning the upgrade process to ensure you will not lose any data due to unexpected problems.
- ▶ Stop your P6 EPPM instance on your application server.
- ▶ Deinstall the current instance of P6 EPPM.
- ▶ Grant privileges to the system user by running the `manual_script_before_upgrade.sql` script.
- ▶ Run the validate file located in your 8.0, 8.1, 8.2, 8.3, or 8.4 Database folder of the P6 EPPM physical media or download. Ensure you run the 8.0, 8.1, 8.2, 8.3, or 8.4 validate file, not the 15.1 validate file.
- ▶ Upgrade your database by running `dbsetup.bat` (`.sh`) which can be found in database folder of your P6 EPPM physical media or download.
- ▶ Run the P6 EPPM Installation Wizard using `setup.exe` which can be found in your P6 EPPM physical media or download.
- ▶ Connect to an existing P6 EPPM database by using the P6 EPPM Configuration Wizard.
- ▶ Update any existing Primavera P6 Administrator configurations.
- ▶ Restart the P6 EPPM instance on your application server.
- ▶ Clear your browser cache.
- ▶ Test the new database to ensure that the upgrade succeeded.

Requirements to Upgrade Version 6.2.1 through 7.0 to 15.1

The following list summarizes the procedures required to upgrade from P6 EPPM version 7.0 or earlier (including service packs) to P6 EPPM R15.1:

‣ Back up your P6 EPPM database before beginning the upgrade process to ensure you will not lose any data due to unexpected problems. See ***Data that is Not Migrated during the P6 EPPM Database Upgrade*** (on page 11) for details on what information will not upgrade.

Run the validate file located in your current Database folder of the P6 EPPM physical media or download.

‣ If you're upgrading from version 7.0 or earlier, convert your Methodology Management data to projects before you upgrade to P6 EPPM R15.1. See ***Converting Methodologies to Projects*** (on page 15) and ***Creating a Project Template From Projects*** (on page 55) for manual migration instructions.

‣ Run the P6 EPPM Configuration Wizard to automatically upgrade your existing P6 EPPM database.

‣ Test the new database to ensure that the upgrade succeeded.

Data that is Not Migrated during the P6 EPPM Database Upgrade

When upgrading P6 EPPM, the following data will not migrate from previous releases:

‣ Workflows Repository (supported configuration changed from jBPM to Oracle BPM).

‣ Content Repository (if previously an Apache JackRabbit user). Refer to My Oracle Support's Knowledge Articles for information on manually migrating JackRabbit documents to Oracle Universal Content Management.

‣ Top Down Estimation, including estimated weights (removed).

‣ Invited Users in the Project Workspace (removed).

‣ Issue Form Categories (removed).

‣ Summary Data (new summary tables incompatible with old summary tables). Refer to My Oracle Support's Knowledge Articles for information on manually migrating Scenarios data to the new summary tables.

‣ Methodology Management (replaced with Project Templates). See ***Converting Methodologies to Projects*** (on page 15) and ***Creating a Project Template From Projects*** (on page 55) for manual migration instructions.

Tips for Upgrading to 15.1

Consider the following tips when upgrading to 15.1:

User Name and Password Tips

‣ All new users must create a password with at least one character, regardless of whether Password Policy is enabled. P6 EPPM will prompt existing users to follow the new requirement if they reset their password and the Password Policy is disabled.

Security Tips

‣ Starting with P6 EPPM R8, P6 performs all user security and administration. Due to this change, all Admin Superusers receive Projects module access during the upgrade.

‣ To configure the Oracle database server for SSL, see the *Advanced Security Administrator's Guide* included with the Oracle Database Server Documentation for configuring the Oracle Server and Oracle Client(s) for SSL.

▸ To configure the SQL database server for SSL, use Microsoft's documentation for instructions on configuring SQL Database Server SSL. Direct questions about Installation / Configurations to the database vendor, Microsoft.

Application Tips

▸ P6 EPPM does not support Summary-Only projects. During the P6 EPPM database upgrade, existing Summary-Only projects convert to standard projects, but lose all summary data. You can import the summary project from Microsoft Project into the converted blank project, then summarize the data. See the *P6 Professional Help* or the *P6 Help*.

▸ P6 Professional no longer performs recurring job services. Use the Windows command line interface to run batch reports and export projects as a service. To view P6 Professional reports in P6, select the "Store report in Work Products and Documents" option when creating report batches or printing reports. See the *P6 Professional Help* for more information.

ANSI_PADDING for Microsoft SQL Server Database Tips

▸ To prevent duplicate values in P6 EPPM modules appearing due to leading or trailing spaces, ensure that the ANSI_PADDING setting in Microsoft SQL Server is **Off**. For example, if one user enters "Equipment" and another user enters " Equipment" (with a leading space) for resource codes, the database will store both of these as valid values if ANSI_PADDING is **On**. If ANSI_PADDING is **Off**, the database will remove the leading space in the second entry and tell the user to enter a unique ID. See the documentation included with Microsoft SQL Server for more information.

Risks Migration

The following table illustrates the risks data field mapping when upgrading from P6 EPPM database (7.0 or 7.0 service packs) to P6 R15.1.

> **Note**: Some fields will migrate to text fields instead of new fields because certain fields no longer correspond. The new text fields are noted below.

Risks Fields Migration Table

P6 EPPM database (version 7.0 and 7.0 service packs) Risks Fields	P6 EPPM R15.1 Risks Field
Risk Id	id
risk_name	name
risk_descr	description
status_code	status
risk_type_id	category_id
risk_control	notes
table_name	table_name

P6 EPPM database (version 7.0 and 7.0 service packs) Risks Fields	P6 EPPM R15.1 Risks Field
wbs_id	cause (with heading 'Applies to WBS' <WBS name>)
rsrc_id	cause (with heading 'Applies to Resource' <resource name>)
obs_id	cause (with heading 'Responsible Manager' <OBS name>)
priority_type	cause (with heading 'Priority' <priority type>)
add_date	cause (with heading 'Date Identified' <add_date in mmm-dd-yyyy format >)
impact_date	cause (with heading 'Date Identified' <add_date in mmm-dd-yyyy format >)
prbly_pct	cause (with heading 'Probability' <prbly_pct>)
impact_work_qty	cause (with heading 'Impact - Labor Units' <impact_work_qty> - 2 decimals)
impact_equip_qty	cause (with heading 'Impact - Nonlabor Units' <impact_equip_qty> - 2 decimals)
impact_mat_qty	cause (with heading 'Impact - Material Units' <impact_mat_qty> - 2 decimals)
Impact_expense_cost	cause (with heading 'Impact - Expenses' <impact_expense_cost> - 2 decimals)

Pre-Upgrade Procedures

Perform the tasks in the following topics before upgrading your database.

Stopping the Application Server

You must stop your application server prior to upgrading in order to prevent files that are in use from not being upgraded. In the event that the application server has not been stopped, the upgrade process will fail.

Stopping WebLogic for P6 EPPM Applications

To stop WebLogic:

1) Navigate to <*weblogic_home*>/user_projects/domain directory.

2) Run the stopWebLogic script.
   ▸ `stopWeblogic.cmd` on Windows machine
   ▸ `stopWeblogic.sh` on Unix machine
3) If prompted for a user name and password in the WebLogic console window, type in the administrative user name and password you specified when creating the domain.

> **Note**: The WebLogic console window that opened when you started WebLogic will close automatically when it has shutdown.

Stopping WebSphere for P6 EPPM Applications

To stop WebSphere for any P6 EPPM application:

1) On the Administrative Console main screen, in the left-hand navigation, expand **Applications**.
2) Click **WebSphere enterprise applications**.
3) Select the option for your application (for example, **Primavera**).
4) Click **Stop**.

> **Notes**:
> - Repeat these steps for any application you want to stop, including your help and tutorials files.
> - Do not do this step for the any help.war file if you want to use OTN for your help. The OTN link is the default link in the Primavera P6 Administrator. OTN will have the most up-to-date help documentation.

Running the Validate Tool for a 7.0 or Later Oracle Database

Use the validate tool to ensure your database is not missing objects that could cause the database to fail to upgrade. You must perform the steps below before you download the 15.1 media pack. If you run the 15.1 validate tool against your current database, it will not work.

1) Double-click **validate.bat** (validate.sh for Linux) in your current Database folder of the P6 EPPM physical media or download to start the validate tool.

> **Note:** Ensure you use the validate file from your current Database folder, not the 15.1 database folder.

2) Provide the following:
   a. In the **Username** field, enter your administrative user name (for example, admuser).
   b. In the **Database host address** field, enter your database server name or TCP/IP address.
   c. In the **Database host port** field, enter the port number that Oracle is using. The default is 1521.
   d. In the **Database name field**, enter the Oracle Service Name. You can find it in the TNSNAMES.ORA file, which you created when you set up the Oracle client.
3) View the HTML page that the tool creates to ensure your database is not missing objects.

- ▶ If upgrading from 7.0, go to the 'Client Application' media pack, then locate the \install\database\scripts\ folder to find the scripts you need to fix.
- ▶ If upgrading from the 8.0, 8.1, 8.2, 8.3, or 8.4, go to the database folder of the P6 EPPM physical media or download, then locate the \database\scripts\install\ to find the scripts you need to fix.

Running the Validate Tool for a Microsoft SQL Server Database

Use the validate tool to ensure your database is not missing objects that could cause the database to fail to upgrade. You must perform the steps below before you download the 15.1 media pack. If you run the 15.1 validate tool against your current database, it will not work.

1) Double-click **validate.bat** (validate.sh for Linux) in your current Database folder of the P6 EPPM physical media or download to start the validate tool.

> **Note:** Ensure you use the validate file from your current Database folder, not the 15.1 database folder.

2) Provide the following:
   a. In the **Database host address** field, enter the server machine name or IP address where you installed Microsoft SQL Server.
   b. In the **Database host port** field, enter the port number that Microsoft SQL Server is using. The default is 1433.
   c. In the **Database name field**, enter the name of the existing database that you want to validate.
3) View the HTML page that the tool creates to ensure your database is not missing objects.
4) If your database is missing objects, do one of the following:
   - ▶ If upgrading from 7.0, go to the 'Client Application' media pack, then locate the \install\database\scripts\ folder to find the scripts you need to fix.
   - ▶ If upgrading from the 8.0, 8.1, 8.2, 8.3, or 8.4 go to the database folder of the P6 EPPM physical media or download, then locate the \database\scripts\install\ to find the scripts you need to fix.

Converting Methodologies to Projects

To migrate Methodology Management version 7.0 data to P6 R15.1 Project Templates, you must first use Project Architect in the Project Management module to convert the data from a methodology to a project.

To convert Methodology Management data to a project:

1) Create a new EPS node in P6 Professional version 7.0 where you can store all your Methodology Management projects.

2) Use Project Architect in P6 Professional version 7.0 to create projects from Methodology Management data. For more information on using Project Architect, see version 7.0 of the *Oracle Primavera P6 Project Management Reference Manual*.

> **Note**: You can create only one project at a time. If you want all of your Methodology Management data moved to P6 Project Templates, contact Oracle Consulting to automate the process.

3) After you have converted all your Methodology Management data to projects, upgrade P6 EPPM to 15.1.

4) Launch P6.

5) Convert your upgraded projects (formerly methodologies) to project templates. See ***Creating a Project Template From Projects*** (on page 55).

Installing Oracle Multimedia for an Oracle Database

When using an Oracle database, you must install Oracle Multimedia, along with these supporting components: Oracle JVM, Oracle XML DB (XDB), and XML Developer's Kit (XDK). Unless you specify otherwise, all these components automatically get installed with the latest versions of an Oracle database (11g and later). If you chose not to install these components, you will need to install them before you upgrade P6 EPPM. See the *Oracle Multimedia's User's Guide* on the Oracle Technology Network (OTN) for information on how to install these components.

Grant Privileges to the SYSTEM User

Before upgrading P6 EPPM on an Oracle database, execute the following scripts:

1) Navigate to the following locations, open the designated scripts in a text editor, and modify the schema user references to match your actual schema user names:

   a. `\scripts\install\PM_`*<release level>*`\`**manual_script_before_upgrade.sql**

   If you are not using the schema names admuser or pxrptuser, update the references with your actual admuser and pxrptuser names.

   b. `\scripts\install\PM_`*<release level>*`\`**manual_script_before_install.sql**

   You must apply grant options to the SYSTEM schema user or a custom user associated with the Oracle DBA role. If you plan to use a custom schema user, other than SYSTEM, to execute steps which require a DBA role, then you must update the references to SYSTEM in the script with the new custom schema user associated with the DBA role.

2) Execute the following steps:

   a. From the command line, execute: **sqlplus sys/password@<db_tns_names_entry> as sysdba**

   b. Go to \scripts\install\PM_<release_level> and execute the **manual_script_before_upgrade.sql** script.

   c. Go to \scripts\install\PM_<release_level> and execute the **manual_script_before_install.sql** script.

Upgrading an Oracle P6 EPPM Database

To upgrade the P6 EPPM database:

1) Perform a cold backup and a full database export.

   If you are unsure how to back up your Oracle database, do not proceed with the upgrade. Contact your database administrator, your database vendor, or Oracle Global Customer Support for assistance in backing up your database before performing the database upgrade. Also, ensure that you are familiar with the process of restoring the backup copy of the database in case you need to do so.

2) Double-click `dbsetup.bat` (dbsetup.sh for Linux) in the Database folder of the P6 EPPM physical media or download to start the Database wizard.

   > **Note**: Click **Next** on each wizard screen to advance to the next step.

3) On the **Primavera P6** dialog box:

   a. Choose **Upgrade an existing database.**

   b. Choose **Oracle** as the server type.

4) On the **Connection Information** dialog box, enter the following information to connect to the database:

   a. In the **DBA user name** field, log on to the database as a DBA.

   b. In the **DBA password** field, type the password associated with the user name that you entered.

   c. In the **Database host address** field, enter the server machine name or IP address where Oracle is installed.

   d. In the **Database host port** field, enter the port number that Oracle is using. The default is 1521.

   e. In the **Database name** field, enter the Oracle Service Name. It can be found in the `TNSNAMES.ORA` file, which was created when you or your DBA set up the Oracle client.

5) On the Connection Information dialog box, enter the following information:

   a. In the **Administrative user name** field, log on to the database as an administrative user, such as admuser. The user name must have administrative privileges and must be the owner of the application tables. The database must also have the Oracle compatible parameter set to 10.2 or greater.

   b. In the **Administrative password** field, type the password associated with the user name you entered.

6) On the **Upgrade Options** dialog box:

   a. Select your **Privileged user name** for the database (for example, privuser).

   b. In the **Privileged user password** field, type the password associated with the user name that you entered.

   c. Select your **Public user name** for the database (for example, pubuser).

    d. In the **Public user password** field, type the password associated with the user name that you entered.

    e. Select your **Background job user name** for the database (for example, bjobuser).

    f. In the **Background job user password** field, type the password associated with the user name that you entered.

7) On the **Upgrade Option** dialog box:

    a. Select your **PX Reporting User name** for the database (for example, pxrptuser).

    b. In the **Px Reporting User Password** field, type the password associated with the user name that you entered.

8) On the **Ready to Begin Upgrading Data** dialog box:

    a. Choose **Yes, upgrade my database**.

    b. Click **Upgrade**.

    The upgrade process could take several minutes, depending on its size.

9) On the **Primavera Database Setup Wizard** dialog box, click **Next** after the process has completed.

> **Note**: If the database upgrade fails, see PrimaveraDatabaseSetup.log located in the user home directory (for example, C:\Documents and Settings\Administrator). Contact Oracle Global Customer Support if you need further assistance.

10) On the **Finish** dialog box, click **Finish** to exit the wizard.

    Your database is now ready to use with P6 EPPM.

Prerequisites for P6 EPPM Configuration

Review the prerequisites before configuring any P6 EPPM applications.

Uninstall P6 EPPM 7.0 or Later Applications

Before you upgrade, uninstall the products mentioned in the following sections. For most P6 EPPM applications, you can use the Oracle Universal Installer and then delete the applications from WebLogic or WebSphere if needed. You cannot use the Oracle Universal Installer for P6 Team Member 8.1 and E-mail Statusing Service; for those two applications, see one of the following:

▶ *Deleting P6 EPPM 7.0 or Later Applications from WebLogic* (on page 19)
▶ *Deleting P6 EPPM 7.0 or Later Applications from WebSphere* (on page 20)
▶ *Removing E-mail Statusing Service* (on page 20)

Using Oracle Universal Installer to Uninstall P6 EPPM 7.0 or Later

1) From the P6 folder of the physical media or download location, run one of the following depending on your system type:
    ▸ If you are installing on a Microsoft Windows system, navigate to the **win\Disk1\install** directory, and then double-click on the **setup.exe** file.
    ▸ If you are installing on a non-Microsoft Windows system, type the following command:
       ```
       cd Operating System/Disk1/install
       ```
       Depending on your operating system, replace *Operating System* in the command above with aix_64-5L, hp_64, hpux_IA64, linux, or solaris_64, then type the following commands:
       ```
       chmod 755 runInstaller
       chmod 755 unzip
       ./runInstaller
       ```
2) On the **Welcome** screen, click **Deinstall Products**.
3) On the **Inventory** dialog box, under the **Contents** tab, select any P6 EPPM applications you want to uninstall.
4) Click **Remove**.
5) On the **Confirmation** dialog box, click **Yes**.
6) Click **Close** then **Cancel** to exit the dialog box and Oracle Universal Installer.

Deleting P6 EPPM 7.0 or Later Applications from WebLogic

To delete P6 EPPM applications from WebLogic:

1) Launch the WebLogic **Administration Console**.

> **Note:** You can open the Administration Console via a web browser using this address: http://*serverIP*:*listenport*/console. The default *listenport* is 7001.

2) In the **Welcome** window, log in using the user name and password that you created when you created your WebLogic domain.
3) In the **Change Center** pane of the Administration Console, click **Lock & Edit**.
4) In the **Domain Structure** pane, click **Deployments**.
5) In the **Summary of Deployments** pane, in the **Control** tab:
    a. Select the option next to the application(s) you want to delete.
    b. Click **Stop**, **Force Stop Now**.
6) On the **Force Stop Application Assistant** pane, click **Yes**.
7) In the **Summary of Deployments** pane, in the **Control** tab:
    a. Ensure the **State** column shows **Prepared**.
    b. Select the option next to the application(s) you want to delete.
    c. Click **Delete**.
    d. On the **Delete Application Assistant** pane, click **Yes**.
8) In the **Change Center** pane, click **Activate Changes**.

9) Logout of the **Administration Console**.

10) If you will use the same home directory for the new deployments, delete the existing WAR or EAR file from that directory to avoid conflict with the new files.

Deleting P6 EPPM 7.0 or Later Applications from WebSphere

For more information about removing P6 EPPM 7.0 or Later Applications from WebSphere, see the app

To delete P6 EPPM applications from WebSphere:

1) Start the WebSphere Application Server.

2) Launch the WebSphere Application Server **Administrative Console**.

3) On the **Administrative Console Main** screen:
   a. In the left-hand navigation, expand **Applications**.
   b. Click **WebSphere enterprise applications**.

4) Select the option next to the application(s) you want to uninstall.

5) Click **Uninstall**.

6) In the message or in the task menu, click **Save** .

7) On the **Save to Master Configuration** screen, click **Save**.

8) If you will use the same home directory for the new deployments, delete the existing WAR or EAR file from that directory to avoid conflict with the new files.

Removing E-mail Statusing Service

To remove E-mail Statusing Service:

1) Locate your E-mail Statusing Service home directory (for example, EMAIL_HOME).

2) Create a backup copy of the config.properties file and note the location where you saved it.

3) Delete the E-mail Statusing Service home directory.

Installing Applications

Before you upgrade or install your application, install the products mentioned in the following sections.

Terminal Emulator

Unix and Linux users are required to have a terminal emulator, which is used to execute commands during P6 EPPM installation. Compatible terminal emulators are listed below:

▶ Konsole

▶ GNOME-terminal

▶ XTERM

Download and install a terminal emulator before proceeding with P6 EPPM installation.

> **Note:** Windows users do not need to install a terminal emulator. The P6 EPPM Installer uses the Windows command prompt to execute commands.

Installing WebLogic

You will need to install WebLogic to deploy P6 EPPM. For supported versions, see the *Tested Configurations* document. For more information about how to install WebLogic, see the following URL: http://www.oracle.com/technetwork/middleware/weblogic/documentation/index.html

> **Note:** If you are using WebLogic 11g (10.3.6), you must download and apply the following patches from My Oracle Support:
>
> - *9923849*
> - *19182814*
>
> For information on how to apply your WebLogic patches, see the readme that is located in the respective patch zip file.
>
> **Note:** Oracle recommends that you install Oracle Access Manager on a new WebLogic Middleware home.
>
> If existing Middleware applications are installed into the Middleware home (for example, BI Publisher or Identity Management), Access Manager will fail to deploy.

Tips

After you finish installing WebLogic, ensure you can run the startNodeManager.cmd/sh (depending on your environment) before installing P6 EPPM. If you cannot run these files, contact your WebLogic representative for help.

JDK Installation

WebLogic automatically installs a Java Development Kit.   For a list of supported JDK versions for P6 EPPM, see the *Tested Configurations* document. As new releases of the software become available, you can find these at http://www.oracle.com/technetwork/java/archive-139210.html.

Content Repository Installation

The Content Repository allows users to collaboratively share and manage documents in P6. For P6 EPPM users to utilize the enhanced document management functionality, you must install either Oracle Webcenter Content Core Capabilities (WCCC) or a CMIS-compliant content repository. Refer to the documentation included with those applications for installation instructions.

> **Note**: P6 supports clustering of the Content Repository only when using WebLogic for the application server.

After you install the Content Repository application and P6, perform the following tasks to complete the Content Repository setup:

▶ Configure the Content Repository server based on your organization's needs.
   ▸ See **Configuring WCCC to Work with P6** (on page 22)
   ▸ If you are using another CMIS-compliant repository, see the installation instructions included with your content repository.
▶ Enter the appropriate Database/Instance/Content Repository Primavera P6 Administrator settings. You can use the P6 EPPM Configuration Wizard to enter your settings. See **Using the Content Repository Selection Screen** (on page 42) for detailed information about these settings.

Configuring WCCC to Work with P6

> **Note**: These instructions contain information only on configuring Oracle Webcenter Content Core Capabilities (WCCC) to work with P6. They do not include information on installing WCCC. For WCCC's installation instructions, see the documentation included with Oracle WCCC.

Except where noted, the guidelines below are recommendations. Depending on your organization, you can choose to use existing configurations or your own naming conventions. Refer to the documentation included with Oracle Webcenter Content Core Capabilities for detailed instructions on how to complete the guidelines in this section. See the *Tested Configurations* document for information on supported versions.

To configure Oracle WCCC:

1) *(required)* Establish a Trusted Connection to the P6 EPPM database by adding the P6 EPPM machine name or IP address as a trusted server in the WCCC server's configuration file.
   a. Go to *WCCC_Home*\ucm\cs\config\ in which *WCCC_Home* is the location where you installed WCCC.

   > By default, *WCCC_Home* path = *\Oracle\Middleware\user_projects\domains\$domain_name*

   b. Edit the config.cfg file.

    c. Find the **SocketHostAddressSecurityFilter** line and add the P6 EPPM machine name or IP address to the end of the line.

> **Note**: If multiple IP Address or machine name entries are made, they must be separated by a pipe symbol. For example, 127.0.0.1|127.0.0.2

    d. Restart the WCCC server.

2) Enable Framework folders or Folder_G. The Framework folder interface and Folder_G are not enabled by default. To enable either of them, see the WCCC documentation for more information.

3) *(required)* Create a P6 EPPM Security Group in WCCC and grant the appropriate rights (read, write, delete) for P6 EPPM users. You should consider the following:

   ▸ Log into the WCCC Content Server as an administratiDefault Groups are already created -- Public and Secure -- making this step optional. Public is the default security group assigned to framework folders. User Assignment to roles (associated to groups) still apply if using the Public or secure group.ve user.

   ▸ WCCC users are assigned to Roles, Roles are assigned to Security Groups, and Security Groups are assigned to framework or Folder_G folders.

   ▸ You should assign the Security Group created to the folder used by P6 EPPM.

   ▸ If using Multiple User Authentication Mode when configuring A WCCC Admin User will need to be assigned to a role with read, write, delete, admin rights to the group.:

       ▪ WCCC Users need to be assigned to a role with appropriate rights to the group for reading, writing, and deleting objects.

       ▪ A WCCC Admin User will need to be assigned to a role with read, write, delete, admin rights to the group.

   ▸ If using Single User Authentication Mode when configuring P6 EPPM:

       ▪ A WCCC Admin User will need to be assigned to a role with read, write, delete, admin rights to the group.

4) *(required)* Create an P6 EPPM documents home folder on the WCCC server by adding a unique path to the root folder.

   a. Log into the WCCC Content Server as an administrative user.

   b. Create a new folder (see the WCCC documentation for more information).

   Example format:

   OracleEnterpriseProjectPortfolioManagement

   c. Use the advanced options to assign the security group you created forP6 EPPM to this folder.

5) Create users in WCCC for integrating with P6 EPPM. Consider the following:

   ▸ If using Multiple User Authentication Mode when configuring P6 EPPM:

       ▪ You must create a WCCC user for every P6 EPPM user, and the username created must match the P6 EPPM user.

       ▪ You must assign the user to a role mapped to the security group associated with the P6 EPPM framework folder and must have appropriate rights (read, write, delete).

       ▪ You must create an administrative user in WCCC. The username does not have to match an P6 EPPM user.

- You must assign the administrative user to a role mapped to the security group associated with the P6 EPPM folder and must have read, write, delete, and admin rights the security group.
  - ▸ If using Single User Authentication Mode when configuring P6 EPPM:
    - You must create an administrative user in WCCC. The username does not have to match that of an P6 EPPM user.
    - You must assign the administrative user to a role mapped to the security group associated with the P6 EPPM framework folder and must have read, write, delete, and admin rights to the security group.

6) 🛡 If you enabled Security Accounts, create an P6 EPPM Security Account. For example, depending on your organization, you might need to set up a Security Account for performance and storage reasons. Security considerations, similar to those made for the Security Group above, include the following:

  - ▸ P6 EPPM user names must match the WCCC usernames, unless using "Single User" for the Authentication Mode.
  - ▸ All P6 EPPM-related WCCC usernames must have appropriate assignments to WCCC Roles and Users.
  - ▸ All P6 EPPM-related WCCC usernames must have access to the Oracle Primavera Prime Security Account.

7) Create a Document Type for P6 EPPM documents in WCCC.

  a. Log into the WCCC Content Server as an administrative user.

  b. Use the Configuration Manager to create a new Content Type for P6 EPPM Documents (see the WCCC documentation for more information).

8) *(required)* From the Configuration Manager applet:

  a. Create the following metadata text fields in the "Information fields" tab, exactly as specified (including case), in WCCC for P6 EPPM:

    - PrmUserId
    - PrmProjectId
    - PrmWorkgroupId
    - PrmWorkflowId
    - PrmWorkflowStatus
    - PrmWorkflowAction
    - PrmSecurityPolicy
    - PrmTemplate
    - PrmCheckedOutUserId
    - PrmCheckedOutDate
    - PrmLocalFilePath (make Type = Long Text)
    - PrmAuthorId

  Using "Prm" as a prefix is optional. You can use any prefix. If you don't use a prefix, ensure that none of the P6 EPPM metadata fields conflict with existing metadata fields.

  Select the "Update Database Design" button to commit the changes.

9) *(required)* Configure the appropriate settings for the Primavera P6 Administrator.

> **Note**: You will configure the Primavera P6 Administrator settings when you run the P6 EPPM Configuration Wizard. See **About the P6 EPPM Configuration Wizard** (on page 37).

10) Restart the WCCC Server.

Configuring Microsoft SharePoint to Work with P6

> **Notes**:
>
> - These instructions contain information only on configuring Microsoft SharePoint to work with P6. They do not include information on installing Microsoft SharePoint. For Microsoft SharePoint's installation instructions, see the documentation included with Microsoft SharePoint.
> - Oracle recommends that you install the P6 SharePoint Connector on the same Internet Information Server (IIS) where you installed SharePoint. However, if you want to install it on a different server, you must install the P6 SharePoint Connector on an IIS where it can continually connect to the SharePoint server and Web Access Server in the same Local Area Network.

Except where noted, the guidelines below are required. Depending on your organization, you can choose to use your own naming conventions. Refer to the documentation included with Microsoft SharePoint for detailed instructions on how to complete the guidelines in this section.

To configure Microsoft SharePoint:

1) Create a new site named "WS_FPRPC" (recommended name) on the Microsoft IIS using the IIS Admin.
2) If not already installed, install Microsoft .Net Framework 3.5 SP1. You can download it from this Web site: http://msdn.microsoft.com/en-us/netframework/cc378097.
3) From the **\Tools\SharePoint Connector** folder of the P6 EPPM physical media or download, launch **setup.exe** to install P6 EPPM Web Services on the "WS_FPRPC" site.
4) During the web service installation, retain the default virtual directory. For example, on the **Select Installation Address** dialog box, enter the following:
    Site = WSFPRPC
    Virtual Directory = WS_FPRPC
    Application Pool = DefaultAppPool
5) Once the installation finishes, test the installation by launching the following URL:
    http://*host*:*port*/*virtual_dir*/WS_FPRPC.asmx
    where *host* is the server machine name or IP address where you installed SharePoint, *port* is the port number that SharePoint is using (the default is 80), and *virtual dir* is the default virtual directory (for example, WS_FPRPC).
6) From the **\Tools\SharePoint Connector** folder of the P6 EPPM physical media or download, upload one of these templates to the SharePoint server:

> ▸ For SharePoint 2010 or 2013, **WebAccessLibraryTemplate2010.stp**.

7) Go to **Site Actions**, **Site Settings**, **List Templates** and create a SharePoint document library for P6 EPPM. Note what you call the document library.

8) Enter the appropriate settings in the Primavera P6 Administrator.

> **Note**: You will configure the Primavera P6 Administrator settings when you run the P6 EPPM Configuration Wizard. See *About the P6 EPPM Configuration Wizard* (on page 37).

BI Publisher Installation

Consult BI Publisher documentation for installation instructions. For complete overview information about BI Publisher, go to the following web site:
http://www.oracle.com/technetwork/middleware/bi-publisher/documentation/index.html.

Workflows Repository Installation

The Workflows Repository helps users to keep track of project initiations in P6. For P6 users to utilize the project initiation functionality, you must install the supported Workflows Repository application, BPM. Refer to the documentation included with the Oracle BPM application for installation instructions.

Installing the Oracle MDS Schema for BPM

If you are using BPM, you must install the **Oracle MDS schema** using the **Repository Creation Unit (RCU)** on a separate database instance. See the *Tested Configurations* document for supported versions.

Modifying the P6 Environment for BPM 11g

You can use BPM with P6 EPPM. See *Tested Configurations* for the versions of BPM that work with P6 EPPM.

To configure BPM with P6:

1) Create a new directory on the host where P6 is running. For example, **P6BPMConnector/P6** and **P6BPMConnector/BPM**.

2) In the P6 media pack `Tools\BPM Connector\11g` subfolder, locate the prm-bpm-connector-11.1.1.X-v1.0.jar

3) Copy the connector file listed above to the **P6BPMConnector/P6** folder you created. Determine the location of the BPM installation that you are using to integrate with P6. If you have multiple SOA Suite installations, ensure that you determine the location of the specific installation that you are integrating with P6.

4) Copy all the supporting jars from the BPM installation that you are using to integrate with P6 to the **P6BPMConnector/BPM** folder you created. Their default locations are listed:

> ▸ C:\oracle\Middleware\Oracle_SOA1\soa\modules\oracle.soa.fabric_11.1.1\
> bpm-infra.jar

▸ C:\oracle\Middleware\Oracle_SOA1\soa\modules\oracle.soa.workflow_11.1.1\
  `bpm-services.jar`
▸ C:\Oracle\Middleware\Oracle_SOA1\soa\modules\oracle.soa.fabric_11.1.1\
  `fabric-runtime.jar`
▸ C:\oracle\Middleware\oracle_common\modules\oracle.jmx_11.1.1\
  `jmxframework.jar`
▸ C:\oracle\Middleware\oracle_common\modules\oracle.jmx_11.1.1\
  `jmxspi.jar`
▸ C:\oracle\Middleware\oracle_common\bpm\modules\oracle.bpm.mgmt_11.1.1\
  `oracle.bpm.bpmn-em-tools.jar`
▸ C:\oracle\Middleware\oracle_common\soa\modules\oracle.soa.mgmt_11.1.1\
  `soa-infra-mgmt.jar`
▸ C:\Oracle\Middleware\wlserver_10.3\server\lib
  `wlclient.jar`
▸ C:\Oracle\Middleware\oracle_common\webservices
  `wsclient_extended.jar`
▸ C:\Oracle\Middleware\oracle_common\oui\jlib
  `xml.jar`
▸ C:\Oracle\Middleware\oracle_common\modules\oracle.xdk_11.1.0
  `xmlparserv2.jar`

> **Note:** The jars must be from the same BPM installation that will be integrated with P6.

5) Edit the weblogic.policy file:
   a. Locate the weblogic.policy file in one of the following locations:
      In Windows: C:*WebLogic_Home*\wlserver_10.3\server\lib
      In Linux: /*WebLogic_Home*/wlserver_10.3/server/lib
   b. Add the following information in weblogic.policy file and restart the P6 application server.
   ```
   grant codeBase "file:<full path to BPM support JAR directory>/*" {
   permission java.security.AllPermission;
   };
   ```
   For example :

   grant codeBase "file:C:/oracle/bpm1111X/*" {
   permission java.security.AllPermission;
   };

   or

   grant codeBase "file:/home/oracle/bpm1111X/*" {
   permission java.security.AllPermission;
   };
   c. Save and close the file.
   d. Restart the P6 application server.

Modifying the P6 Environment for BPM 12c

You can use BPM with P6 EPPM.

To configure BPM with P6:

1) Create a new directory on the host where P6 is running. For example, **P6BPMConnector/P6** and **P6BPMConnector/BPM**.

In the P6 media pack `Tools\BPM Connector\12c` subfolder, locate the
`prm-bpm-connector-`*12c*`-v1.0.jar`

1) Copy the connector file listed above to the **P6BPMConnector/P6** folder you created. Determine the location of the BPM installation that you are using to integrate with P6. If you have multiple SOA Suite installations, ensure that you determine the location of the specific installation that you are integrating with P6.

2) Copy all the supporting jars from the BPM installation that you are using to integrate with P6 to the **P6BPMConnector/BPM** folder you created. Their default locations are listed:

   ▸ *<Oracle_Home>*`\soa\soa\modules\oracle.soa.fabric_12c\bpm-infra.jar`
   ▸ *<Oracle_Home>*`\soa\soa\modules\oracle.soa.workflow_12c\bpm-services`
   `.jar`
   ▸ *<Oracle_Home>*`\soa\soa\modules\oracle.soa.fabric_12c\fabric-runtime`
   `.jar`
   ▸ *<Oracle_Home>*`\oracle_common\modules\oracle.jmx_12c\jmxframework.ja`
   `r`
   ▸ *<Oracle_Home>*`\oracle_common\modules\oracle.jmx_12c\jmxspi.jar`
   ▸ *<Oracle_Home>*`\soa\bpm\modules\oracle.bpm.mgmt_12c\oracle.bpm.bpmn-`
   `em-tools.jar`
   ▸ *<Oracle_Home>*`\soa\soa\modules\oracle.soa.mgmt_12c\soa-infra-mgmt.j`
   `ar`
   ▸ *<Oracle_Home>*`\wlserver\server\lib\wlclient.jar`
   ▸ *<Oracle_Home>*`\oracle_common\modules\oracle.xdk_12c\xml.jar`
   ▸ *<Oracle_Home>*`\oracle_common\modules\oracle.xdk_12c\xmlparserv2.jar`
   ▸ *<Oracle_Home>*`\soa\soa\modules\oracle.soa.fabric_12c\tracking-api.j`
   `ar`
   ▸ `<Oracle_Home>\soa\soa\modules\oracle.rules_12c\rulesdk2.jar`

   > **Note:** The jars must be from the same BPM installation that will be integrated with P6.

3) Edit the weblogic.policy file:
   a. Locate the weblogic.policy file in one of the following locations:
      In Windows: *<Oracle_Home>*`/wlserver/server/lib`
      In Linux: *<Oracle_Home>*`/wlserver/server/lib`
   b. Add the following information in weblogic.policy file and restart the P6 application server.

```
grant codeBase "file:<full path to BPM support JAR directory>/*" {
permission java.security.AllPermission;
};
```

For example :

grant codeBase "file:C:/oracle/bpm12XX/*" {
permission java.security.AllPermission;
};

or

grant codeBase "file:/home/oracle/bpm12XX/*" {
permission java.security.AllPermission;
};

   c. Save and close the file.

   d. Restart the P6 application server.

Installing SOA

If you are upgrading from a previous version to R15.1, you must install the entire Oracle Fusion Middleware SOA suite for BPM to work with P6. The Oracle WSM Policy Manager is required. See the SOA documentation in either the "Connecting BPM 11g to P6" or "Connecting BPM 12c to P6" guides for more information.

Download the wsdl4j-1.6.2.jar

If you plan to install Web Services, you must download the wsdl4j-1.6.2.jar on your machine.

To download the jar:

1) Go to http://mirrors.ibiblio.org/pub/mirrors/maven2/wsdl4j/wsdl4j/1.6.2/.

2) Select the **wsdl4j-1.6.2.jar**.

3) Save the file to your machine.

4) Note the location where you save the jar file.

Installing IAIK-JCE

IAIK-JCE is a Java Cryptography Extension that has a set of APIs and can implement cryptographic functionality. It is used for supporting additional security functionalities to the JDK. IAIK-JCE libraries can be used to support higher level of encryption while storing/transmitting sensitive information (for example, passwords) in P6 EPPM.

IAIK-JCE is installed when you install P6 EPPM. To allow the P6 EPPM installer to recognize and install IAIK-JCE, you must modify your existing `java.security` settings and copy the `iaik_jce.jar` file to the correct location in *<Java_Home>*.

To prepare IAIK-JCE for installation:

1) Navigate to the following URL:

    http://jce.iaik.tugraz.at/sic/Products/Core-Crypto-Toolkits/JCA_JCE

2) Download and extract `iaik_jce.zip` locally. See Tested Configurations for the supported versions of IAIK-JCE.

3) Navigate to the lib-signed folder and then copy `iaik_jce.jar` to *<Java_Home>*`/jre/lib/ext`.

4) Navigate to *<Java_Home>*`/jre/lib/security` and then add the following to java.security.

   security.provider.11=iaik.security.provider.IAIK

   > **Note:** If the number '11' is being used by another entry, use the next available number.

5) Save and then close the file.

6) Complete the instructions in the following topic:

   Setting an Environment Variable for IAIK-JCE (on page 30)

Setting an Environment Variable for IAIK-JCE

Setting the Environment Variables in Microsoft Windows

To set the `JAVA_TOOL_OPTIONS` environment variables in Microsoft Windows:

1) Click **Start**, **Control Panel**, **System**, and then **Advanced system settings**.

2) In the System Properties dialog box, on the Advanced tab, click **Environment Variables**.

3) Add the J`AVA_TOOL_OPTIONS` environment variable:

   a. In the System Variables section, click **New**.

   b. In the Variable name field, type `JAVA_TOOL_OPTIONS`.

   c. In the Variable value field, type the following:

      `-Dprimavera.encryptor.provider="IAIK"`

   d. Click **OK**.

4) Exit the Control Panel.

Setting the Environment Variables on Unix-Based Systems

To set the `JAVA_TOOL_OPTIONS` environment variables on Unix-based systems:

1) Set the `JAVA_TOOL_OPTIONS` environment variable by typing the following command:

   `export JAVA_TOOL_OPTIONS=-Dprimavera.encryptor.provider="IAIK"`

About the P6 EPPM Installation Wizard

Before you run the installation wizard, ensure that you have read through *Prerequisites for P6 EPPM Configuration* (on page 18).

You can install the following with the installation wizard:

> **Note:** Oracle recommends that you install P6 and P6 Team Member separately so that you can create an Admin configuration for both of them. If you install them together, you will only be able to create an Admin configuration for P6.

▸ P6 (including its help and tutorials)
▸ P6 Professional Cloud Connect (to connect to an EPPM Oracle database and P6 APIs using a remote method of access)

> **Note:** When you choose to install Cloud Connect, the wizard will also install P6 Integration API (in remote mode) by default.

▸ P6 Integration API (remote mode only)
▸ P6 EPPM Web Services
▸ P6 Team Member (includes P6 Team Member Web and E-mail Statusing Service)

Once you have completed your installation, the P6 EPPM Configuration Wizard will appear. When the configuration wizard appears, you will have the choice to configure your database, WebLogic server, and extra application settings.

In This Section

Installing Your P6 EPPM Suite

1) Download the **Primavera P6 Enterprise Project Portfolio Management R15.1 for \<platform\>** folder and extract the contents.
2) Go to the location where you extracted the contents and run one of the following depending on your system type:
   ▸ If you are installing on a Microsoft Windows system, navigate to the **P6_R\<release_level\>\Disk1\install** directory, and then double-click on the **setup.exe** file.

    ▸ If you are installing on a non-Microsoft Windows system, type the following command:

```
cd P6_R<release_level>/Disk1/install
chmod 755 runInstaller
chmod 755 unzip
./runInstaller
```

3) On the **Welcome** screen, click **Next**.

> **Note**: Click **Next** on each wizard screen to advance to the next step.

4) On the **Specify Home Details** screen, type a name for the installation. For the path, browse to the location of the P6 EPPM home folder (for example, C:\P6EPPM_1).

5) On the **Available Product Components** screen, select each component you want to install.

> **Note**: Oracle recommends that you install P6 and P6 Team Member separately so that you can create an Admin configuration for both of them. If you install them together, you will only be able to create an Admin configuration for P6.

    a. If you are installing P6 select the following version-specific components:

      1. Select **P6**.

      2. Select **P6 Help** if you want to use the local help (i.e., the p6help.war file).

> **Do not** select this option if you want to use the default URL which connects to the Oracle Technology Network (OTN) site. OTN houses Oracle's most up-to-date documentation. If P6 EPPM functionality changes, the help documentation on OTN will show those changes.
>
> If any updates are made to the help, these will not be visible if you are using the p6help.war file.

    b. Select **P6 Professional Cloud Connect** if you want to connect to P6 Professional with an EPPM Oracle database using a remote method of access. This installation option is applicable to only Oracle database users. The wizard will also install P6 Integration API (in remote mode) by default.

    After running the P6 EPPM Configuration wizard, the Configuration Complete screen will display the default URL generated for P6 Professional Cloud Connect. This URL (case-sensitive) must be provided to P6 Professional users to enable them to setup and configure a new database connection to the P6 Pro Cloud Connect server in the P6 Professional database configuration utility.

    For more details on establishing the P6 Pro cloud connect database connection in P6 Professional, see the *P6 Professional for EPPM Installation and Configuration Guide*.

c. If you are installing P6 Integration API, select **P6 Integration API**.

> **Notes**:
> - The wizard will install the remote version of P6 Integration API.
> - If you install **P6 Professional Cloud Connect**, P6 Integration API (in remote mode) will also be installed by default. In the P6 Web Administration Application Settings, you must also set up the P6 Pro API URL for remote applications to determine where the API server is running in remote mode to take requests from API Apps (in P6 Professional application). Enter the URL in the format. https://<hostname>:<port>/PrimaveraAPI/APIAPPS.
> - If you need to install the local version of P6 Integration API or want to install the client-side packages (which include libraries and documentation for remote mode), see the *P6 Integration API Configuration Guide*.

d. If you are installing P6 EPPM Web Services, select **P6 Web Services**.

   The wizard will also install the demo applications for P6 EPPM Web Services.

e. If you are installing P6 Team Member, select **P6 Team Member**. This will install the files necessary for P6 Team Member Web, E-mail Statusing Service, and the server components for P6 mobile.

f. If you want to use the local help for P6 Team Member, select **P6 Team Member Help**.

> **Notes**:
> - If you want to use E-mail Statusing Service, see the *P6 EPPM Post Installation Administrator's Guide* when you have completed installing and configuring your other applications.
> - P6 for iOS supports SSL (https) or HTTP only when it has a certificate signed by a trusted authority.
> - P6 for Android requires SSL (https) when you are not using SSO authentication. If you are using SSO authentication, you can use HTTP or HTTPs protocols. HTTPS requires a valid certificate from an Android trusted certifying authority.

6) On the **Specify JDK Home** screen, type or browse to the location where JDK is installed (for example, C:\Program Files\Java\jdk1.7.0_75).

7) On the **Specify the wsdl4j-1.6.2 Directory** screen:
   ▸ If you are not installing P6 EPPM Web Services, this screen will not appear.
   ▸ If you are installing P6 EPPM Web Services, type or browse to the location where you installed the **wsdl4j-1.6.2.jar**.

8) On the **Summary** screen:

    a. Verify that all the components you want to install are listed.

    b. Click **Install**.

    > **Note**: Ignore the **Configuration Assistants** screen when it appears. It will close itself.

9) On the **End of Installation** screen, click **Exit**.

    > **Note**: The P6 EPPM Configuration Wizard will appear if the installation was successful.

10) In the **Exit** dialog box, click **Yes**.

11) If you want to use the P6 EPPM Configuration Wizard to configure your P6 EPPM, WebLogic, and other applications, continue to *About the P6 EPPM Configuration Wizard* (on page 37).

    > **Note**: If you are using WebSphere, you can still use the P6 EPPM Configuration Wizard to configure your database and BI Publisher, BPM, and content repository installations with P6 EPPM.

If you want to configure your applications manually and/or you are using WebSphere, click **Cancel** to exit the configuration wizard. See *Where to Go From Here - Pre Configuration Wizard* (on page 34) to see what guides you will need to configure your applications manually or in WebSphere.

Where to Go From Here - Pre Configuration Wizard

The configuration process provides you with several options to configure your applications to work with P6 EPPM. The following sections describe your options.

Using the P6 EPPM Configuration Wizard To Configure P6 EPPM

Oracle recommends you use the P6 EPPM Configuration Wizard to configure P6 EPPM, its applications, and WebLogic. With this option, you can install or upgrade your database, deploy your P6 EPPM applications in WebLogic, and configure a content repository, BI Publisher, and BPM to work with P6. Continue to *About the P6 EPPM Configuration Wizard* (on page 37) to use this option.

> **Note**: If you are using WebSphere, you can still use the P6 EPPM Configuration Wizard to install or upgrade your database and connect BPM, BI Publisher, and the content repository to P6 EPPM; however, you must manually deploy your P6 EPPM applications in WebSphere. The wizard will not deploy the P6 EPPM applications into WebSphere.

Manually Configuring Your Applications

Database

You can manually install or upgrade your database. If you want to install or upgrade your database manually, you can still use the wizard to deploy your P6 EPPM applications in WebLogic and configure a content repository, BI Publisher, and BPM to work with P6.

If you want to install or upgrade your database manually, see the *Manually Installing the P6 EPPM Database* or *Manually Upgrading the P6 EPPM Database* guide.

P6 EPPM Applications

You can manually deploy your P6 EPPM applications in WebLogic or WebSphere. Depending on which server you are using, use any of the following:

For WebLogic:

▶ *P6 and WebLogic Configuration Guide*
▶ *P6 Team Member and WebLogic Configuration Guide*
▶ *P6 EPPM Web Services and WebLogic Configuration Guide*
▶ *P6 Integration API and WebLogic Configuration Guide*

For WebSphere:

▶ *P6 and WebSphere Configuration Guide*
▶ *P6 Team Member and WebSphere Configuration Guide*
▶ *P6 EPPM Web Services and WebSphere Configuration Guide*
▶ *P6 Integration API and WebSphere Configuration Guide*

Additional Applications

You can also use the Primavera P6 Administrator to connect additional applications to P6. Depending on your application, use the following:

▶ *Connecting the Content Repository to P6*
▶ *Connecting BI Publisher to P6*
▶ *Connecting BPM 11g to P6*
▶ *Connecting BPM 12c to P6*

About the P6 EPPM Configuration Wizard

The P6 EPPM Configuration Wizard will allow you to:

- ▸ Install or upgrade your database.
- ▸ Deploy your P6 EPPM applications in WebLogic and setup managed servers.
- ▸ Configure BI Publisher, BPM 11g, and your content repository (WCCC 11g or CMIS) with P6.

Use the P6 EPPM Configuration Wizard to configure your suite. Before running the configuration wizard, consider the following:

- ▸ You must be on an Oracle server or Microsoft SQL Server.
- ▸ You must have   Sun JDK installed. See the *Tested Configurations* document for information on supported versions.
- ▸ If you want to use the configuration wizard to deploy any of your P6 EPPM applications in WebLogic, you must have WebLogic installed.
- ▸ If you are using WebSphere, you can still use the configuration wizard to install or upgrade your database and connect BI Publisher and the content repository to P6 EPPM; however, you must manually deploy your P6 EPPM applications in WebSphere. The wizard will not deploy your P6 EPPM applications into WebSphere for you.

On the **Welcome** screen, click **Next** if you want to use the wizard to configure your suite. Click **Cancel** if you want to configure your applications manually and/or are using WebSphere.

In This Section

Configuring Your Database

You must either install or upgrade your database or already have the 15.1 database installed to use this wizard. If you want to manually install or upgrade your database, leave the P6 EPPM Configuration Wizard open and go to the *Manually Installing the P6 EPPM Database* or *Manually Upgrading the P6 EPPM Database* guides. If you want to automatically install or upgrade your database, continue to the next section.

Using the Database Configuration Screen

On the **Database Configuration** screen:

1) Choose one of the following:
   ▸ Select **Create a new P6 EPPM database** if you are creating a new database.

   Select the **Install Sample Projects** option if you want to include sample project data in a non-production database. If you do not select the Install Sample Projects option, the P6 EPPM database loads empty data in a secure state and includes only the most basic information needed to run.

   ▸ Select **Upgrade an existing P6 EPPM database** if you are upgrading your database.
   ▸ Select **Connect to an existing P6 EPPM 15.1 database** if you already installed the 15.1 database and want to configure your applications with this database.

2) Click **Next**.

Using the Database Type & Connection Screen

On the **Database Type & Connection** screen:

1) For the **Database Type** option, choose **Oracle** or **Microsoft SQL Server**.
2) In the **Database Host Address** field, enter the server machine name or IP address where you installed the database.
3) In the **Database Host Port** field, enter or verify the port number for your database.

   The default for Oracle is 1521.

   The default for Microsoft SQL Server is 1433.
4) In the **DBA** or **Public Username** field, enter or verify your user name.

   The default for Oracle is 'system'.

   The default for Microsoft SQL Server is 'sa'.

   The default public username is 'pubuser'.
5) In the **DBA** or **Public User Password** field, enter the password to log into the database.
6) In the **Database Name** field:
   a. Enter the name of your database.
   b. Select **SID** (for Oracle 11g) or **Service** (for Oracle 11g or 12c) based on the database you installed.
7) Click **Next**.

Using the Database User Validation Screen for an Oracle Database

Use one of these chapters based on your database version:

▸ For 7.0 and earlier

   Using the Database User Validation Screen When Upgrading from a 7.0 and Earlier Oracle Database (on page 39)

▸ For 8.0

Using the Database User Validation Screen When Upgrading from an 8.0 Oracle Database (on page 39)

▸ For 8.1

Using the Database User Validation Screen When Upgrading from an 8.1 or Later Oracle Database (on page 39)

Using the Database User Validation Screen When Upgrading from a 7.0 and Earlier Oracle Database

On the **Database User Validation** screen:

1) In the **Privileged Username** field, select your privuser name.
2) In the **Public Username** field, select your pubuser name.
3) In the **Public User Password** field, enter your pubuser password.
4) In the **Background Username** field, create a bgjobuser name.
5) In the **Background User Password** and **Confirm Password** fields, enter a bgjobuser password.
6) In the **Reporting Username** field, create a pxrptuser name.
7) In the **Reporting User Password** and **Confirm Password** fields, enter a pxrptuser password.
8) Click **Next**.

Using the Database User Validation Screen When Upgrading from an 8.0 Oracle Database

On the **Database User Validation** screen:

1) In the **Privileged Username** field, select your privuser name.
2) In the **Public Username** field, select your pubuser name.
3) In the **Public User Password** field, enter your pubuser password.
4) In the **Background Username** field, select your bgjobuser name.
5) In the **Background User Password** field, enter your bgjobuser password.
6) In the **Reporting Username** field, create a pxrptuser name.
7) In the **Reporting User Password** and **Confirm Password** fields, enter a pxrptuser password.
8) Click **Next**.

Using the Database User Validation Screen When Upgrading from an 8.1 or Later Oracle Database

On the **Database User Validation** screen:

1) In the **Privileged Username** field, select your privuser name.
2) In the **Public Username** field, select your pubuser name.
3) In the **Public User Password** field, enter your pubuser password.
4) In the **Background Username** field, select your bgjobuser name.
5) In the **Background User Password** field, enter your bgjobuser password.
6) In the **Reporting Username** field, select pxrptuser name.

7) In the **Reporting User Password** field, enter your pxrptuser password.

8) Click **Next**.

Using the Database User Validation Screen for a Microsoft SQL Server Database

Use one of these chapters based on your database version:

▶ For 8.0 or earlier

▶ For 8.1

Using the Database User Validation Screen when Upgrading from an 8.0 or Earlier Microsoft SQL Server Database

On the **Database User Validation** screen:

1) In the **Public Username** field, select your pubuser name.

2) In the **Public User Password** field, enter your pubuser password.

3) In the **Use Existing Reporting User** field, select the option if you already have a pxrptuser that you want to use.

4) In the **Reporting Username** field, enter a pxrptuser name.

5) In the **Reporting User Password** and **Confirm Password** fields, enter a pxrptuser password.

6) Click **Next**.

Using the Database User Validation Screen when Upgrading from an 8.1 or Later Microsoft SQL Server Database

On the **Database User Validation** screen:

1) In the **Public Username** field, select your pubuser name.

2) In the **Public User Password** field, enter your pubuser password.

3) In the **Reporting Username** field, select a pxrptuser name.

4) In the **Reporting User Password** and **Confirm Password** fields, enter a pxrptuser password.

5) Click **Next**.

Configuring Your WebLogic Server with P6 EPPM

In this section, you will configure the P6 EPPM applications you installed with the installation wizard. The P6 EPPM Configuration Wizard will set up managed servers and deploy your P6 EPPM applications in the WebLogic domain that you installed.

> **Note**: If you are using WebSphere, you cannot use the wizard to deploy your P6 EPPM applications. You must deploy your applications in WebSphere manually. See *Manually Configuring Your Applications* (on page 34) for the guides you will need.

Using the P6 Configuration Settings Screen

On the **P6 Configuration Settings** screen:

1) Do one of the following:

 ‣ If a P6 configuration does not exist, in the **Create a new configuration** field, enter your new configuration name.

> **Note:** Oracle recommends that you name your configuration after the P6 EPPM application that you chose to install at the beginning of your installation process. For example, *Primavera P6 Configuration* or *Primavera TM Configuration.*If you chose the **Select All** option at the begining of the installation process, you can only create a configuration for P6.

 ‣ If you already created a configuration, choose it from the **Use an existing configuration** option, or create a new configuration.

> **Note**:
>
> ▪ If you are upgrading from a previous version of P6 against the same database, choose the option to create a new configuration. This is necessary to accommodate new configuration settings. See the *P6 EPPM Post Installation Administrator's Guide* for more information about configurations and the Primavera P6 Administrator.
>
> ▪ You can edit the settings for this configuration through the Primavera P6 Administrator.

2) Click **Next**.

Using the Application Server Configuration Screen

On the **Application Server Configuration** screen:

1) Select the **Configure WebLogic** option.

> **Notes**:
>
> ▪ If you do not want to configure WebLogic right now, ensure the **Configure WebLogic** option is clear and click **Next** to continue to the next screen. If you want to configure WebLogic manually, refer to the *P6 and WebLogic Configuration Guide.*
>
> ▪ If you are using WebSphere you can skip this section by ensuring the **Configure WebLogic** option is clear and clicking **Next** to continue to the next screen. Use the *P6 and WebSphere Configuration Guide* to configure P6 and WebSphere.

2) Choose one of the following:

> ▸ **Create a new WebLogic domain** if you are creating a new domain.
> ▸ **Use an existing WebLogic domain** if you already have a WebLogic domain.
>
> > **Note**: This is the domain where the wizard will create your managed servers for each application.

3) Select **Deploy Oracle WSM Policy Manager** if you are integrating with BPM 11g or later.
4) Click **Next**.

Using the Configure WebLogic Screen

On the **Configure WebLogic** screen:

1) In the **WebLogic Server Home** field, verify or choose the location of your WebLogic home. For example, C:\Oracle\Middleware\wlserver_10.3.
2) In the **Domain Home** field, enter or verify your WebLogic domain home name.
3) In the **Port** field, enter or verify the port number that your WebLogic domain is using. The default is 7001.
4) In the **Administration Username** field, create or verify your administrative user name for the WebLogic domain you defined on the previous screen.
5) In the **Password** and **Confirm Password** fields, enter the password for your administrative user name.
6) Click **Next**.

Connecting Applications to P6 EPPM

If you installed a content repository, BI Publisher, or BPM, you can use the P6 EPPM Configuration Wizard to configure these applications to work with P6 EPPM. The settings in this wizard correspond to the settings in the Primavera P6 Administrator.

> **Notes**:
>
> - You can configure the settings for these applications later in the Primavera P6 Administrator. See *Manually Configuring Your Applications* (on page 34) for the guides you will need.
> - If you are using an existing P6 configuration, the wizard will skip the content repository, BI Publisher, and BPM screens.

Using the Content Repository Selection Screen

On the **Content Repository Selection** screen:

1) Select the **Connect to a Content Repository** option.

> **Note**: If you would rather configure your content repository manually or do not have a content repository installed, ensure the **Connect to a Content Repository** option is clear and click **Next**. See the *Connecting the Content Repository to P6* guide for more information.

2) Choose **Oracle Webcenter Content Core Capabilities**, **CMIS, Microsoft SharePoint,** or **Oracle Database**.
3) Click **Next**.

Using the Content Repository Configuration Screen for Oracle Webcenter Content Core Capabilities

On the **Content Repository Configuration** screen:

> **Note**: Ensure the settings you entered in when you configured the content repository match the settings you enter below.

1) In the **Host** field, enter the machine name or IP address of the content repository server.
2) In the **Port** field, enter the IntradocServerPort number of the content repository server. By default, this is 4444. To find the port number, navigate to *WCCC_Home*\ucm\cs\config\.
   a. Open the **config.cfg** file.
   b. Find the IntradocServerPort line, which contains the port number.
3) In the **Oracle Home** field, enter the path to the P6 EPPM content repository files on the content repository server, as specified when you configured your content repository. This setting is required.
   Example:
   //Contribution Folders/Production/Oracle Primavera/
4) In the **Oracle Security Group** field, enter the name of the Security Group assigned to the document folder created in WebCenter for P6 EPPM documents, as specified when you configured the content repository.
5) In the **Oracle Security Account** field, enter the name of the Security Account for P6 EPPM documents, as specified when you configured the content repository.
   If you did not enable security accounts, leave this setting blank.
6) In the **Oracle Document Type** field, enter the document type for P6 EPPM documents, which can be either an existing document type or a new one, as specified when you configured the content repository. If you enabled Document Types, you must configure this setting.
   For example:
   Enter the Document Type as Document.
7) In the **Metadata Prefix** field, enter the prefix added to P6 EPPM metadata fields, as specified when you configured the content repository.

8) In the **Admin User** field, enter the user name with administrative privileges, as specified when you configured the content repository. This setting is required.

9) In the **Authentication Mode** field, enter authentication mode used to access the content repository server. P6 EPPM users cannot access content repository functions if you do not configure this setting.

If you choose "Multiple User", all P6 EPPM content repository-related user names must match the equivalent content repository user name. For example, a P6 EPPM user named "Joe" must have an equivalent user named "Joe" in the content repository.If you choose "Single User", the administrative user specified in the setting above must have access to all appropriate Security Groups to browse to documents outside of the P6 EPPM home folder.

10) Click **Next**.

Using the Content Repository Configuration Screen for Microsoft SharePoint

On the **Content Repository Configuration** screen:

> **Note**: Ensure the settings you entered in *Configuring Microsoft SharePoint to Work with P6* (on page 25) match the settings you enter below.

1) In the **Login Name** field, enter a SharePoint user name with administrative privileges.

> **Note**: You do not need to include your domain. You just need your user name.

2) In the **Password** field, enter the password for the SharePoint login name.

3) In the **Authentication Mode** field, select the mode used to connect to the SharePoint content repository database. P6 EPPM users cannot access content repository functions if you do not configure this setting.

If you choose "Multiple User", all P6 EPPM content repository-related user names must match the equivalent SharePoint user name. For example, a P6 EPPM user named "Joe" must have an equivalent user named "Joe" in SharePoint.

If you choose "Single User", the administrative user specified in the setting above must have access to all appropriate SharePoint libraries to browse to documents outside of the P6 EPPM home folder.

4) In the **Host Name** field, enter the machine name or IP address of the SharePoint server.

5) In the **Domain** field, enter the domain where the SharePoint server resides.

6) In the **Document Library URL** field, enter the URL of the P6 EPPM document library on SharePoint that you created when you configured SharePoint. The URL includes the machine name (or IP address) of the content repository server and the path to the content repository library.

   Example format:

   http://*<hostname>:<port>/<domain>/<doclib>*

   > **Note**:
   > - Do not put a / at the end of the URL.
   > - Ensure there are no spaces in the URL.

7) In the **Web Service URL** field, enter the URL of the Web Service used to connect P6 EPPM to SharePoint, as specified when you configured SharePoint. The URL includes the machine name (or IP address) of the content repository server, port number of the server, and web service name.

   Example format:

   http://*<hostname>:<port>/WS_FPRPC*

   > **Note**: Do not put a / at the end of the URL.

8) In the **External Document Library URL** field, enter the URL of an external document library. If you need to connect to a non-P6 EPPM document library, you must configure this setting.

   Example format:

   http://*<hostname>:<port>/<extdoclib>*

   > **Note**: Do not put a / at the end of the URL.

9) Click **Next**.

Using the Content Repository Configuration Screen for CMIS

On the **Content Repository Configuration** screen:

1) In the **Login Name** field, enter the user name for your content repository.
2) In the **Password** field, enter the password for the user name you entered above.
3) In the **Authentication Mode** field, enter authentication mode used to access the content repository server. P6 EPPM users cannot access content repository functions if you do not configure this setting.

   If you choose "Multiple User", all P6 EPPM content repository-related user names must match the equivalent content repository user name. For example, a P6 EPPM user named "Joe" must have an equivalent user named "Joe" in the content repository.

   If you choose "Single User", the administrative user specified in the setting above must have access to all appropriate Security Groups to browse to documents outside of the P6 EPPM home folder.
4) In the **Repository Name** field, enter the name for your content repository.

5) In the **Document Home** field, enter the location of your documentation home where you want to store P6 documents.

6) In the **Web Service URL** field, enter the URL for your web services home.

Using the BI Publisher Screen

On the **BI Publisher** screen:

1) Select the **Connect to BI Publisher** option.

> **Note**: If you would rather configure BI Publisher manually or do not have BI Publisher installed, verify the **Connect to BI Publisher** option is clear and click **Next**. See the *Connecting BI Publisher to P6* guide for more information.

2) In the **Server URL** field, enter the URL used to connect to the BI Publisher web service to P6. For example,
`http://serverIP:port/xmlpserver/services/PublicReportService?WSDL`

3) In the **Version** field, enter the version of BI Publisher (11.1.1.7.x) that you want to integrate with P6.

4) In the **Folder Paths** field, enter the relative path to the BI Publisher P6 reports folder where P6 will search for reports.

Example format (the forward slash is required):

/P6REPORTS

> **Notes**:
>
> - You can find the relative path (for example, /P6Reports) in the following folder:
> - For 11g,
>   `%weblogic_home%\user_projects\domains\bifoundation_`
>   `domain\config\bipublisher\repository\Reports`

5) In the **Admin Username** field, enter a BI Publisher web services user name with administrative privileges (for example, PxRptUser).

6) In the **Password** field, enter the password for the administrative user name.

7) In the **Personal Folders** field, select the option (true) to enable personal folders per user. If you do not want to use personal folders, leave the option clear. Users have their own personal folders where they can store their objects. Only the user who created and saved the content in the folder can access the folder.

8) In the **Scrub Username** field, select the option (true) to enable the setting or leave it clear (false) to ensure it's disabled.

This setting controls whether special characters (non-alphanumeric) are removed from the user name when connecting to BI Publisher. The default is 'false,' meaning special characters will not be removed.

If you are using the P6 EPPM Extended Schema for BI Publisher reporting, leave the setting as false.

If you are using the P6 ODS Schema for BI Publisher reporting, change the setting to true. Setting the value to true will allow the user's security context (user name) to format properly before it goes to BI Publisher. This allows reporting queries to perform against the ODS tables.

9) In the **Cache Timeout** field, enter how long cached report definitions should appear.

The default is 1d.

10) Click **Next**.

Using the BPM Workflows Screen

On the **BPM Workflows** screen:

1) Select the **Connect to BPM** option.

> **Note**: If you would rather configure BPM manually or do not have BPM installed, ensure the **Connect to BPM** option is clear and click **Next**. See *Connecting BPM 11g to P6* for more information.

2) In the **Connector file location** field, enter the full path (including the file name) where you copied the connector files.

For BPM 11g it might be:

c:/oracle/bpm1111x/eppmjars/prm-bpm-connector-11.1.1.x-v1.0.jar or /home/oracle/bpm1111x/prm-bpm-connector-11.1.1.x-v1.0.jar

3) In the **BPM library path** field enter the directory where you copied all the 11g jars for BPM 11g.

> **Notes**:
>
> - To satisfy these requirements, this admin setting can contain multiple path elements. You must separate multiple path elements with a semicolon. For example:
>   C:\bpm11g-client-jars;C:\bpm11g-connector-jars
> - If the above settings are incorrect or the BPM jar files are incomplete, you will see an error message when you try to configure BPM. Verify that your settings and jar files are correct.

Using the BPM Configuration Screen for 11g

On the **BPM Configuration** screen, to configure P6 to use BPM 11g, add the following settings:

1) In the **bpm.user** field, enter the BPM 11g user with administrative access to BPM.

2) In the **bpm.password** field, enter the password for the user.

3) In the **bpm.t3.url** field, enter the T3 URL for your Oracle SOA configuration. For example: t3://*<host_name>*:*<port>*/soa-infra

4) In the **bpm.security.realm** field, enter the name of the security realm used by BPM. This is jazn.com by default.

5) In the **bpm.soap.url** field, enter the URL for the SOAP services. Usually this URL takes the form of http://*<host_name>*:*<port>*.

6) In the **bpm.workspace.url** field, enter an address in the form of `http://<host_name>:<port>` that indicates where the BPM Workspace application is hosted.

> **Note**: The host can be an IP address or a host name such as a machine name.

7) In the **bpm.partition** field, enter the name of the SOA partition containing the BPM composite applications you would like to use in P6. The default partition name is `default`.

8) Click **Next**.

Completing Your P6 EPPM Installation

Once you have finished entering your configuration settings, you can verify all the applications you configured. Once you click **Configure**, the wizard will setup your P6 EPPM environment and start WebLogic. After the wizard finishes, you will be able to login and use all of your applications.

Using the Configuration Review Screen

On the **Configuration Review** screen:

1) Verify all your configuration settings are correct.
2) Click **Next**.
3) On the **Acknowledgment** dialog box, click **OK** to confirm you have read the information.

   If you are upgrading from P6 8.2 or lower version and have been using a content repository configured with P6, you will need to run the **Document Migration Utility** located in P6 home after the installation completes.

4) On the **Start Configuration?** dialog box, click **Yes** to confirm you want the wizard to configure your applications.

   Click **No** if you do not want to continue with the configuration.

Using the Configuration Progress Screen

On the **Configuration Progress** screen, the wizard will let you know when each item is configured. The configuration process will take several minutes. When the configuration is done, all of your applications will have a green check next to them.

The configuration wizard will do any of the following based on the selections you made in the previous screens:

▶ Create your database.
▶ Create or upgrade the Primavera Configuration.
▶ Create a WebLogic domain.
▶ Create bootstrap files for your applications.
▶ Create managed servers and deploy the applications you installed into them.
▶ Configure integrations with other servers for the content repository, BI Publisher, and BPM.
▶ Configure URLs to the P6 Help in the Primavera P6 Administrator.

▶ Copy the wsdl4j-1.6.2.jar to the JDK Endorsed folder for P6 EPPM Web Services.
▶ Create Start menu items for P6 EPPM URLs and start/stop scripts (only on Windows 2003 and 2008).
▶ Sets your parameters in WebLogic.

   For example, it will set your bootstrap variables and Java heap settings for you. This will connect P6 to your other P6 EPPM applications and ensure that your environment is set up for optimal performance.

When the configuration wizard completes this process:

1) Note the location of the log file. Use the log file to view what happened during setup and see what went wrong if an error occurred.
2) Click **Next**.

Using the Configuration Complete Screen

On the **Configuration Complete** screen:

1) Click any link to go to the default URL for each of your applications.
2) Click the **Save Configuration** button.

> **Note**: The HTML file you save contains the default URLs and other information for your P6 EPPM applications.

   a. Choose a location where you want to store your HTML file (Oracle recommends using the P6 EPPM directory you created when you installed your applications).
   b. In the **File Name** field, verify or enter a name for your configuration HTML file.
   c. Click **Save**.
   d. On the **Configuration Saved Successfully** dialog box, click **OK**.
3) Click **Finish**.

> **Note**: Once you click **Finish**, the wizard will start WebLogic for you so you can begin using your applications instantly.

Default Locations Created by the Wizard

The configuration wizard creates the following defaults.

Oracle Primavera EPPM Home

> ▶ C:\p6eppm_1\
> ▶ Holds all your P6 EPPM applications folders and files

> > **Note**:
> >
> > - The local drive location is the default the wizard provides. If you changed it, it will be noted in the HTML file you saved in *Using the Configuration Complete Screen* (on page 49).
> > - You will need to enter your IP address where it says 'server' in the URLs below.

> ▶ **WebLogic Administration Console**
> **Port**: 7001
> **URL**: http://server:7001/console

> ▶ **P6**
> **Port**: 8203
> **URL**: http://server:8203/p6

> ▶ **P6 Integration API**
> **Port**: 8205
> **URL**: http://server:8205/PrimaveraAPI

> ▶ **P6 EPPM Web Services**
> **Port**: 8206
> **URL**: http://server:8206/p6ws/services

> ▶ **P6 mobile**
> **Port**: 8207
> **URL**: http://server:8207/p6tmws

> > **Note**: This is the URL you will enter when you sign into the P6 mobile app on your mobile device. The actual URL will not work in a browser.

> ▶ **P6 Team Member Web**
> **Port**: 8207
> **URL**: http://server:8207/p6tmweb

▶ **E-mail Statusing Service**

File Name: p6tm-email-service.zip

Default Location: C:\P6EPPM_1\tmws or /usr/P6EPPM_1/tmws

> **Note**: You will have to unzip the file and configure the email services before you can update status through email. See the *P6 EPPM Post Installation Administrator's Guide*.

▶ **P6 Professional Cloud Connect**

Port: 8208

URL: http://server:8208/p6procloudconnect

> **Note:** This URL (case-sensitive) must be provided to P6 Professional users to enable them to setup and configure a new database connection to the P6 Pro Cloud Connect service in the P6 Professional database configuration utility.
>
> For more details on establishing the P6 Pro Cloud Connect connection in P6 Professional, see the *P6 Professional for EPPM Installation and Configuration Guide*.

Configuring the Microsoft SQL Server Database

To verify that the isolation level setting on the upgraded database has been set to "read committed snapshot":

1) Open Microsoft SQL Server Management Studio.

2) Open a new query window for the updated database and execute the following command:

   `dbcc useroptions`

3) Look for **isolation level** in the Set Option column and verify that the value is set to **read committed snapshot**.

4) If the value is **read committed snapshot**, you do not need to do anything. If the value is set to **read committed**, proceed to step 5.

> **Caution:** Only the connection executing the alter database command is allowed in the database. You must close all connections in the database until the execution of the command finishes.

5) Execute the following command to fix the isolation level setting:

   `alter database` *database name* `set read_committed_snapshot on`

   Your database is now ready to use with R15.1.

Post-Upgrade Procedures

Consider the following after you upgrade your database.

Creating a New Primavera P6 Administrator Configuration

To create a Primavera P6 Administrator configuration:

1) Do one of the following:
   ▸ On Windows platforms, run `dbconfigpv.cmd` (located in the *p6home* directory that you specified when installing P6).
   ▸ On UNIX platforms, change to the *p6home* directory that you specified when installing P6, and run `dbconfigpv.sh`.
2) On the Setup and Configuration of the Primavera P6 Database dialog box, select the database type.
3) On the Please enter the following information. . . dialog box:
   a. Specify the database connection parameters. Type your database user name (for example, pubuser) and password, the database name, host address, and host port. The database name, host address, and host port are specific to your database installation. The Database Host Port field displays the default port for the database type you selected. You can edit this port.
   b. To use the SSL protocol to securely communicate between the P6 application server and the database server, select the SSL option. If you select the SSL option, you must specify an SSL-enabled port number in the Database Host Port field.

   > **Notes:**
   > - See the appropriate database server documentation and the My Oracle Support's Knowledge Articles for information on configuring SSL.
   > - Using the SSL protocol will impact database performance.

   c. Ensure that the Public Group ID is 1 for a standard configuration.
4) Select **Create a new configuration** and then enter the name of your new configuration (for example, Team Member Configuration).
5) Click **Next**.
6) Click **OK**.

Updating an Existing Primavera P6 Administrator Configuration

To update an existing Primavera P6 Administrator configuration:

1) Do one of the following:

   ▸ On Windows platforms, run `dbconfigpv.cmd` (located in the *p6home* directory that you specified when installing P6).

   ▸ On UNIX platforms, change to the *p6home* directory that you specified when installing P6, and run `dbconfigpv.sh`.

2) On the Setup and Configuration of the Primavera P6 Database dialog box, select the database type.

3) On the Please enter the following information. . . dialog box:

   a. Specify the database connection parameters. Type your database user name (for example, pubuser) and password, the database name, host address, and host port. The database name, host address, and host port are specific to your database installation. The Database Host Port field displays the default port for the database type you selected. You can edit this port.

   b. To use the SSL protocol to securely communicate between the P6 application server and the database server, select the SSL option. If you select the SSL option, you must specify an SSL-enabled port number in the Database Host Port field.

   > **Notes:**
   >
   > ▪ See the appropriate database server documentation and the My Oracle Support's Knowledge Articles for information on configuring SSL.
   >
   > ▪ Using the SSL protocol will impact database performance.

   c. Ensure that the Public Group ID is 1 for a standard configuration.

4) Select **Use an existing configuration** and then select a configuration from the list.

5) Click **Next**.

6) Click **OK**.

Migrating the Content Repository if Upgrading P6

If you upgraded P6 from a previous version, you must:

1) Run the migration utility before connecting the upgraded environment back to the Content Repository. Running the migration utility will ensure all project folder names in the Content Repository change from Database IDs to their Project ID field (from P6).respective

   a. Go to the **P6EPPM_Home/p6** folder.

   b. Run **migrationtool.cmd** or **migrationtool.sh** (based on your operating system).

Upgrading from Previous Universal Content Management Version to WCCC

If you were using a previous version of Universal Content Management (UCM), you will notice many changes when you upgrade to WCCC 11.1.1.8 or later. To maintain your documents from P6, you should ensure folder_g updates to a framework folder correctly. To do this, you should:

1) Shutdown all the P6 applications connecting to your current content repository.
2) Run the migration utility.
   a. Go to the **P6EPPM_Home/p6** folder.
   b. Run **migrationtool.cmd** or **migrationtool.sh** (based on your operating system).

      > **Note**: **Users** is a restricted folder name for folders within the WCCC 11.1.1.8 or later folder structure.

3) Note the folder database converts project IDs to project short names.
4) Upgrade UCM 11.1.1.5 to WCCC 11.1.1.8 or later using the upgrade guide provided with the UCM media packs.
   a. Enable both folder_g and framework folders components.

      > **Note**: You should enable both these components only when you want to migrate data from folder_g to the Framework folders.

   b. In the **Migration** menu under **Administration** section, migrate folder_g to the Framework folders.
5) After the migration:
   a. Locate the **migration_run****** folder that was created.
   b. Move all the folders and documents under this folder to the Content repository home folder that you want to use.
   c. Ensure you select **inhibit propagation** to ensure proper movement of documents and folders.
6) After the move completes, you can start using the documents with the correct content repository home.

Tips
▶ Have 4-6 GB open memory space.
▶ Don't propagate changes when given the option.

Start the Application Server

Before you can use P6 EPPM after your upgrade, you must restart your application server.

Starting WebLogic for P6 EPPM Applications

To start WebLogic:

1) Navigate to the *<weblogic_home>*/user_projects/domains/*<your_domain>* directory.

2) Run the startWebLogic script.

- ‣ `startWeblogic.cmd` on Windows machine
- ‣ `startWeblogic.sh` on Unix machine

3) If prompted for a user name and password in the WebLogic console window, type in the administrative user name and password you specified when creating the domain.

Starting WebSphere for P6 EPPM Applications

To start WebSphere for any P6 EPPM application:

1) On the Administrative Console main screen, in the left-hand navigation, expand **Applications**.
2) Click **WebSphere enterprise applications**.
3) Select the option for your application (for example, **p6**).
4) Click **Start**.

> **Notes**:
>
> - Repeat these steps for any application you want to start, including your help and tutorials files.
> - Do not do this step for the any help.war file if you want to use OTN for your help. The OTN link is the default link in the Primavera P6 Administrator. OTN will have the most up-to-date help documentation.

Creating a Project Template From Projects

After you have converted your Methodology Management data to projects and upgraded your database to 15.1, you can create your project templates.

To create a project template:

1) Click **Projects**.
2) On the **Projects** navigation bar, click **EPS**.
3) On the **EPS** page, click the **Actions** ▼ menu and select **Add** ▶ **Add Project Template**.
4) In the **Add Project Template** dialog box, choose the **General** tab.
5) On the **General** tab:
   a. In the **Template ID** field, type in a unique ID for the template.
   b. In the **Template Name** field, type in a unique name for the template.
   c. In the **EPS** field, click the corresponding 🖳 and choose the EPS where you want to store the template.
   d. In the **Responsible Manager** field, click the corresponding 🖳 and choose a responsible manager.
   e. In the **Copy from existing project or template field**, click the corresponding 🖳 and choose the methodology project you created in *Converting Methodologies to Projects* (on page 15).
   f. Click **Create**.

Requirements After the Upgrade from R8 or later to R15.1

The following list summarizes the procedures you need to perform after the upgrade to P6 EPPM R15.1:

User Name and Password Procedures

▸ 🛡 For security reasons, Oracle strongly recommends that you replace the default database users' (admuser, privuser, pubuser, bgjobuser, and PxRptUser) passwords immediately after a manual database installation or an upgrade from P6 version 7.0 and earlier. Do not use special characters in the database name, privileged user, public user, or PX Reporting user name for example: { } [ ] : ; < > , . ? ! @ # $ % ^ & * ( ) - _ | / \ ~ `

▸ 🛡 Oracle recommends using strong passwords. Strong passwords in P6 EPPM contain between 8 and 20 characters and at least one numeric and one alpha character. To further strengthen the password, use a mixture of upper and lower case letters.

▸ See Modifying Private Database Logins for P6 EPPM for instructions on how to replace the private database login. For all other database user names and passwords, use the tools included with the database.

Application Configuration Procedures

▸ Install the new P6, P6 Professional, and any additional components.
▸ Assign new or modified privileges to users. See information about defining global security and project security profiles in the *P6 EPPM Post Installation Administrator's Guide.*

Requirements After the Upgrade from Version 6.2.1 through 7.0 to 15.1

The following list summarizes the procedures required and recommended to perform AFTER the upgrade to P6 EPPM R15.1:

User Name and Password Procedures

▸ 🛡 For security reasons, Oracle strongly recommends that you replace the default database users' (admuser, privuser, pubuser, bgjobuser, and PxRptUser) passwords immediately after a manual database installation or an upgrade from P6 version 7.0 and earlier. Do not use special characters in the database name, privileged user, public user, or PX Reporting user name for example: { } [ ] : ; < > , . ? ! @ # $ % ^ & * ( ) - _ | / \ ~ `

▸ 🛡 Oracle recommends using strong passwords. Strong passwords in P6 EPPM contain between 8 and 20 characters and at least one numeric and one alpha character. To further strengthen the password, use a mixture of upper and lower case letters.

▸ See Modifying Private Database Logins for P6 EPPM for instructions on how to replace the private database login. For all other database user names and passwords, use the tools included with the database.

Application Configuration Procedures

▸ Install the new P6, P6 Professional, and any additional components.

▸ Starting with P6 EPPM R8, all recurring job service functions are hosted by P6. Due to this change, after upgrading to P6 EPPM R8 or later, you must configure Scheduled Services settings in the Primavera P6 Administrator to use this functionality. Also, if you're upgrading from version 7.0 or earlier, you must RESUMMARIZE ALL PROJECTS to accurately reflect your summary data. See the *P6 EPPM Post Installation Administrator's Guide* for information on Scheduled Services and configuring separate servers for job services.

▸ Assign new or modified privileges to users. See information about global and project security profiles in the *P6 EPPM Post Installation Administrator's Guide.*

▸ All previously defined module access (except Contributor module access (formerly Team Member)), security profiles, OBS access, and resource security settings will still apply to existing users after the database upgrade. For users who had Contributor and P6 Professional module access, they will keep their access during the database upgrade; however, once you edit these users post-upgrade, P6 will remove Contributor module access to comply with P6 EPPM functionality. The upgrade process will remove only Contributor access during the upgrade if users had Contributor and additional module access assignments other than P6 Professional; all other assignments will remain selected. See the *P6 EPPM Post Installation Administrator's Guide* for information on defining module access, security profiles, OBS access, and resource security.

▸ During the upgrade to P6 EPPM 15.1, some P6 Activity Views settings will reset. After the upgrade, use the Customize Detail Windows feature to modify the settings that should appear for each view. See the *P6 Help* for information on how to edit Activity Views.

▸ Starting with P6 EPPM R8, P6 saves filter definitions globally. Filters still work for Activity Views, but all standard filter assignments reset during the upgrade. Due to this change, views that had Standard Filters applied will show all activities after the upgrade. Reapply filters after the upgrade finishes. See the *P6 Help* for information on how to edit Activity Views.

Security Procedures

▸ 🛡 For security reasons, Oracle strongly recommends that you replace the default Admin Superuser (admin) immediately after a manual database installation or an upgrade from P6 version 7.0 and earlier. See *The Default Admin Superuser* in the *P6 EPPM Post Installation Administrator's Guide* for guidelines on this process.

Clearing the Cache

Once you have updated all of your configurations, you should clear the cache in your browser. If you do not clear your cache, the P6 EPPM Help might not display correctly. For more information about clearing the cache in your browser, see your browser help.

Database Administration

Read this chapter to learn how to configure the job scheduler supplied by your RDBMS, how to optimize performance of your P6 EPPM database, and how to configure the PRMAUDIT feature to monitor edits, deletions, and additions to the databases.

In This Section

Background Processes and Clean Up in P6 EPPM

Because clean up tasks can be resource intensive and time consuming, in P6 EPPM, these tasks are initiated by two background jobs that run on the database server using the background job processes user name:

- ▶ SYMON (System Monitor), responsible for running procedures that take less than a few seconds to complete.
- ▶ DAMON (Data Monitor), responsible for running procedures that take longer than a few seconds to complete.

Both of these jobs are pre-configured with default settings. Since the default settings are optimal for most environments, you generally do not need to tune them. However, if you need to optimize your background process further, you can use the background job processes user to change the settings to tune the behavior of the background jobs for specific environments.

The background process will:

- ▶ Update the settings table with a record each time a job runs.
- ▶ Update the settings table with a HeartBeatTime record for both the SYMON and DAMON processes. The background processes regularly refresh the record to indicate that they are still running.

When you initiate background jobs:

▸ Execute the stored procedure **INITIALIZE_BACKGROUND_PROCS**.
▸ Locate the logs of background process activity in **BPLOGS** and **SETTINGS** tables within the Primavera database.

PX Tables Clean Up Procedure

To avoid operational problems for P6, PX table entries are not automatically deleted when you delete data from P6 tables. You can use the following clean up procedure to clear the obsolete entries in PX tables.

1) Run the CLEAN_PX_DELETE stored procedure to purge obsolete entries in the PX tables:

   For Oracle:
   ```
   BEGIN
   CLEAN_PX_DELETE();
   END;
   ```
   For a Microsoft SQL Server database:
   ```
   USE [ddname]
   GO
   DECLARE @return_value int
   EXEC @return_value = [dbo].[CLEAN_PX_DELETE]
   SELECT 'Return Value' = @return_value
   GO
   ```
   where *ddname* is the is your admin user name

   > **Note**: You can run this procedure any time you want or you can run it as a database background job and schedule a specific time for it to run.

2) To delete batch size and max delete from each table in a single run, run the following queries:

   > **Note**: You can specify the delete batch size and max delete from each table in a single run. Delete batch size is the number of rows deleted before a commit. Max delete is the max number of rows that will be deleted from a table in a single run. They have default values if you do not provide your own. They're used to avoid resource problems with the P6 operations.

   ▸ insert into settings (namespace, setting_name, setting_value) values ('PxService.Cleanup','DeleteMaxSize','100000');
   ▸ insert into settings (namespace, setting_name, setting_value) values ('PxService.Cleanup','DeleteBatchSize','5000');

RDBMS Scheduler Configuration

Since background jobs are initiated by the job scheduler supplied by the RDBMS, you need to ensure that the scheduler for your specific RDBMS is properly configured.

For an Oracle Database: P6 EPPM uses DBMS_SCHEDULER to schedule background jobs in Oracle. P6 EPPM R15.1 does not need parameter changes.

For a Microsoft SQL Server Database: P6 EPPM uses the SQL Agent service to automatically schedule background job execution for Microsoft SQL Server. Background jobs handles the maintenance of the utilities tables (for example, USESSION and REFRDEL). As part of background jobs, the agent runs the SYMON and DAMON stored procedures at specific intervals.

Database Settings Table

Settings Table Overview

The settings table contains name-value pairs that configure the behavior of the background processes.

Namespace

The namespace component is a dot-notation string representing a formal path to the parameter.

Setting Name

The setting name identifies the name of the setting.

Value

Values in the SETTINGS table are case-sensitive. The value portion of the pair can be:

▶ **String**. The string data type is a free text value. The most common string sub-type is interval which represents an interval of time by combining a numeric portion with a unit portion as depicted in the table below.

Interval Subtype Table				
		Unit portion	**Example**	**Meaning**
Numeric portion	+	d	'30d'	Thirty day interval
		h	'2h'	Two hour interval
		m	'10m'	Ten minute interval
		s	'30s'	Thirty second interval

▶ **Numeric**. The numeric data type consists of any number.
▶ **Boolean**. The Boolean data type can have one of two values: true or false, where zero represents false and any non-zero number represents true.
▶ **Date**. The date data type consists of dates.

Setting Example

The following is an example of a setting:

▶ Namespace: database.cleanup.Usession

▸ Setting Name: ExpiredSessionTimeout
▸ Value: 2h (two hour interval)

Reading Setting Values

You can configure settings through the Settings API Procedures. These procedures are similar to registry or INI file procedure calls.

Reading Settings Values

Use the following SETTINGS_READ_* procedures to determine the current value of specific settings:

▸ `SETTINGS_READ_STRING(ret_val,namespace,settings_name,default)`
▸ `SETTINGS_READ_DATE(ret_val,namespace,settings_name,default)`
▸ `SETTINGS_READ_NUMBER(ret_val,namespace,settings_name,default)`
▸ `SETTINGS_READ_BOOL(ret_val,namespace,settings_name,default)`

Using Code to Read Setting Values for Oracle

The following code snippets for the Oracle Database demonstrate how the SETTINGS_READ_* procedures read the setting values.

To retrieve the value of the KeepInterval setting in Oracle:

1) Use the following code:

```
SQL> variable vset varchar2(255)
SQL> exec settings_read_string(:vset,'database.cleanup.Usession',
'ExpiredSessionTimeout');
```

2. The following message should appear:

```
PL/SQL procedure successfully completed.
SQL> print vset
```

Using Code to Read Setting Values for Microsoft SQL Server

The following code snippets for the Microsoft SQL Server database demonstrate how the SETTINGS_READ_* procedures read the setting values.

To retrieve the value of the KeepInterval setting in SQL:

1) Use the following code:

```
declare @vset varchar(255)
exec settings_read_string @vset
OUTPUT,'database.cleanup.Usession','ExpiredSessionTimeout'
print @vset
```

2) The following message should appear:

```
PL/SQL procedure successfully completed.
SQL> print vset
```

Writing Setting Values

Use the SETTINGS_WRITE_STRING procedure to set the value of a specific setting:

```
SETTINGS_WRITE_STRING(new value,namespace,settings_name);
```

Using Code to Write Setting Values for Oracle

The following code snippets for Oracle Database demonstrate how the SETTINGS_WRITE_STRING procedure sets the value of the ExpiredSessionTimeout setting to twelve hours.

To set the value of the ExpiredSessionTimout setting to twelve hours in an Oracle Database:

1) Log into SQL *Plus using privuser as your user name.
2) Run the following statement:
```
SQL > exec SETTINGS_WRITE_STRING
('12h','database.cleanup.Usession','ExpiredSessionTimeout');
```

Using Code to Write Setting Values for Microsoft SQL Server

The following code snippets for Microsoft SQL Server databases demonstrate how the SETTINGS_WRITE_STRING procedure sets the value of the ExpiredSessionTimeout setting to twelve hours.

To set the value of the ExpiredSessionTimeout setting to twelve hours in a Microsoft SQL Server database:

1) Open the Query Analyzer/SSMS and connect as privuser.
2) Select the P6 EPPM database, then run the following statement (using 12 hours as an example):
```
exec SETTINGS_WRITE_STRING '12h','database.cleanup.Usession',
'ExpiredSessionTimeout'
```

Tracking Background Job Execution

You can track the execution of background jobs by monitoring the high level status settings or by inspecting the BGPLOG table.

High Level Status Settings

Each time a job runs it will update the SETTINGS table for the setting_name = 'HeartBeatTime.' The job can update this value multiple times during the execution. You can monitor the maximum difference between this time and the current date to ensure that the job is running promptly. Refer to the High Level Status Settings table below for information about the HeartBeatTime setting.

High Level Status Settings	
Last date and time background job SYMON ran.	
Namespace	database.background.Symon
Setting Name	HeartBeatTime
Default Setting	N/A
Last date and time background job DAMON ran.	
Namespace	database.background.Damon
Setting Name	HeartBeatTime
Default Setting	N/A

The BGPLOG Table

You can also track the execution of background jobs by inspecting the BGPLOG table. The BGPLOG table holds detailed entries from the background processes including informational, elapsed time, and error entries. Refer to the BGPLOG Table Descriptions for information about what this table contains.

BGPLOG Table Descriptions		
Column	**Description**	**Value**
Log_time	Time when background process made a log entry	Datetime
Source	Program generating log entry	"system_monitor", "data_monitor"
Type	Type of message	INFORMATION, ELAPSED TIME, ERROR
Description	Message from the background process	A variable message followed by a number in parenthesis that represents the number of rows that processed. As an example, the message "Complete BGPLOG (40)" indicates that forty rows processed.

SYMON (System Monitor) Procedures

SYMON runs simple P6 EPPM tasks on a quick schedule. By default, the job runs every minute; the tasks assigned to this job should take only a few seconds to complete on each run. Do not change the scheduled run time (every minute) for this procedure.

Procedures performed by SYMON

The procedures run by SYMON perform these tasks:

▶ Processing the PRMQUEUE entries for Project Security by queuing OBSPROJ updates to the PRMQUEUE table.
▶ Marking expired USESSION records as logically deleted.

> **Note**: You can manually run queries to assist you with tracking concurrent usage of P6 EPPM.

OBSPROJ_PROCESS_QUEUE Procedure

OBSPROJ_PROCESS_QUEUE processes the PRMQUEUE entries for Project Security. It defers processing of OBSPROJ updates by queuing the updates to the PRMQUEUE table.

Refer to the following table for information about the settings associated with the OBSPROJ_PROCESS_QUEUE procedure.

OBSPROJ_PROCESS_QUEUE Settings

Setting Description: Maximum project-level queue records to process on each run.	
Namespace	database.obsproj.queue
Setting Name	MaxProjectUpdates
Default Setting	1000
Type	Numeric
Setting Description: Maximum EPS-level queue records to process on each run.	
Namespace	database.obsproj.queue
Setting Name	MaxEpsUpdate
Default Setting	25
Type	Numeric
Setting Description: Maximum times to re-process a failed entry before marking it as an error.	
Namespace	database.obsproj.queue
Setting Name	MaxRetries
Default Setting	50
Type	Numeric

USESSION_CLEANUP_EXPIRED Procedure

USESSION_CLEANUP_EXPIRED logically deletes USESSION records that have not updated their last_active_time based on the Expired Session settings. Marking expired USESSION records as logically deleted maximizes the number of module access logins that are available. Since it is not cleaning up the underlying data (physically deleting rows), the task completes quickly.

Values in the SETTINGS table control the clean up of expired sessions. By default, although the clean up of expired sessions occurs every two hours, the SETTINGS table does not contain a value for this setting. Use the SETTINGS_WRITE_STRING (*value*, *namespace*, *setting*) stored procedure to change the default clean up value.

For example, setting the value to "2d" deletes expired sessions older than two days.

> **Note**: Oracle recommends that you set the ExpiredLongSessionTimeout sessions to at least one hour longer than your longest job. For example, if your longest job is a summarizer job that usually takes 12 hours, you should set the value in the SETTINGS table to at least 13.

Refer to the table below for information about the USESSION_CLEANUP_EXPIRED Settings.

USESSION_CLEANUP_EXPIRED Settings

Setting Description: ExpiredSessionTimeout determines how long an inactive user session will remain in the records before it is marked deleted. User sessions are created when a P6 user logs into P6.	
Namespace	database.cleanup.Usession
Setting Name	ExpiredSessionTimeout
Default Setting	2h
Type	Interval
Setting Description: ExpiredLongSessionTimeout determines how long a session that is running a job-like operation (that is still processing) will remain in the records before it is marked deleted. Job-like operations are processed by job services and some are performed by logged in P6 users. Operations that are considered job-like are: ▸ Scheduling ▸ Leveling ▸ Apply Actuals ▸ Update Progress ▸ Copy/Paste Project ▸ Create Project from Template ▸ Maintain Baselines (create new baseline) ▸ Approve Timesheets ▸ Summarize ▸ PX Publish ▸ Export ▸ Import	
Namespace	database.cleanup.Usession
Setting Name	ExpiredLongSessionTimeout
Default Setting	12h

Type	Interval

Tracking Concurrent Usage of P6 EPPM

To track concurrent usage of P6 EPPM, you can run queries against the USESSION and USESSAUD tables to perform self-audits. See sample queries below.

> **Note**: See **DAMON (Data Monitor) Procedures** *(on page 69)* for information on how to set up the USESSAUD procedure. To ensure accuracy of these queries, run them before physically deleting remaining USESSION records and cleaning up the USESSAUD table.

▸ Against the USESSION table, run the following query to determine how many users are logged in at a given time:

```
select count(*) from usession where delete_session_id is null
```

▸ Against the USESSION table, run the following query to determine how many users are logged into a specific P6 EPPM product at a given time:

```
select count (*) from usession where delete_session_id is null and
app_name='P6 EPPM product name'
```

where *P6 EPPM product name* is the application abbreviation.

> **Note**: You can view all available application abbreviations by running the following query as an administrative database user: `select distinct(db_engine_type) from usereng`

▸ Against the USESSAUD table, run a query similar to the following to determine how many users logged into P6 EPPM on a specific date during a specified time range. You can alter the date, time range, and P6 EPPM product as needed. The following example will search for all users who logged into P6 Professional on February 17, 2010 between 9am and 10am:

For an Oracle database:

```
select * from usessaud where login_date between to_date('17-FEB-10
09:00:00','DD-MON-YY HH:MI:SS') and to_date('17-FEB-10
10:00:00','DD-MON-YY HH:MI:SS') and app_name='Project Management'
```

For a Microsoft SQL Server database:

```
select * from usessaud where login_date between

'2010-02-17 09:00' and '2011-02-17 10:00' and app_name='Project
Management'
```

Tips

See "Counting Users" in the *P6 EPPM Post Installation Administrator's Guide* for information on counting users and how to view the total number of licenses assigned for each module.

DAMON (Data Monitor) Procedures

The second database job is the DAMON data monitor job. The DAMON job runs the majority of the background processing and is responsible for running background clean up processes required by the application that can potentially take a relatively long time to run.

Oracle and DAMON

By default, DAMON runs every Saturday. It uses the Oracle DBMS_SCHEDULER package to schedule the jobs, and an Interval setting controls the schedule and accepts the same parameters as the DBMS_SCHEDULER interval. For more information, refer to your Oracle database documentation.

Microsoft SQL Server and DAMON

By default, DAMON runs every Saturday. You can set it to run every two weeks or on a specific day. To run DAMON every two weeks, use the following command to set the interval: `-eg 2W`

To set DAMON to run on a specific day, use the following setting under namespace: â€˜`Database.background.Damon`â€™ *DayOfWeek*

DAMON Procedures

DAMON cleans the:

▸ BGPLOG table containing the background logs.
▸ REFRDEL table.
▸ PRMQUEUE table.
▸ Remaining USESSION records.
▸ Logically deleted records.
▸ PRMAUDIT table.
▸ USESSION audit table (USESSAUD).

You can also dynamically extend DAMON functionality via the user-defined procedure, USER_DEFINED_BACKGROUND.

BGPLOG_CLEANUP Procedure

This procedure keeps the BGPLOG table at a reasonable size. The default clean up interval is 5 days which will result in a table size of about 54,000 records.

Refer to the following table for information about the settings associated with the BGPLOG_CLEANUP procedure.

BGPLOG_CLEANUP Settings

Setting Description: The oldest records to keep in the BGPLOG table.	
Namespace	database.cleanup.BackGroundProcessLog
Setting Name	KeepInterval

Default Setting	5d
Type	Interval

REFRDEL_CLEANUP Procedure

This procedure deletes records from the REFRDEL table based on the value of the KeepInterval setting. The default setting keeps the REFRDEL records from the last five days.

Refer to the following table for information about the settings associated with the REFRDEL_CLEANUP procedure:

REFRDEL_CLEANUP Settings

Setting Description: The oldest records to keep in the REFRDEL table.	
Namespace	database.cleanup.Refrdel
Setting Name	KeepInterval
Default Setting	5d
Type	Interval
Setting Description: Identifies the maximum number of minutes before records are deleted from the REFRDEL table.	
Namespace	database.cleanup.Refrdel
Setting Name	DaysToDelete
Default Setting	1
Type	Numeric
Setting Description: Determines the number of minutes that is added to each delete step interval.	
Namespace	database.cleanup.Refrdel
Setting Name	IntervalStep
Default Setting	15
Type	Numeric

REFRDEL Bypass Procedure

The REFRDEL table maintains a list of deleted records from P6 database tables. However, when an entire project is deleted, a large amount of detailed delete records can be inserted into the REFRDEL table resulting in the potential for downstream performance degradation when joins are made to the REFRDEL table.

The REFRDEL Bypass procedure is an alternative to inserting REFRDEL records for tracking delete records on a large scale. This procedure bypasses the REFRDEL table and simply adds a single delete record for a deleted project and project ID.

By default, the REFRDEL BYPASS procedure is set to 0 (zero).

To enable REFRDEL Bypass, execute the following procedure and set to a non-zero value:

```
SQL> exec SET_REFRDEL_PROJECT_BYPASS(1);
```

Database triggers check for the value of the REFRDEL BYPASS value and process accordingly.

> **Note:** The bypass procedure is meant only for a PROJECT DELETE operations.

CLEANUP_PRMQUEUE Procedure

This procedure deletes records from the PRMQUEUE table based on the value of the KeepInterval setting. The remaining settings are similar to the REFRDEL_CLEANUP.

Refer to the following table for information about the settings associated with the CLEANUP_PRMQUEUE procedure:

CLEANUP_PRMQUEUE Settings

Setting Description: The oldest records to keep in the PRMQUEUE table. Default is five days.	
Namespace	database.cleanup.Prmqueue
Setting Name	KeepInterval
Default Setting	5d
Type	Interval
Setting Description: Determines whether the procedure will delete all of the PRMQUEUE records possible on each pass.	
Namespace	database.cleanup.Prmqueue
Setting Name	DeleteAll

Default Setting	0 (false)
Type	Boolean
Setting Description: Determines whether all of the records are cleaned. If the total record count is less than this number then all the records are cleaned.	
Namespace	database.cleanup.Prmqueue
Setting Name	DeleteAllThreshold
Default Setting	1,000
Type	Numeric
Setting Description: Percentage of records to delete on each pass.	
Namespace	database.cleanup.Prmqueue
Setting Name	DeletePercentage
Default Setting	10(%)
Type	Numeric
Setting Description: Maximum rows to delete on each pass.	
Namespace	database.cleanup.Prmqueue
Setting Name	MaxRowsToDelete
Default Setting	10,000
Type	Numeric

USESSION_CLEAR_LOGICAL_DELETES Procedure

This procedure physically deletes all logically deleted USESSION records. This procedure does not have settings associated with it: All logically deleted USESSION records are cleared.

CLEANUP_LOGICAL_DELETES Procedure

This procedure removes logically deleted rows based on the value of the KeepInterval setting. Records in the database can be marked as deleted (logically deleted) by setting the DELETE_SESSION_ID column to a non-null value. By default, records that were deleted more than 5 days ago will be deleted by this procedure.

> **Notes**:
> - The CLEANUP_LOGICAL_DELETES procedure will not delete records whose DELETE_SESSION_ID column is set to a negative value.
> - This procedure will not delete records older than the earliest user session in USESSION, as determined by the minimum value in the login_date column.

Refer to the following table for information about the settings associated with the CLEANUP_LOGICAL_DELETES procedure:

CLEANUP_LOGICAL_DELETES Settings

Setting Description: The oldest logically deleted records to keep in tables.	
Namespace	database.cleanup.LogicalDelete
Setting Name	KeepInterval
Default Setting	5d
Type	Interval
Setting Description: Determines whether the procedure will delete all of the logically deleted records possible on each pass.	
Namespace	database.cleanup.LogicalDelete
Setting Name	DeleteAll
Default Setting	0 (false)
Type	Boolean
Setting Description: Maximum rows to delete on each pass.	
Namespace	database.cleanup.LogicalDelete
Setting Name	MaxRowsToDelete
Default Setting	10,000
Type	Numeric

PRMAUDIT_CLEANUP Procedure

If the auditing feature is enabled, this procedure will physically delete records from the table based on the value of the KeepInterval setting.

Refer to the following table for information about the settings associated with the PRMAUDIT_CLEANUP procedure:

PRMAUDIT_CLEANUP Settings

Setting Description: Should the procedure attempt to clean up PRMAUDIT records.	
Namespace	database.cleanup.auditing
Setting Name	Enabled
Default Setting	1 (true)
Type	Boolean
Setting Description: The oldest audit records to keep in PRMAUDIT.	
Namespace	database.cleanup.auditing
Setting Name	KeepInterval
Default Setting	30d
Type	Interval

CLEANUP_USESSAUD Procedure

The CLEANUP_USESSAUD procedure deletes records from the USESSAUD table based on the KeepInterval parameter setting. All other settings are similar to the REFRDEL_CLEANUP procedure. The following table describes the settings associated with the CLEANUP_USESSAUD procedure.

CLEANUP_USESSAUD Settings

Setting Description: Determines the oldest records to keep in the USESSAUD table. Based on the logout time, data beyond the KeepInterval parameter value will not deleted. The KeepInterval parameter setting overrides all other CLEANUP_USESSAUD settings.	
Namespace	database.cleanup.Usessaud
Setting Name	KeepInterval
Default Setting	5d

Type	Interval
Setting Description: Deletes all the REFRDEL records that satisfy the KeepInterval setting on each pass. The DeleteAll parameter setting overrides the settings of DeleteAllThreshold, DeletePercentage, and MaxRowsToDelete parameters.	
Namespace	database.cleanup.Usessaud
Setting Name	DeleteAll
Default Setting	0 (false)
Type	Boolean
Setting Description: Determines the minimum number of records to delete after satisfying the KeepInterval parameter setting. By default, a minimum of 1000 records are deleted. If the total record count is less than this setting, all records are deleted. The DeleteAllThreshold parameter setting overrides the settings of the DeletePercentage and MaxRowsToDelete parameters.	
Namespace	database.cleanup.Usessaud
Setting Name	DeleteAllThreshold
Default Setting	1,000
Type	Numeric
Setting Description: Determines the maximum rows to delete on each pass after satisfying the KeepInterval parameter setting. The MaxRowsToDelete parameter setting overrides the DeletePercentage parameter setting.	
Namespace	database.cleanup.Usessaud
Setting Name	MaxRowsToDelete
Default Setting	10,000
Type	Numeric
Setting Description: Determines the percentage of records to delete on each pass after satisfying the DeleteAllThreshold and MaxRowsToDelete settings. However, the percentage of records deleted is limited to the default value of the MaxRowsToDelete setting.	
Namespace	database.cleanup.Usessaud
Setting Name	DeletePercentage
Default Setting	10 (%)
Type	Numeric

USER_DEFINED_BACKGROUND Procedure

This procedure is an optional customer procedure that DAMON runs. This procedure does not have settings associated with it.

Oracle Database Performance

You can modify several Oracle database settings to improve the performance of your P6 EPPM database. Run the scripts as described below after you create the database.

Grant access to the V_$TRANSACTION view:

V_$TRANSACTION is a system view in Oracle that lists the active transactions in the system.

GET_SAFETY DATE (a procedure in the Project Management schema) accesses this view to get the oldest start time of an active transaction. If the schema owner does not have privileges to this view, then it returns a safety date using the USESSION table. V_$Transaction tunes performance during a refresh action. USESSION records the login time of the logged in user, whereas data in the V_$Transaction view is recorded at a system level. The logged in user could be logged in for more than an hour (as seen from the USESSION table), but the V_$Transaction view has the current transaction datetime, regardless of the time the user logged in.

> **Note**: Access to the V_$TRANSACTION view was built into the procedure to tune performance with refreshing operations; however, third party functions could impact performance with database refresh operations that use an older time in the V_$TRANSACTION view.

To grant access to this view, connect to Oracle as SYS. Run the `RUN_AS_SYS.SQL` script located in the \Database\scripts\common folder of the P6 EPPM physical media or download.

Gather statistics for cost-based optimization:

Oracle 11g and later supports only cost-based optimization, which relies on accurate statistics to determine the optimal access path for a query. To gather the appropriate statistics for the optimizer, which will improve database performance, run the ORPM_STATS_GATHER.SQL script located in the \Database\scripts\common folder of the P6 EPPM physical media or download.

Safe Deletes

The P6 EPPM database normally handles restoring select deleted data using a safe delete setting. While using P6 Professional, the Undo command (Edit, Undo) allows users to restore certain types of data that have been deleted. Deleted data remains in the P6 EPPM database until the CLEANUP_LOGICAL_DELETES procedure clears it (after 5 days, by default).

See the *P6 Professional Help* for more information about using undo.

Turning Off Safe Deletes

You can turn off safe deletes to save storage space. Turning off safe deletes disables undo functionality and instantly clears deleted data from the P6 EPPM database.

To turn off safe deletes:

1) Verify the current state of your safe deletes setting. In the database, if the table ADMIN_CONFIG has the following row, a CONFIG_VALUE of 'N' means turn off safe deletes.

   ```
   CONFIG_NAME = 'SAFEDELETE.ACTIVE' and CONFIG_TYPE = 'SETTINGS'
   ```

   > **Note**: This is only loaded at startup. If you change CONFIG_VALUE while a user is running P6 Professional, the setting will not apply until the user restarts the P6 Professional session.

2) Once you have determined the current state of your safe deletes setting, run one of the following statements.

   ▸ To turn off safe deletes for the first time:

   ```
   INSERT INTO ADMIN_CONFIG (CONFIG_NAME, CONFIG_TYPE, CONFIG_VALUE)
   VALUES ('SAFEDELETE.ACTIVE', 'SETTINGS', 'N')
   ```

   ▸ To turn on safe deletes after it has been turned off:

   ```
   UPDATE ADMIN_CONFIG SET CONFIG_VALUE = 'Y' WHERE CONFIG_NAME =
   'SAFEDELETE.ACTIVE' AND CONFIG_TYPE = 'SETTINGS'
   ```

   ▸ To turn off safe deletes after it has been turned on:

   ```
   UPDATE ADMIN_CONFIG SET CONFIG_VALUE = 'N' WHERE CONFIG_NAME =
   'SAFEDELETE.ACTIVE' AND CONFIG_TYPE = 'SETTINGS'
   ```

3) Restart the P6 server.

PRMAUDIT Auditing

PRMAUDIT auditing permits you to log the edits, additions, and deletions made by users of P6 EPPM applications. When users make changes, they create a Data Manipulation Language (DML) INSERT, UPDATE, or DELETE statement. PRMAUDIT auditing uses the Data Manipulation Language (DML) INSERT, UPDATE, or DELETE statement being executed against tables in the database schema. Since every application table in the schema has its own auditing trigger, you can log changes made to each table regardless of who made the change or when the change was made. The database schema owner owns the auditing trigger: you can bypass trigger execution.

Auditing Level Configuration

You can adjust the amount of information that is logged by adjusting the audit level for each table. You can refine the audit further by setting the audit level individually for insert, updates, and deletes within each table.

Auditing Levels

Level	Description
Level 0	No audit.
Level 1	Row-level audit. Audit only the operation without column details
Level 2	Column-level Audit without blobs. Audit changes to the data at the column level but without blob changes
Level 3	Full Audit. Audit changes to the data at the column level. For Oracle, column level changes to blobs are audited. For Microsoft SQL server, column level changes to blobs are not included.

Simple Configuration

You can use two configuration procedures to provide simple control of the auditing feature:

- auditing_enable(*table_name*, *level*)
- auditing_disable(*table_name*)

You can set the audit level on an individual table or the same audit level for all of the tables. However, the simple configuration procedures do not allow for setting individual auditing levels for insert, update, or delete operations within a table.

Examples for Oracle:

Use the following examples as a guide to use the simple audit configuration procedures to control the auditing feature.

- The following code snippet enables full auditing on all tables:
  exec auditing_enable(null,3);
- The following code snippet enables level one auditing on the task table:
  exec auditing_enable('TASK',1);
- The following code snippet disables auditing on PROJWBS:
  exec auditing_disable('PROJWBS');
- The following code snippet completely disables auditing across the entire database:
  exec auditing_disable(null);

Detailed Configuration

You can configure auditing trigger behavior by changing values in the settings table that enable or disable:

- The auditing feature itself
- The auditing of specific tables

▸ The auditing of table insert, update, or delete operations within each table

Auditing Status

You can enable or disable the auditing feature by using the database.audit.Enable setting. Use the settings_write_bool procedure to enable/disable the auditing feature.

Oracle Example:

To enable the auditing feature in Oracle, use the following code:

```
exec settings_write_bool(1,'database.audit','Enabled');
```

Microsoft SQL Server Example:

To enable the auditing feature in Microsoft SQL Server, use the following code:

```
exec settings_write_bool 1,'database.audit','Enabled'
```

Options Setting

Each table's auditing settings are controlled by the Options setting in each table's auditing namespace (for example, database.audit.TASK). The Options setting is a three character string with a numeric value in each character position representing the audit level for insert, update, and delete.

Auditing Level Options Setting by Table Operation				
	Operation			
	Insert	Update	Delete	Description
Level	0	0	0	No audit.
	1	1	1	Row-level audit. Audit only the operation without column details.
	2	2	2	Column-level audit without blobs. Audit changes to the data at the column level but without blob changes.
	3	3	3	Full Audit. Audit changes to the data at the column level. For Oracle, column level changes to blobs are audited. For Microsoft SQL server, column level changes to blobs are not included.

The following table provides some examples of the options setting:

Setting the Auditing Level Options Setting by Table Operation Examples			
Namespace	Setting	Value	Description
database.audit.TASK	Options	330	Fully audit any insert and update operations. Do not audit any delete operations.
database.audit.PROJWBS		001	Row-level audit on deletes only.
database.audit.TASKRSRC		333	Fully audit.

SETTINGS_WRITE_STRING Procedure

You can change table audit settings using the settings_write_string procedure.

Oracle Example:

To set the table settings to fully audit insert and update operations but ignore any delete operations, use the following code for Oracle:

```
exec settings_write_string('330','database.audit.TASK','Options');
```

Microsoft SQL Server Example:

To set the table settings to fully audit insert and update operations but ignore any delete operations, use the following code for Microsoft SQL Server:

```
exec settings_write_string '330','database.audit.TASK','Options'
```

> **Note**: Changes to auditing settings will not appear immediately in the application. The program will need to close the database connection and then reconnect to the database to get the new settings.

The Audit Table

Audit records are inserted into the PRMAUDIT table. One record is inserted into the audit table for each row changed in the database.

PRMAUDIT Table		
Column	**Type**	**Description**
audit_date	Date	Date and time of change
table_name	String(30)	Table Name
pk1, pk2, pk3, pk4	String(255)	Primary key values for audited record
oper	String(1)	I=Insert, U=Update, D=Delete
prm_user_name	String(32)	P6 EPPM user name if the change was made in P6 EPPM applications
audit_info	String(4000)	Column changes up to 4000 characters (Level 2 and 3 only)
audit_info_extended	BLOB	Blob changes and overflow from audit_info (Level 2 and 3 only)
logical_delete_flag	String(1)	Flag for deletes that are logical (marked) rather than a physical delete
rdbms_user_name*	String(255)	Database user name (usually privuser)
os_user_name*	String(255)	Operating system user name of connected session **Note:** When auditing is enabled against a SQL Server database, `PRMAUDIT.os_user_name` will always return a null value. This is because the value for `os_user_name` in `PRMAUDIT` table is taken from the `nt_username` column in `master.sys.sysprocesses` view and the `nt_username` value in `master.sys.sysprocesses` view is empty for the P6 Professional program because P6 is connected to SQL DB using SQL authentication. The `nt_username` field is filled only

		when we connect to SQL DB using Windows authentication.
program*	String(255)	Name of program connecting to the database
host_name*	String(255)	Computer name of connected session
app_name*	String(25)	Name of application connected to the database
netaddress*	String(24)	IP or MAC address of connected session

> **Note**: Grant select privileges to the administrative user on V_$SESSION to ensure correct values for several auditing table values.

Session Auditing

Activity for the USESSION table is audited with its own trigger and table. When an application user logs out of the system they logically delete, or mark, their session record in the USESSION table. One record is written to the USESSAUD table for each logout. The format of the USESSAUD table mirrors that of the USESSION table. This audit can be enabled using the usessaud_enable procedure and disabled using the usessaud_disable procedure.

Column Audit Data

The data changes for each audit are stored in the audit_info and audit_info_extended columns. The audit_info column contains all the row changes as long as they do not exceed 4000 characters. Changes over 4000 characters or any edit to a blob will be written to the audit_info_extended BLOB column.

Data in the two audit_info columns has a specific format. Each column audit within the data begins with either ":O" (old data) or ":N" (new data) to distinguish between the audit of the previous (old) or the changed (new) value (for BLOB columns the data starts with :BLOBO or :BLOBN). Directly after this is the name of the column in lowercase. Following the column name is the length of the audited value in a fixed four character field. Finally the actual data is placed in the audit record. Updates will have both an old and new value for each change. Inserts will have only a new value and deletes only an old value.

The following is an example of the audit record for TASK to change the task_code from 'A1010' to 'B102:'

```
audit_info =>:Otask_code: 5:A1010:Ntask_code: 4:B102
```

Using the Data Pump Utility

The data pump utility is a java-based tool that enables you to pump data from one database to another at its current version only. Data can be pumped from the following types of databases:

▸ SQL Server to Oracle
▸ Oracle to SQL Server
▸ Oracle to Oracle
▸ SQL Server to SQL Server

Depending on the operating system, use the appropriate file to run the data pump utility:

▸ For Windows operating systems, use `migrate.bat`.
▸ For Linux/Unix operating systems, use `migrate.sh`.

Use the data pump utility to:

▸ only import data into a newly created database
▸ repair damaged databases to only correct issues with regard to database objects (such as constraints, views)

Do **not** use the data pump utility to:

▸ upgrade from one database version to another
▸ import data into an existing database
▸ correct data-specific issues
▸ correct schema related issues. It is not ideal for large databases (10GB+) due to the performance of the utility. For larger databases, try to manually resolve schema related issues first whenever possible.

Prerequisite

Running a Schema Validation on the Database .

Running a Schema Validation on the Database

The schema validation utility finds missing, extra, and modified schema objects for a P6 database. Depending on the operating system, use the appropriate file to run the schema validation.

▸ For Windows, run `validate.bat`
▸ For Linux/Unix systems, run `validate.sh`

To run the schema validation, proceed as follows.

1) In the software download, locate the utility in the **Database Download** folder.
2) Edit the utility similar to the following:

```
@echo off
REM ------------------------------------
REM Run the Primavera Schema Validation Tool
REM ------------------------------------
```

```
SET JAR_FILE_DIR=lib
SET JAR_FILE_NAME=dbmt.jar
SET DB_SCHEMA=ppm

SET JVM_PROPERTIES=-Ddbmt.dbschema.package.location=%JAR_FILE_DIR%
-Dprimavera.db.schema=%DB_SCHEMA%
-Dcom.primavera.database.logfile=SchemaValidation.log
SET DBMT_ACTION=application/ppmschemaval
SET DBMT_COMMAND=schemavalpm
```

set JAVA_HOME=C:\Program Files\Java\jre6

```
IF NOT EXIST "%JAVA_HOME%\bin\java.exe" (
 echo JAVA_HOME IS NOT SET
 pause
 goto :EXIT
)
```

3) Run `validate.bat` (or `validate.sh`).

For an Oracle database in an Enterprise environment, enter values for the following:

   ‣ **Username**: Use the appropriate ADMUSER username and password.
   ‣ **Database host address**: Database server name or IP address.
   ‣ **Database host port**: The port your Oracle listener is listening on. (Default is 1521)
   ‣ **Database name (SID)**: Enter the Oracle SID for your database.

> **Note:** When running for an Enterprise version of the database, you will be prompted for the appropriate privileged and public usernames.

For a SQL Server 2005 database, enter values for the following:

   ‣ **Database host address**: Database server name or IP address.
   ‣ **Database host port**: The SQL port.
   ‣ **Database name**: pmdb$primavera (default)

> **Note:** When running for an Enterprise version of the database, you will be prompted for the appropriate privileged and public user names.

4) The browser displays the results of the schema validation utility.

Running the Data Pump Utility Using the Wizard

Depending on the operating system, use the appropriate file to run the data pump utility.

   ‣ For Windows, run `migrate.bat`
   ‣ For Linux/Unix systems, run `migrate.sh`

> **Note:** Do not use `migrate.bat` to convert database type from EPPM to PPM or vice-versa.

To run the data pump utility using the wizard, proceed as follows:

1) In the `\install\database` directory, double-click the `migrate.bat` (or `migrate.sh`) utility.

   You must launch this utility from within the `\install\database` directory, because it has dependencies to other files inside this directory.

2) Follow the prompts on each screen by providing the connection information for the source and target database being migrated.

> **Note:** When using an Oracle schema, the migration utility will allow you to create new tables or use existing tables in the target instance, but new schema users will have to be created through the migration process. The ability to map to existing schema users is not currently available through the migration process.

Running the Data Pump Utility From the Command Line

Depending on the operating system, use the appropriate file to run the data pump utility.

▸ For Windows, run `migrate.bat`
▸ For Linux/Unix, run `migrate.sh`

> **Note:** Do not use `migrate.bat` to convert the database type from EPPM to PPM or vice-versa.

To run the data pump utility from the command line, proceed as follows.

1) Open a new command line console.
2) Change directory to where the utility is located.
3) Enter appropriate parameters to define the migration.

   On a Windows Operating System

   ▸ SQL Server to Oracle Data Migration Syntax

   ```
   Migrate.bat -source sa/sa@sqlserver:rcgsrv:1433:vader_pmdb -target
   system/manager@oracle:rcgsrv:1521:rcg02 -db PM
   ```

   ▸ Oracle to SQL Server Data Migration Syntax

   ```
   Migrate.bat -source admuser/admuser@oracle:rcgsrv:1521:rcg02
   -target sa/sa08@sqlserver:rcgsrv:1433:vader_pmdb -db PM
   ```

   ▸ SQL Server to Oracle Data Migration Syntax Creating Non-Default Oracle Users

   ```
   Migrate.bat -source sa/sa@sqlserver:rcgsrv:1433:vader_pmdb -target
   system/manager@oracle:rcgsrv:1521:rcg02 -db PM -admuser admjeff
   -privuser privjeff -pubuser pubjeff
   ```

   On a Unix/Linux Operating System

   ▸ SQL Server to Oracle Data Migration Syntax

```
sh migrate.sh -source
sa/sa@sqlserver:saumverm-lap\primavera:1433:PMDB -dattbsp <Name of
data tblspc at target> -ndxtbsp <Name of index tblspc at target>
-pxtbsp <Name of px tblspc at target> -lobtbsp <Name of LOB tblspc at
target> -admuser <admuser at target> -admpass <admuser password at
target> -privuser <privuser at target> -privpass <privuser password
at target> -pubuser <pubuser at target> -pubpass <pubuser password at
target> -pxrptuser <pxrptuser at target> -pxrptpass <pxrptuser
password at target> -bgjobuser <bgjobuser at target> -bgjobpass
<bgjobuser password at target> -target
system/admin@oracle:oldb-orcl:1521:PMDB
```

For example,

```
sh migrate.sh -source
sa/sa@sqlserver:saumverm-lap\primavera:1433:PMDB -dattbsp PMDB_DAT1
-ndxtbsp PMDB_NDX1 -pxtbsp PMDB_PX_DAT1 -lobtbsp PMDB_LOB1 -admuser
admuser -admpass admuser -privuser privuser -privpass privuser
-pubuser pubuser -pubpass pubuser -pxrptuser pxrptuser -pxrptpass
pxrptuser -bgjobuser bgjobuser -bgjobpass bgjobuser -target
system/admin@oracle:oldb-orcl:1521:PMDB
```

▶ Oracle to SQL Server Data Migration Syntax

```
sh migrate.sh -source privuser/privuser@oracle:oldb-orcl:1521:PMDB
-privuser <privuser at target> -privpass <privuser password at target>
-pubuser <pubuser at target> -pubpass <pubuser password at target>
-pxrptuser <pxrptuser at target> -pxrptpass <pxrptuser password at
target> -target sa/sa@sqlserver:jdoe-lap\primavera:1433:PMDB
```

For example,

```
sh migrate.sh -source privuser/privuser@oracle:oldb-orcl:1521:TEST
-privuser privuser -privpass privuser -pubuser pubuser -pubpass
pubuser -pxrptuser pxrptuser -pxrptpass pxrptuser -target
sa/Primavera1@sqlserver:jdoe-lap\primavera:1433:test
```

Where To Go From Here - Post Configuration Wizard

Now that you've installed all of your P6 EPPM applications, you can begin using P6. You may find the following guides useful to get started:

▸ *P6 EPPM Post Installation Administrator's Guide*

> **Note**: You can use this guide to configure E-mail Statusing Service.

▸ *P6 Help*

> **Note**: The most recent version of all these guides are available on OTN.

In This Section

Launching Your P6 EPPM Applications

After you have installed and configured your P6 EPPM applications, you can launch your applications by doing the following:

1) Go to the scripts folder where you installed P6 EPPM (for example, C:\P6EPPM_1\scripts or /usr/P6EPPM_1/scripts).
2) If you are on Windows, launch the **start_Primavera.bat**.

   If you are on Linux, launch the **start_Primavera.sh**.

   > **Note**: You need to launch the file only once unless you stop the server or need to restart the machine.

3) Open the HTML file you saved when you finished your configuration and choose the URL for the application you want to launch.
4) Login to the application.

Tips

▸ If you are on Windows, you can use the Start menu to launch your applications.
   1. Go to **Start**, **P6 EPPM**.
   2. Select the **start_Primavera.bat** file and wait for it to say running.
   3. Select the application you want to launch and login.

▸ If you want to set up the WebLogic Admin Server and Managed Servers to run as Windows Services, see WebLogic's documentation.

Starting and Stopping Managed Servers

You have several options for starting and stopping managed servers. Oracle recommends that you use the startNodeManager file and start the server in the WebLogic Administration Console (see *Starting a Managed or Clustered Server* (on page 88)). However, you can view other ways to stop and start managed servers at "Managing Server Startup and Shutdown for Oracle WebLogic Server" at http://download.oracle.com/docs/cd/E14571_01/web.1111/e13708/overview.htm.

> **Note**: You can use different ways to start the managed servers, but you must ensure that the managed servers recognize the arguments required for your application (for example, the argument for where the bootstrap is located) and how the application environment will start.

Starting a Managed or Clustered Server

To start a managed or clustered server in the WebLogic Administration Console:

> **Note**: When starting/stopping an environment using the node manager, the **StartScriptEnabled** setting in the **nodemanager.properties** file must equal true. Example: StartScriptEnabled=true

1) Run the **startNodeManager** file.
   ▸ In Windows, the file is named "startNodeManager.cmd" and is located in:
     weblogic_home\user_projects\domains*domainname*\bin
   ▸ In Unix, the file is named "startNodeManager.sh" and is located in:
     weblogic_home\user_projects\domains*domainname*\bin
2) Launch the WebLogic **Administration Console**.

> **Note**: You can open the Administration Console via a web browser using this address: http://*serverIP*:*listenport*/console. The default *listenport* is 7001.

3) In the **Welcome** window, log in using the user name and password that you created when you created your WebLogic domain.
4) In the **Change Center** pane of the Administration Console, click **Lock & Edit**.
5) In the **Domain Structure** pane:
   a. Expand **Environment**.
   b. Click **Servers**.
6) In the **Summary of Servers** pane:
   a. Select the **Control** tab.
   b. Select the option for your managed server.
   c. Click **Start**.

7) In the **Server Life Cycle Assistant** pane, click **Yes**.

8) In the **Summary of Servers** pane, click the 'Start Refresh' icon in the middle of the pane to see when the **State** column says 'RUNNING.'

Stopping a Managed or Clustered Server

Your managed or clustered server will stop running when you close the startNodeManager file.

You can also stop the managed or clustered server in the WebLogic Administration Console.

1) Launch the WebLogic **Administration Console**.

> **Note**: You can open the Administration Console via a web browser using this address: http://*serverIP*:*listenport*/console. The default *listenport* is 7001.

2) In the **Welcome** window, log in using the user name and password that you created when you created your WebLogic domain.

3) In the **Change Center** pane of the Administration Console, click **Lock & Edit**.

4) In the **Domain Structure** pane:

   a. Expand **Environment**.

   b. Click **Servers**.

5) In the **Summary of Servers** pane:

   a. Select the **Control** tab.

   b. Select the option for your managed server.

   c. Click the down arrow to the right of the **Shutdown** button.

   d. Click **When work completes** or **Force Shutdown Now**.

6) In the **Server Life Cycle Assistant** pane, click **Yes**.

7) In the **Summary of Servers** pane, click the 'Start Refresh' icon in the middle of the pane to see when the **State** column says 'SHUTDOWN.'

Installing Additional Applications

The following applications will work with P6 EPPM, but are not installed or configured with the wizard. See the guides mentioned for more information about each product.

▸ P6 Professional (see the *P6 Professional Installation and Configuration Guide*)

▸ Oracle Identity Manager 11g (see *Connecting Oracle Identity Manager 11g to P6*)

▸ Oracle Enterprise Manager (see *Connecting Oracle Enterprise Manager to P6 EPPM Metrics*)

▸ Oracle BI Publiser (see Connecting BI Publisher to *P6)*

▸ Oracle Fusion PPM Bridge (see *Connceting Fusion PPM Bridge to P6)*

▸ Oracle BPM 11g to P6 (see *Connecting BPM 11g to P6)*

▸ Oracle BPM 12c to P6 (see *Connecting BPM 12c to P6)*

For More Information

Where to Get Documentation

Complete documentation libraries for P6 EPPM releases are available on the Oracle Technology Network (OTN) at:

http://www.oracle.com/technetwork/documentation/primavera-093289.html

From this location you can either view libraries online or download them to have local copies. We recommend viewing them from OTN to ensure you always access the latest versions, including critical corrections and enhancements.

P6 EPPM is configured to access its help systems on OTN. However, you can also install local versions when you install the software.

The documentation assumes a standard setup of the product, with full access rights to all features and functions.

The following table describes the core documents available for P6 EPPM and lists the recommended readers by role. P6 EPPM roles are described in the *Planning Your P6 EPPM Implementation* guide.

Title	Description
What's New in P6 EPPM	Highlights the new and enhanced features included in this release.
	You can also use the *P6 EPPM Cumulative Feature Overview Tool* to identify the features that have been added since a specific release level.
	All users should read this guide.
Planning Your P6 EPPM Implementation	Explains planning your implementation and provides an installation process overview, frequently asked questions, client and server requirements, and security information.
	The P6 EPPM network administrator/database administrator and P6 administrator should read this guide.
P6 EPPM Installation and Configuration Guide	Explains how to install and configure P6 EPPM using the P6 EPPM Installation and Configuration wizards.
	The P6 EPPM network administrator/database administrator and P6 administrator should read this guide.

Title	Description
P6 EPPM Installation and Manual Configuration Guide	Explains how to install and configure the P6 EPPM using the P6 EPPM Installation wizards, and how to manually configure individual components. The P6 EPPM network administrator/database administrator and P6 administrator should read this guide.
P6 EPPM Post Installation Administrator's Guide	Describes how to get started using P6 EPPM applications after you have installed and configured them. Complete the tasks in this guide before letting your users work with these applications. These tasks include information about configuring your users and security settings and privileges, configuring your Primavera P6 Administrator settings, and finalizing your P6 Integration API and P6 EPPM Web Services settings. The P6 EPPM network administrator/database administrator and P6 administrator should read this guide.
Tested Configurations	Lists the configurations that have been tested and verified to work with P6 EPPM. The network administrator/database administrator and P6 EPPM administrator should read this document.
P6 User's Guide	Explains how to plan, set up, and manage projects in a multiuser environment. If you are new to P6, start with this guide to learn how to use the software effectively to plan and manage projects. When you need more detail, refer to the P6 Help. The program manager, project manager, resource/cost manager, team leader, and all P6 users should read this guide.
P6 Help	Explains how to use P6 to administer, plan, set up, and manage projects, portfolios, workflows, timesheets, documents, and reports in a multiuser environment. Describes how to analyze performance and ROI, and analyze budgets. If you are new to P6, use this Help to learn how to use the software effectively. The operations executive, P6 EPPM and P6 administrator, program manager, project manager, resource/cost manager, team leader, and all users should read this Help.
P6 Data Dictionary	Defines fields used in P6. All P6 users should refer to this guide if they need a field definition.

Title	Description
P6 Team Member Web Help	Describes how to use P6 Team Member Web to provide status on activities. P6 Team Member Web users should read this Help.
P6 EPPM Web Services Programmer's Guide	Describes how to invoke, use, and troubleshoot the available services and operations within supported environments. When you need specific information about the services and operations available, refer to the P6 EPPM Web Services Reference Manual. Anyone who wants to develop applications that interact with P6 should read this guide.
P6 EPPM Web Services Reference Manual	Describes all services and operations available in P6 EPPM Web Services. Anyone who wants to develop applications that interact with P6 should read this guide.
P3 to P6 EPPM Migration Guide	Provides best practices for migrating your P3 data to P6 EPPM and details how P3 functionality maps to P6 EPPM functionality. All administrators should read this guide if your organization is moving from P3 to P6.

Distributing Information to the Team

You can copy the online documentation to a network drive for access by project participants. Team members can then view or print those portions that specifically relate to their roles in the organization.

Throughout this documentation, the Security Guidance icon 🛡 helps you to quickly identify security-related content to consider during the installation and configuration process.

Where to Get Training

To access comprehensive training for all Primavera products, go to:

http://education.oracle.com

Oracle Learning Library

The Oracle Learning Library (OLL) provides online learning content covering Primavera products. Content includes whitepapers, videos, tutorials, articles, demos, step-by-step instructions to accomplish specific tasks, and self-paced interactive learning modules.

To access the learning library's Primavera content, go to:

http://www.oracle.com/oll/primavera

Where to Get Support

If you have a question about using Oracle products that you or your network administrator cannot resolve with information in the documentation or help, visit http://support.oracle.com/. This page provides the latest information on contacting Oracle Global Customer Support, knowledge articles, and the support renewals process. For more information about working with Support, visit https://support.oracle.com/epmos/faces/DocumentDisplay?id=888813.2 to view **Support Tools & Tips**.

The following knowledge articles are a good place to start your research because they link to the most frequently referenced articles about P6 EPPM

- Primavera Product Master Notes [ID 1489367.1]
- Master Note For Primavera P6 Common Application Questions Or Issues [ID 1292929.1]

P6 EPPM integrates with different Oracle applications; when you create a Service Request, be sure to open the request with the proper Support team. To ensure you reach the proper Support team, enter the correct product information when you create the Service Request. Each product has its own support line.

- Use the **Primavera P6 EPPM** support line when you are having installation, configuration, or connection issues related to P6 EPPM.
- Use one of the following support lines when you are having installation or configuration issues that do not relate to P6 EPPM.
  - Oracle WebLogic Server
  - Oracle Database Server
  - BI Publisher
  - BPM
  - Oracle Webcenter Content Core Capabilities (formerly Universal Content Management)
  - Oracle Enterprise Manager
  - Oracle Access Manager
  - Oracle AutoVue

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/us/support/contact-068555.html or visit http://www.oracle.com/us/corporate/accessibility/support/index.html if you are hearing impaired.

Using Primavera's Support Resource Centers

Primavera's Support Resource Center provides links to important support and product information. Primavera's Product Information Centers (PICs) organize documents found on My Oracle Support (MOS), providing quick access to product and version specific information such as important knowledge documents, Release Value Propositions, and Oracle University training. PICs also offer documentation on Lifetime Management, from planning to installs, upgrades, and maintenance.

Visit https://support.oracle.com/epmos/faces/DocumentDisplay?id=1486951.1 to access links to all of the current PICs.

PICs also provide access to:

▶ **Communities** which are moderated by Oracle providing a place for collaboration among industry peers to share best practices.

▶ **News** from our development and strategy groups.

▶ **Education** via a list of available Primavera product trainings through Oracle University. The Oracle Advisor Webcast program brings interactive expertise straight to the desktop using Oracle Web Conferencing technology. This capability brings you and Oracle experts together to access information about support services, products, technologies, best practices, and more.

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