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**PRIMAVERA**

**P6 EPPM Web Services and WebSphere Configuration Guide  
Release 8.3**

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## Legal Notices

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Oracle Primavera P6 EPPM Web Services and WebSphere Configuration Guide

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# Preface

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## Where to Get Documentation

For the most up-to-date versions of all manuals and technical documents related to installing, administering, and using P6 EPPM, go to:

[http://download.oracle.com/docs/cd/E29618\\_01/index.htm](http://download.oracle.com/docs/cd/E29618_01/index.htm)

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

You can also access the versions of the product manuals and technical documents that were available at the time of the release from the P6 EPPM Documentation Center, located in the \Documentation\Documentation\_library\language folder of the P6 EPPM physical media or download.

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>	This book provides information on planning your implementation. It 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.

Title	Description
<i>P6 EPPM Installation and Configuration Guide</i>	<p>This documentation set 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>This documentation set 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>Once you have installed and configured your P6 EPPM applications, this guide will tell you how to get started using them. You will want to complete most of the tasks in this guide before you let your users work with these applications. These tasks include information about configuring your users and security settings and privileges, setting your P6 Administrator application and P6 Progress Reporter 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>This 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.</p> <p>The program manager, project manager, resource/cost manager, and team leader should read this guide.</p>
<i>P6 Data Dictionary</i>	<p>This data dictionary defines fields used in P6.</p> <p>All P6 users should refer to this guide if you need a field</p>


Title	Description
	definition.
<i>P6 Team Member User's Guide</i>	<p>This guide explains how to status activities using P6 Team Member interfaces, which are P6 Team Member Web, P6 Team Member for iPhone, and E-mail Statusing Service.</p> <p>All users of the P6 Team Member interfaces should read this guide.</p>
<i>P6 Team Member Web Help</i>	<p>Describes how to use P6 Team Member Web to provide status on activities.</p> <p>P6 Team Member Web users should read this Help.</p>
<i>P6 Team Member for iPhone Help</i>	<p>Describes how to use the P6 Team Member for iPhone app to provide status on activities.</p> <p>P6 Team Member for iPhone app users should read this Help.</p>
<i>P6 Professional Help</i>	<p>Explains how to use P6 Professional for EPPM to plan, set up, and manage projects in a multiuser environment. If you are new to P6 Professional, use this Help to learn how to use the software effectively to plan and manage projects.</p> <p>The P6 Professional administrator, program manager, project manager, resource/cost manager, and team leader should read this Help.</p>
<i>P6 Help</i>	<p>Describes how to create, manage, plan, and schedule projects, group projects into portfolios, administer all enterprise data, application settings, user accounts, and security profiles, maintain both the organizational breakdown structure (OBS) and enterprise project structure (EPS), manage resources and roles, track risks, issues, and notebooks, create and reuse templates, evaluate budgets, analyze performance and ROI for project portfolios, participate in workflows and document reviews, approve timesheets, and generate reports.</p> <p>The operations executive, P6 EPPM and P6 administrator, program manager, project manager, resource/cost manager, and team leader should read this Help.</p>

Title	Description
<i>P6 Progress Reporter Administrator Help</i>	<p>Describes how to enter database connection information for the P6 Progress Reporter server and modify P6 Progress Reporter server and application settings.</p> <p>The P6 EPPM network administrator/database administrator should read this Help.</p>
<i>P6 Progress Reporter Help</i>	<p>Describes how to use P6 Progress Reporter to enter and update time spent on assignments.</p> <p>Team members using P6 Progress Reporter should read this Help.</p>
<i>P6 Progress Reporter User's Guide</i>	<p>This guide explains how to report work time and provide status on assigned activities using P6 Progress Reporter.</p> <p>Team members using P6 Progress Reporter should read this guide.</p>
<i>Primavera P6 Visualizer Help</i>	<p>Describes how to create, modify, and manage Timescaled Logic Diagrams and Gantt charts. The Visualizer application can connect to a P6 Professional or EPPM database. Visualizer can only be installed via the P6 Professional setup. However, you can run Visualizer without P6 Professional installed.</p> <p>All users should read this Help.</p>
<i>P6 EPPM Web Services Programmer's Guide, and P6 EPPM Web Services Reference Manual</i>	<p>The <i>P6 EPPM Web Services Programmer's Guide</i>, available as an HTML help system, describes how to invoke, use, and troubleshoot the available services/operations within supported environments. The <i>P6 EPPM Web Services Reference Manual</i>, also available as an HTML help system, describes all services and operations available in P6 EPPM Web Services in a comprehensive manner.</p> <p>Anyone who wants to develop applications which interact with P6 should read this guide.</p>
<i>P3 to P6 EPPM Migration Guide</i>	<p>This guide provides best practices for migrating your P3 data to P6 EPPM, and details how P3 functionality maps to P6 EPPM functionality.</p> <p>All administrators should read this guide.</p>



## Distributing Information to the Team

You can copy the online documentation to a network drive for access by project participants. Each team member can then view or print those portions that specifically relate to his or her role 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>

## 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.

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** are moderated by Oracle providing a place for collaboration among industry peers to share best practices.
- ▶ **News** from our development and strategy groups.
- ▶ **Education** contains 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.

For more information about working with Support, visit <https://support.oracle.com/epmos/faces/DocumentDisplay?id=888813.2>.

# Configuring P6 EPPM Web Services

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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 8.3 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

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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 13).
- ▶ 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 20).
- ▶ Starting the application server. See **Starting WebSphere for P6 EPPM Applications** (on page 23).

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 1.6.x, also known as J2SE 6.0. While P6 EPPM Web Services is compatible with any 1.6 version, Oracle recommends that you use Update 27. 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 1.6.x, also known as J2SE 6.0.

### 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 8.3) 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
- ▶ IBM WebSphere 7.0 or 8.0

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#### 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.
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## Uninstalling Previous Versions of P6

You must uninstall any previous versions of P6 before upgrading to 8.3.


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#### Cautions:

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- Before upgrading P6, you should upgrade the P6 EPPM database to 8.3. 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\
- 
- ▶ If you are a current Apache JackRabbit user and upgrade to P6 EPPM 8.3, 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 8.3.
  - ▶ If you are a current jBPM user and upgrade to P6 EPPM R8.3, workflows and reviews data will not be available. You should close all workflows and reviews that are in progress before upgrading to P6 EPPM 8.3. You cannot migrate any of this data to 8.3.
  - ▶ 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*.
- ▶ Starting with R8, 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 8.3, 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.

### Uninstalling P6 from Tomcat

Follow the instructions below to uninstall Primavera's Web Application version 6.0 from a **Tomcat 5.5 Server**.

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**Note:** Tomcat is not a supported application server for P6 version 6.1 and later.

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### Uninstalling P6 from Tomcat on Windows Platforms

To uninstall P6 from Tomcat on Windows platforms:

- 1) Go to the Start menu.
- 2) Choose Programs, <app name>, Uninstall <app name>.

### Uninstalling P6 from Tomcat on UNIX Platforms

To uninstall P6 from Tomcat on UNIX platforms:

- 1) Change to the webapps directory under the Tomcat install directory.
- 2) Run the **uninstalltc.sh** script.

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### Uninstalling P6 from JBoss

To uninstall Primavera's Web Application 6.0 or P6 Web Access version 6.1 and later from a JBoss Server:

- 1) Go to the JBoss install location (for example, c:\jboss-5.0.1.GA-jdk6\server).
- 2) Delete the deployment folder for Primavera Web.  
For 6.1 and earlier installations, the suggested folder name was "myprimavera."  
For 6.2 and later installations, the suggested folder name was "primaveraweb."

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**Note:** Starting with P6 R8, P6 no longer supports the JBoss application server.

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### Uninstalling P6 6.2.1 or Earlier from WebSphere

To uninstall Primavera's Web Application 6.0, P6 Web Access version 6.1 and later from a WebSphere server:

- 1) Do one of the following:
  - ▶ On Windows platforms, from the Start menu, choose Programs, *app name*, Uninstall *app name*.
  - ▶ On Unix platforms, change to the installableApps/*app name* directory under the WebSphere install directory and run the uninstallws.sh script.
- 2) Launch the **WebSphere Application Console**.  
For 6.1 and earlier installations, remove the current "myPrimavera" deployment.  
For 6.2 installations, remove the current "primaveraweb" deployment.



- 3) If you will use the same *p6home* directory for the new deployment, delete the existing WAR or EAR file from that directory to avoid conflict with the new *p6.ear* file.

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### Uninstalling P6 7.0 or Later From WebSphere

To uninstall P6 7.0 or later, you must uninstall it with the Oracle Universal Installer, then remove it from the application server.

#### Using Oracle Universal Installer to Uninstall P6

- 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 the P6 version 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 from WebSphere

To delete P6 from WebSphere:

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##### Notes:

- If you are deleting a 7.x release, your deployment will say **primaveraweb** instead of **p6**.
  - If you are deleting an 8.x release, your deployment will say **p6**.
- 

- 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 your deployment (for example, **p6**).

- 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 deployment, delete the existing WAR or EAR file from that directory to avoid conflict with the new files.
- 9) If you installed the help and tutorials WAR files, repeat these steps.

### Uninstalling P6 EPPM Web Services 6.2.1 or Earlier from WebSphere

To uninstall P6 EPPM Web Services from a WebSphere server:

- 1) Do one of the following:
  - ▶ On Windows platforms, from the Start menu, choose Programs, *app name*, Uninstall *app name*.
  - ▶ On Unix platforms, change to the `installableApps/app name` directory under the WebSphere install directory and run the `uninstallws.sh` script.
- 2) Launch the **WebSphere Application Console**.
- 3) Remove the current P6 EPPM Web Services deployment.
- 4) If you will use the same `wshome` directory for the new deployment, delete the existing EAR file from that directory to avoid conflict with the new `p6ws.ear` file.

### Uninstalling P6 EPPM Web Services 7.0 or Later from WebSphere

To uninstall P6 EPPM Web Services 7.0 or later, you must uninstall it with the Oracle Universal Installer, then remove it from the application server.

### Using Oracle Universal Installer to Uninstall P6 EPPM Web Services

- 1) From the P6 EPPM Web Services 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 the P6 EPPM Web Services version 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 Web Services from WebSphere

To delete P6 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 p6ws.
- 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 *wshome* directory for the new deployment, delete the existing EAR file from that directory to avoid conflict with the new p6ws.ear file.

### Installing Applications

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

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### 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.

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### JDK Installation on WebSphere

WebSphere 8.5 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.

### 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 R8.3 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.

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

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## 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.dev.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 22).

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**.

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

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- 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 **cxflist** option.
  - c. In Step 3, the **Map virtual hosts for web modules** section, select the **cxflist** 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 20).

#### 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**.

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#### Notes:

- Repeat these steps for any application you want to start, including your help and tutorials files.
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- 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.
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### 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, **p6**).
  - 4) Click **Stop**.
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#### 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.
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## Where to Go From Here - Post Manual P6 EPPM Web Services Configuration

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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.