



PRIMAVERA

**P6 EPPM Web Services and WebSphere Configuration Guide
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Configuring P6 EPPM Web Services

P6 EPPM Web Services uses open standards (XML, SOAP, and WSDL) to enable developers to seamlessly integrate P6's project management functionality into other applications.

When using P6 EPPM Web Services, organizations can share P6 data between applications regardless of operating system or programming language.

This guide will tell you how to:

- ▶ Uninstall previous products and versions of P6 EPPM Web Services
- ▶ Configure the application server for P6 EPPM Web Services
- ▶ Deploy P6 EPPM Web Services

Before using this guide you will need to:

- ▶ Install the 8.4 database. See the *Installing and Configuring P6 EPPM* guide or *Manually Installing the P6 EPPM Database* guide.
- ▶ Install P6 and P6 EPPM Web Services. See the *Installing and Configuring P6 EPPM* guide.

Creating the WebSphere Environment for P6 EPPM Web Services

IBM WebSphere is a supported application server for P6 EPPM Web Services. Creating the WebSphere environment consists of the following tasks:

- ▶ Installing the application server. See **Prerequisites for P6 EPPM Configuration** (on page 7).
- ▶ Installing the application on the server. See the *Installing and Configuring P6 EPPM* guide.
- ▶ Configuring and deploying the application server. See **Configuring WebSphere for P6 EPPM Applications** (on page 10).
- ▶ Starting the application server. See **Starting WebSphere for P6 EPPM Applications** (on page 13).

Other configuration tasks covered in this section are optional, depending on your organization's needs.

Tips

- ▶ See the *Planning Your P6 EPPM Implementation* guide for a list of supported application servers with version numbers.
- ▶ For a full list of tested configurations for P6, see the *P6 EPPM Tested Configurations* document.

In This Section

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Prerequisites for P6 EPPM Configuration

Review the prerequisites before configuring any P6 EPPM applications.

System Requirements

P6 EPPM Web Services has the following system requirements for installation:

Java Runtime Environment Requirements

- ▶ Before installing P6 EPPM Web Services, you need to install the Java Development Kit (JDK), version 1.7.x. While P6 EPPM Web Services is compatible with any 1.7 version, Oracle recommends that you use Update 67. The Integrated Development Environment (IDE) you use to create code must work with this version.
- ▶ You can download the Java JDK from the Sun Microsystems Web site (<http://www.oracle.com/technetwork/java/archive-139210.html>).

- ▶ The EAR file should be deployed in a supported application server running the Java Runtime Environment (JRE), version 1.7.x.

Supported Operating Systems

P6 EPPM Web Services works on Windows, Linux, and the following Unix operating systems: Solaris, HP, AIX.

Database

You must install a P6 (version 8.4) database (supported databases are Oracle and Microsoft SQL Server).

Application Servers

P6 EPPM Web Services requires one of the following supported application servers:

- ▶ Oracle WebLogic 11g R1 (10.3.6) or 12c (12.1.2)
- ▶ IBM WebSphere 8.5.5

Notes:

- Even though the JRE and JDK are available on other operating systems, they have not been tested by Oracle.
 - For the full list of requirements, see the *P6 EPPM Tested Configurations* document.
 - For guidance on hardware and software requirements, see the *P6 Enterprise Project Portfolio Management Performance and Sizing Guide* white paper.
-

Uninstalling Previous Versions of P6


You must uninstall any previous versions of P6 before upgrading to 8.4.

Cautions:

- Before upgrading P6, you should upgrade the P6 EPPM database to 8.4. See the *Upgrading and Configuring P6 EPPM* or *Manually Upgrading the P6 EPPM Database* guide for details on how to upgrade your database and for information on potential impact areas to your environment. For the full list of tested configurations for P6, go to the \Documentation\<language>\Tested_Configurations folder of the P6 EPPM physical media or download.
-
- ▶ If you are a current Apache JackRabbit user and want to upgrade to P6 EPPM 8.4, 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 8.4.
 - ▶ If you are a current jBPM user and want to upgrade to P6 EPPM R8.4, workflows and reviews data will not be available. You should close all workflows and reviews that are in progress before upgrading to P6 EPPM 8.4. You cannot migrate any of this data to 8.4.

- ▶ 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 P6 Administrator application 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.

Tips

- ▶  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 information about the Admin Superuser in the *P6 EPPM Post Installation Administrator's Guide*.
- ▶ 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*.
- ▶ During the upgrade to P6 EPPM 8.4, 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.

Installing Applications

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

JDK Installation on WebSphere

WebSphere 8.5.5 automatically installs the IBM JDK on the application server. Installing the recommended WebSphere fix pack will update the JDK to the supported version. For a list of tested configurations for the P6 EPPM JDK, see the *P6 EPPM Tested Configurations* document.

WebSphere 8.5 Installation

Consult WebSphere's documentation for installation instructions.

Tips

On Windows, Oracle recommends you install the application server to a folder with a short name.

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.

P6 and P6 EPPM Web Services Installation

To deploy P6 EPPM Web Services, you must install P6 and P6 EPPM Web Services. To install these applications, run the setup.exe file from the **Primavera P6 Enterprise Project Portfolio Management R8.4 for <platform>\Disk1\Install** folder of the physical media or download. For more information on installing P6 and P6 EPPM Web Services, see the *Installing and Configuring P6 EPPM* guide.

Note: You can deploy P6 EPPM Web Services on a separate machine from P6.

Configuring WebSphere for P6 EPPM Applications

This section details the necessary configuration and deployment steps for P6 EPPM applications in a WebSphere environment. Although not required for the P6 EPPM server set up, WebSphere has additional settings you can use to enhance the environment. For example, when using clustering, enabling the session replication setting will seamlessly transfer users to another server if the server unexpectedly shuts down.

This section assumes you will setup your P6 EPPM applications in separate domains; however, you can create one domain and configure all P6 EPPM applications to run in this domain. See WebSphere's documentation for details on all available configuration, deployment, and settings options.

Preparing WebSphere for P6 EPPM Web Services

Before you deploy P6 EPPM Web Services into WebSphere, perform the following steps to prepare WebSphere for P6 EPPM Web Services:

- 1) Ensure you installed WebSphere in a location that does not have spaces in its path.
- 2) If it does not exist, create a folder named **app** under the `<WebSphere_Installation_Folder>/lib` folder.
- 3) Download the jaxp jar files from <https://jaxp.java.net/1.4/index.html>.
- 4) Run the `java -jar JAXP_142.jar` command from the command line to expand the jar files.
- 5) Copy the `jaxp-ri.jar` file from the `<jaxp_installation_folder>/lib` to the `app` folder you created.
- 6) Restart the WebSphere application.
- 7) Run `EXPORT CLASSPATH=path of the jaxp-ri`.

For example:

```
EXPORT CLASSPATH=/home/user/jaxp
```

- 8) Run the `p6wsdemo.jar`.

Setting the Bootstrap Location if P6 EPPM Web Services is in a Different WebSphere Domain from Your P6 Home Directory

If you will run the `p6ws.ear` file in the same domain as P6, skip this section and continue to **Configuring P6 EPPM Web Services to be a New WebSphere Application** (on page 12).

If you will run the `p6ws.ear` file in a different domain from P6, set the location of your P6 bootstrap file. When you set the bootstrap argument, you will set it for the home directory where you want your `p6ws.ear` file to connect.

- 1) Start the WebSphere Application Server.
- 2) Launch the WebSphere Application Server **Administrative Console**.
- 3) In the left-hand navigation pane:
 - a. Expand **Servers** then **Server Types**.
 - b. Click **WebSphere application servers**.
- 4) On the **Application servers** screen, click the server name link.
- 5) On the **Configuration** tab, under **Server Infrastructure**, expand **Java and Process Management**.
- 6) Click **Process Definition**.
- 7) Under **Additional Properties** on the right side, click **Java Virtual Machine**.
- 8) On the **Configuration** tab, under **Generic JVM arguments**:
 - a. Type (as all one line):


```
-Dprimavera.bootstrap.home=p6home
```

 where *p6home* is the P6 home directory that was set during installation (for example, `c:\P6EPPM_1\p6` in Windows or `/usr/P6EPPM_1/p6` in UNIX) where you want your application to connect.
 - b. If your bootstrap file has only one database, skip this step.
 If your bootstrap file contains more than one database, you need to add an argument clarifying which database you want to use. The line will look similar to the following:


```
-Ddatabase.instance=db_id
```

 where *db_id* is the database instance you want to use (for example, `-Ddatabase.instance=2`).
 The whole line should look similar to the following (all one line):


```
-Dprimavera.bootstrap.home=p6home -Ddatabase.instance=db_id
```
 - c. Set the memory settings to maximize performance.
 - In Windows, the line should look similar to the following (all one line):


```
-Dprimavera.bootstrap.home=p6home -Xms256m -Xmx512m
```

 where *p6home* is the P6 home directory that was set during installation (for example, `C:\P6EPPM_1\p6`).
 - In UNIX, the line will look similar to the following (all one line):


```
-Dprimavera.bootstrap.home=p6home -Xms256m -Xmx512m
```

where *p6home* is the P6 home directory that was set during installation (for example, */usr/P6EPPM_1/p6*).

- 9) Click **OK**.
- 10) Click the **Save** link that appears within the message reporting changes.
- 11) Restart the application server instance.

Configuring P6 EPPM Web Services to be a New WebSphere Application

To configure P6 EPPM Web Services to be a new WebSphere application:

- 1) From the Administrative Console's left-hand navigation pane:
 - a. Expand **Applications**.
 - b. Click **New Application**.
- 2) On the **Install a New Application** screen, click **New Enterprise Application**.
- 3) On the **Path to the new application** screen:
 - a. Specify the path to the 'p6ws.ear' file (for example, *c:\P6EPPM_1\ws\server\p6ws.ear*).
 - b. Click **Next**.
- 4) On the **How do you want to install the application** screen:
 - a. Accept the defaults.
 - b. Click **Next**.

Note: If the Application Security Warnings screen displays, click **Continue**.

- 5) On the **Install New Application** screen:
 - a. In Step 1, the **Select installation options** section, select the **Deploy Web Services** option.
 - b. In Step 2, the **Map modules to servers** section, select the **cx** option.
 - c. In Step 3, the **Map virtual hosts for web modules** section, select the **cx** option.
 - d. In Step 4, the **Summary** section, review your settings.
 - e. Click **Finish**.

Note that the application EAR file is now deploying and that this process might take several minutes.
- 6) To save directly to the master configuration, click the **Save** link. This process might take several minutes.

Deploying P6 EPPM Web Services in WebSphere

To deploy P6 EPPM Web Services in WebSphere:

- 1) On the **Administrative Console Main** screen:
 - a. In the left-hand navigation, expand **Applications**.
 - b. Click **WebSphere enterprise applications**.
- 2) Locate **p6ws** and verify application status.

If green arrow does not appear, click the Start button above the Select column.

- 3) Create a properties file named 'commons-logging.properties' in *websphere home\WebSphere\AppServer\profiles\profile name\properties* that contains the following:
org.apache.commons.logging.LogFactory=org.apache.commons.logging.impl.LogFactoryImpl
- 4) Restart the WebSphere application server.

Starting and Stopping WebSphere for P6 EPPM

The following procedures assume that you have installed your P6 EPPM applications into a supported application server and completed the additional steps outlined in **Configuring WebSphere for P6 EPPM Applications** (on page 10).

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 P6 Administrator application. OTN will have the most up-to-date help documentation.
-

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 P6 Administrator application. OTN will have the most up-to-date help documentation.
-

Where to Go From Here - Post Manual P6 EPPM Web Services Configuration

Now that you have deployed P6 EPPM Web Services and configured it with P6, you can begin using P6 EPPM Web Services. Use the *P6 EPPM Post Installation Administrator's Guide* to get started.

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
<i>What's New in P6 EPPM</i>	Highlights the new and enhanced features included in this release. You can also use the <i>P6 EPPM Cumulative Feature Overview Tool</i> to identify the features that have been added since a specific release level. All users should read this guide.
<i>Planning Your P6 EPPM Implementation</i>	Explains planning your implementation, provides an installation process overview, frequently asked questions,

Title	Description
	<p>client and server requirements, and security information.</p> <p>The P6 EPPM network administrator/database administrator and P6 administrator should read this guide.</p>
<i>P6 EPPM Installation and Configuration Guide</i>	<p>Explains how to install and configure the P6 EPPM using the P6 EPPM Installation and Configuration wizards.</p> <p>The P6 EPPM network administrator/database administrator and P6 administrator should read this guide.</p>
<i>P6 EPPM Installation and Manual Configuration Guide</i>	<p>Explains how to install and configure the P6 EPPM using the P6 EPPM Installation wizards, and how to manually configure individual components.</p> <p>The P6 EPPM network administrator/database administrator and P6 administrator should read this guide.</p>
<i>P6 EPPM Post Installation Administrator's Guide</i>	<p>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 P6 Administrator application Administrator settings, and finalizing your P6 Integration API and P6 EPPM Web Services settings.</p> <p>The P6 EPPM network administrator/database administrator and P6 administrator should read this guide.</p>
<i>Tested Configurations</i>	<p>Lists the configurations that have been tested and verified to work with P6 EPPM.</p> <p>The network administrator/database administrator and P6 EPPM administrator should read this document.</p>
<i>P6 User's Guide</i>	<p>Explains how to plan, set up, and manage projects in a multiuser environment. If you are new to <i>P6</i>, 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.</p> <p>The program manager, project manager, resource/cost manager, team leader, and all <i>P6</i> users should read this guide.</p>
<i>P6 Help</i>	<p>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.</p> <p>The operations executive, P6 EPPM and P6 administrator, program manager, project manager, resource/cost manager,</p>

Title	Description
	team leader, and all users should read this Help.
<i>P6 Data Dictionary</i>	Defines fields used in P6. All P6 users should refer to this guide if they need a field definition.
<i>P6 Team Member Web Help</i>	Describes how to use P6 Team Member Web to provide status on activities. P6 Team Member Web users should read this Help.
<i>P6 EPPM Web Services Programmer's Guide</i>	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 which interact with P6 should read this guide.
<i>P6 EPPM Web Services Reference Manual</i>	Describes all services and operations available in P6 EPPM Web Services. Anyone who wants to develop applications which interact with P6 should read this guide.
<i>P3 to P6 EPPM Migration Guide</i>	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, click <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.

Legal Notices

Oracle Primavera P6 EPPM Web Services and WebSphere Configuration Guide

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