

# Oracle Primavera® P6™ Web Services

---

Administrator's Guide

Version 7.0

Copyright © 2008, 2009, Oracle and/or its affiliates. All rights reserved.

The Programs (which include both the software and documentation) contain proprietary information; they are provided under a license agreement containing restrictions on use and disclosure and are also protected by copyright, patent, and other intellectual and industrial property laws. Reverse engineering, disassembly, or decompilation of the Programs, except to the extent required to obtain interoperability with other independently created software or as specified by law, is prohibited.

The information contained in this document is subject to change without notice. If you find any problems in the documentation, please report them to us in writing. This document is not warranted to be error-free. Except as may be expressly permitted in your license agreement for these Programs, no part of these Programs may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose.

If the Programs are delivered to the United States Government or anyone licensing or using the Programs on behalf of the United States Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the Programs, including documentation and technical data, shall be subject to the licensing restrictions set forth in the applicable Oracle license agreement, and, to the extent applicable, the additional rights set forth in FAR 52.227-19, Commercial Computer Software--Restricted Rights (June 1987). Oracle USA, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

The Programs are not intended for use in any nuclear, aviation, mass transit, medical, or other inherently dangerous applications. It shall be the licensee's responsibility to take all appropriate fail-safe, backup, redundancy and other measures to ensure the safe use of such applications if the Programs are used for such purposes, and we disclaim liability for any damages caused by such use of the Programs.

Oracle, JD Edwards, PeopleSoft, and Siebel are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

The Programs may provide links to Web sites and access to content, products, and services from third parties. Oracle is not responsible for the availability of, or any content provided on, third-party Web sites. You bear all risks associated with the use of such content. If you choose to purchase any products or services from a third party, the relationship is directly between you and the third party. Oracle is not responsible for: (a) the quality of third-party products or services; or (b) fulfilling any of the terms of the agreement with the third party, including delivery of products or services and warranty obligations related to purchased products or services. Oracle is not responsible for any loss or damage of any sort that you may incur from dealing with any third party.

To view P6 Commercial Notices and Disclosures for Documentation, go to the \Documentation\<language>\Notices and Disclosures folder of the P6 physical media or download.

# Table of Contents

<b>Preface.....</b>	<b>5</b>
Using this Administrator's Guide .....	6
Media Packs .....	7
Where to Get Support .....	9
<b>Installing and Configuring P6 Web Services.....</b>	<b>11</b>
What is P6 Web Services? .....	12
System Requirements.....	13
Installing P6 Web Services .....	15
Enabling WS-Policy.....	20
Using UsernameToken Profile with .NET.....	22
Deploying P6 Web Services .....	23
Changing Database Configuration Settings .....	29
Enabling Access to P6 Web Services .....	30
Using the Primavera Administrator Application .....	31
Starting the Primavera Administrator Application .....	32
Reviewing and Modifying P6 Web Services Configurations .....	33
Setting up Event Notification.....	37
P6 Web Services Configuration Settings.....	38
<b>Configuring Authentication Modes.....</b>	<b>69</b>
Authentication Modes .....	70
Implementing Non-Native Authentication .....	71
Choosing an Authentication Scheme .....	72
Running the Authentication Configuration Wizard.....	73
Configuring P6 Web Services Authentication .....	84
Login/Logout Changes to Support Authentication Modes .....	85
<b>Index.....</b>	<b>87</b>



# Preface

---

***In this preface:***

**Using this Administrator's Guide**

**Media Packs**

**Where to Get Support**

P6 Web Services enables organizations to integrate P6 functionality into other web-based applications using the following web services standards: XML (Extensible Markup Language), SOAP (Simple Object Access Protocol), and WSDL (Web Services Description Language).

## Using this Administrator's Guide

This guide describes the steps required to install P6 Web Services and how to configure it to use or LDAP authentication. It is organized as follows:

**Installing and Configuring P6 Web Services** Describes how to install P6 Web Services and explains how to use the Primavera Administrator (also known as the P6 Administration Application) to review, modify, add, and delete P6 Web Services server configurations.

**Configuring Authentication Modes** Describes the authentication modes available in this release and explains how to configure P6 Web Services to operate using or LDAP authentication.

### **Additional P6 Web Services documentation**

The following P6 Web Services user documentation is available:

- The *Primavera P6 Web Services Programmer's Guide* is available in your P6 Web Services installation folder at `\docs\ProgrammersGuide\index.html`, or from the Windows Start menu, if you choose to install the documentation when installing P6 Web Services. If you do not install the documentation, this document is available in the same folder on the P6 Web Services physical media or download.
- The *Primavera P6 Web Services Reference Manual* is available in your P6 Web Services installation folder at `\docs\ReferenceManual\index.html`, or from the Windows Start menu, if you choose to install the documentation when installing P6 Web Services. If you do not install the documentation, this document is available in the same folder on the P6 Web Services physical media or download.

## Media Packs

Media packs include all files necessary to install Primavera P6 client applications, all manuals and technical documents related to the installation, administration, and use of Primavera P6 components, and the Quick Install Guide.

The Primavera P6 Media Packs are delivered on the Oracle E-Delivery Web site.

The media packs are structured as follows:

### **Primavera P6 Professional Project Management (v7.0) Media Pack**

- Primavera P6 Professional Project Portfolio Management Quick Install Guide – Includes the Quick Install Guide.
- Primavera P6 Client Applications v7.0 – Includes all files necessary to install the Project Management module, Methodology Management Module, P3 converter, Compression Server, Job Services, LDAP Configuration, and the SDK.
- Primavera P6 Database Setup v7.0 – Includes all files for both manual and automatic application database setup.
- Primavera P6 Tools v7.0 – Includes Compression Server, SharePoint Connector, and the OIM Connector.
- Primavera P6 Documentation – Includes all manuals and technical documents related to the installation, administration, and use of Primavera P6 components.

### **Primavera P6 Enterprise Project Portfolio Management (v7.0) Media Pack**

- Primavera P6 Enterprise Project Portfolio Management Quick Install Guide – Includes the Quick Install Guide.
- Primavera P6 Web Access v7.0 – Includes all files necessary to install Primavera P6 Web Access.
- Primavera P6 Database Setup v7.0 – Includes all files for both manual and automatic application database setup.
- Primavera P6 Client Applications v7.0 – Includes all files necessary to install the Project Management module, Methodology Management Module, P3 converter, Compression Server, Job Services, LDAP Configuration, and the SDK.

- Primavera Integration API and Web Services v7.0 – Includes all files necessary to install the Integration API and Web Services.
- Primavera P6 Reporting Database v6.2 Service Pack 1 – Includes all files necessary to install Primavera P6 Reporting Database.
- Primavera P6 Tools v7.0 – Includes Compression Server, SharePoint Connector, and the OIM Connector.
- Primavera P6 Documentation – Includes all manuals and technical documents related to the installation, administration, and use of Primavera P6 components.
- Primavera P6 Progress Reporter v7.0 – Includes all files necessary to install P6 Progress Reporter.



## Where to Get Support

If you have a question about using Oracle Primavera products that you or your network administrator cannot resolve with information in the documentation or Help, go to:

<http://www.oracle.com/primavera/support.html>

This page provides the latest information for contacting Oracle Global Customer Support and the support renewals process.



# Installing and Configuring P6 Web Services

---

***In this chapter:***

- What is P6 Web Services?**
- System Requirements**
- Installing P6 Web Services**
- Deploying P6 Web Services**
- Changing Database Configuration Settings**
- Enabling Access to P6 Web Services**
- Using the Primavera Administrator Application**
- Starting the Primavera Administrator Application**
- Reviewing and Modifying P6 Web Services Configurations**
- P6 Web Services Configuration Settings**

This chapter describes how to install P6 Web Services. In addition, this chapter explains how to use the Primavera Administrator to review, modify, add, and delete P6 Web Services server configurations.

## What is P6 Web Services?

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

Using P6 Web Services, organizations can share P6 project management data between applications independent of operating system or programming language.

# System Requirements

P6 Web Services has the following system requirements for installation:

## Apache CXF Requirements

- You must install the services framework Apache CXF version 2.2.2 before installing P6 Web Services. You can download Apache CXF from the following Web site:

<http://archive.apache.org/dist/cxf/2.2.2/>

After launching the site, you must select the download files that correspond to your operating system.

For machines running Windows, click **apache-cxf-2.2.2.zip**.

For machines running Linux or Solaris, click **apache-cxf-2.2.2.tar.gz**.

Extract the file to a folder on your local machine.

- You must create a CXF\_HOME environment variable before beginning the P6 Web Services installation. To set the environment variable on Windows, from the **Start** menu or Windows Explorer, right-click on **My Computer**, then click **Properties**. Select the **Advanced** tab, then click **Environment Variables**. In the **Variable name** field, type CXF\_HOME. In the **Variable value** field, type the location of Apache CXF on your local machine; for example, C:\apache-cxf-2.2.2.

## Java Runtime Environment Requirements

- If you write Java code against the client-side interface, you need to install the Java Development Kit (JDK), version 1.6.x, also known as J2SE 6.0. While P6 Web Services is compatible with any 1.6 version, we recommend using Update 14. The Integrated Development Environment (IDE) you use to create code must work with this version.
- If you do not plan on writing Java code against the client-side interface and will only be running the sample Java applications, you will need to install only the Java Runtime Environment (JRE), version 1.6.x, also known as J2SE 6.0. While P6 Web Services is compatible with any 1.6 version, we recommend using Update 14.

You can download the JRE or Java JDK from the Sun Microsystems Web site (<http://www.sun.com/>). If you are using the Java JDK, ensure that it is installed before running the P6 Web Services setup.

- The WAR 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.

### .NET Requirements

- To use the .NET client code, you must have Microsoft .NET Framework version 3.0 or later.

### Supported Operating Systems

- P6 Web Services is fully supported on Windows, Solaris, and Linux operating systems.



*Even though the JRE and JDK are available on other operating systems, they have not been tested by Oracle Primavera.*

---

**For the full list of supported operating systems and database versions, refer to the Tested Configurations.pdf file, which is provided in the \Documentation\<<language>\Tested Configurations folder on the P6 physical media or download.**

### Project Management Database

- You must install a P6 (version 7.0) project management database (Oracle, Oracle Database Express Edition, and SQLServer are supported).

### Application Servers

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

- JBoss 5.0.1
- Oracle WebLogic 10g R3
- IBM WebSphere 7.0

## Installing P6 Web Services

**For information on installing the project management database and the client application, see the *Oracle Primavera P6 Administrator's Guide*, which is provided in the \Documentation\  
<language> folder on the P6 physical media or download.**

Before installing P6 Web Services, you need to install the project management database and the P6 Project Management client module (version 7.0).

The P6 Web Services Installer provides a wizard to guide you through the installation process, which includes installing the P6 Web Services client-side and server-side libraries and setting up and configuring the Web Services database.



*Before you start the installation, make sure you set the `JAVA_HOME` and `CXF_HOME` environment variables. For information on setting the `CXF_HOME` environment variable, refer to "[Apache CXF Requirements](#)" on page 13.*

---



*Due to the global nature of the OUI (Oracle Universal Installer), the OUI online help is not applicable for installing or uninstalling P6 Web Services or for references to P6 documentation. Instead, refer to the installation instructions in this section.*

---

### To install P6 Web Services

1 From the Web\_Services\WebServices 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 solaris\_64, linux, hp\_64, or aix\_64-5L.

Then type the following commands

```
chmod 755 runInstaller  
chmod 755 unzip  
./runInstaller
```

2 Click **Next**

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

4 On the **Select Installation Type** dialog box, mark **Typical** to install all of the Primavera P6 Web Services software.

A **Typical** installation installs all required files for both client-side and server-side operation, as well as demo applications and documentation. We recommend that you choose this option.

A **Custom** installation enables you to select the components you want to install. If you choose this option, select the components you want to install on the following screen, then click **Next**.



**5** On the **Specify Home Details. . .** dialog box:

- Enter an appropriate name for P6 Web Services in the **Name** field.
- Specify the installation location for the P6 Web Services files in the **Path** field.



*P6 Web Services does not have to be installed on the same server as the P6 Project Management client module.*

**6** Click **Next**.**7** On the **Information** dialog box, review the text and click **Next**.**8** On the **Java Home Directory** dialog box, type or browse to the location where Java is installed. the setup wizard automatically detects the JDK/JRE on your local machine. To specify a different location, enter the path, or click **Browse** to select it.**9** On the **Choose Apache CXF Home Directory**, the setup automatically detects the location of your Apache CXF installation, if you specified the CXF\_HOME environment variable. If you did not specify this environment variable, type the location of Apache CXF 2.2.2 on your local machine, or click **Browse** to select it.**10** On the **Authentication and Session Management dialog** box, select one of the following:

- Use UsernameToken Profile for authentication
- Use UsernameToken Profile with nonce for additional security
- Use HTTP cookies for session management

Refer to the *P6 Web Services Programmer's Guide* for information relating to these choices.

**11** On the **Summary** dialog box, click **Install**.

After the P6 Web Services files are installed, the **Configuration Assistants** dialog box opens. Do not close this dialog box. After a short time, the **Setup and Configuration of the Primavera Database** dialog box opens.

**12** On the **Setup and Configuration of the Primavera Database** dialog box, select the database type (Oracle or SQL).

---

*For the full list of tested configurations for P6 Web Services, go to the \Documentation\<language>\Tested Configurations folder of the P6 physical media or download.*

---



---

*You can later change the database type through the P6 Web Services Database Configuration Setup.*

---

- 13** On the **Please enter the following information. . .** dialog box, specify the database connection parameters.

P6 Web Services requires **pubuser** access (in the User Name field) to the database. The database name, host address, and host port are specific to your Oracle or MS SQL Server installation. **Database Host Port** displays the default port for the database type you selected. You can edit this port.



*P6 Web Services supports SSL communication between the application server and the database server. For information on configuring SSL, refer to the appropriate database server documentation and the Oracle Primavera Support Knowledgebase.*

---

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



*Using the SSL protocol will impact database performance.*

---

The **Public Group ID** must be 1 for a standard configuration.

- 14** If there is an existing P6 configuration, on the **The installer has detected. . .** dialog box, you can choose whether you want to use it, or create a new configuration.



*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 newly added configuration settings.*

---

If there is no existing P6 configuration, the **The installer has detected. . .** dialog box does not appear and the installation process automatically creates a default configuration named Primavera Configuration. You can edit the settings for this configuration through the Primavera Administrator (also known as the P6 Administration Application).



*After installation, you can use the Database Configuration Setup wizard to choose a different configuration, if necessary.*

---

**15** When the message displays to confirm that the database configuration has completed successfully, click **OK**.

**16** On the **End of Installation** screen, click **Exit**, then click **OK**.



*P6 Web Services will not appear in the “Add or Remove Programs” list in Windows. If you need to uninstall P6 Web Access, run the OUI (Oracle Universal Installer).*

---

The following shortcuts are added to the Primavera P6 Web Services entry in your Start menu:

- Demo (includes .NET and Java demos)
- Documentation (includes P6 Web Services Administrator’s Guide, Programmer’s Guide, Readme, and Reference Manual)
- Database Configuration
- Primavera Administrator



*The DotNet Demo and Java JAX-WS Demo are installed along with demo source code in the \demo folder of the P6 Web Services installation directory.*

---

## Enabling WS-Policy

P6 Web Services uses an external attachment file to support WS-Policy. Since the reference to the external file is commented out in the default P6 Web Services installation, WS-Policy for P6 Web Services is disabled by default. However, you can enable WS-Policy by uncommenting the reference to the external file before deploying P6 Web Services to the server.

The external file, `policies.xml`, asserts that HTTPS and WS-Addressing is required for all of the P6 Web services. However, if you desire that one or both of these requirements be removed from a specific P6 Web Service, you can customize WS-Policy by removing the HTTPS and/or WS-Addressing assertions for that service from the external attachment file.

Enabling and customizing WS-Policy involves four steps:

- Extracting the `cx.xml` and `policies.xml` files from the `p6ws.war` file.
- Uncommenting the reference in the `cx.xml` file to the external attachment file.
- Customizing the `policies.xml` file.
- Updating the `p6ws.war` file with the new `cx.xml` file and `policies.xml` files.

### Extracting the `cx.xml` and `policies.xml` files

- 1 Ensure that the `JAVA_HOME` variable has been set correctly and that `%JAVA_HOME%\bin` has been added to your system path.
- 2 Navigate to the location of the `p6ws.war` file and use the following commands to extract the `cx.xml` and `policies.xml` files:

```
jar xf p6ws.war WEB-INF/classes/cx.xml
jar xf p6ws.war WEB-INF/classes/policies.xml
```

### Uncommenting the reference to the external attachment file

- 1 Open the `cx.xml` file in a text editor.
- 2 Find following lines in the `cx.xml` file:

```
<!--
<p:externalAttachment location="classpath:/policies.xml"/>
-->
```

- 3 Remove the lines beginning with `<!--` and `-->` to uncomment the external file reference.

### Customizing the policies.xml file

The default policies.xml file is separated into two sections:

- A top section which contains policy expressions for requiring HTTPS connections from clients.
- A bottom section which contains policy expressions for requiring WS-Addressing (WS-Addressing is configured using the `<Addressing>` policy expression).

Follow the steps below to customize the policies.xml file:

- 1 Open the policies.xml in a text editor.
- 2 Customize the HTTPS Policy definitions section. For example, to remove the requirement to use HTTPS with the Spread service remove or comment out the following lines from the **HTTPS Policy definitions** section of the policies.xml file:

```
<wsa:EndpointReference>  
<wsa:Address>/SpreadService</wsa:Address>  
</wsa:EndpointReference>
```

- 3 Customize the WS Addressing Policy definitions section. For example, to remove the requirement to use WS Addressing with the Spread service remove or comment out the following lines from the **WS Addressing Policy definitions** section of the policies.xml file:

```
<wsa:EndpointReference>  
<wsa:Address>/SpreadService</wsa:Address>  
</wsa:EndpointReference>
```

### Update the p6ws.war file with the new cxf.xml file and policies.xml files

- 1 Make sure that you are in the same directory as the p6ws.war file.
- 2 Use the following commands to update the p6ws.war file:

```
jar uf p6ws.war WEB-INF/classes/cxf.xml  
jar uf p6ws.war WEB-INF/classes/policies.xml
```

## Using UsernameToken Profile with .NET

If you are using UsernameToken Profile with .NET, you need to customize the cxf.xml file.

Customizing the cxf.xml file involves three steps:

- Extracting the cxf.xml file from the p6ws.war file.
- Editing the file.
- Updating the p6ws.war file with the new cxf.xml file.

### Extract the cxf.xml file

- 1 Ensure that the JAVA\_HOME variable has been set correctly and that %JAVA\_HOME%\bin has been added to your system path.
- 2 Navigate to the location of the p6ws.war file and use the following command to extract the cxf.xml file:

```
jar xf p6ws.war WEB-INF/classes/cxf.xml
```

### Edit the cxf.xml file

- 1 Open the cxf.xml file in a text editor and find following line:

```
<entry key="action" value="UsernameToken"/>
```

- 2 Replace the line above with this line:

```
<entry key="action" value="UsernameToken Timestamp"/>
```

### Update the p6ws.war file with the new cxf.xml file

- 1 Make sure that you are in the same directory as the p6ws.war file.
- 2 Use the following command to update the p6ws.war file:

```
jar uf p6ws.war WEB-INF/classes/cxf.xml
```

## Deploying P6 Web Services

You can deploy P6 Web Services on one of the following application servers that support JDK/JRE 1.6.x.

- JBoss 5.0.1 on Windows
- Oracle WebLogic 10g R3
- IBM WebSphere 7.0



*Refer to your application server documentation for detailed deployment instructions.*

---



*P6 Web Services supports the HTTPS communication protocol. Refer to the appropriate application server documentation for instructions on configuring HTTPS on your application server.*

---

### Deploying into JBoss

To deploy P6 Web Services into JBoss:

- 1 copy the **p6ws.war** file from the \<P6 Web Services home>\server folder to the following JBoss folder:

**<JBOSS INSTALL LOCATION>\server\default\deploy\**

- 2 In order for incoming client connections to remotely access the JBoss service, the JBoss services must be configured to bind to a network interface (i.e. the IP address of the network card for the server on which JBoss is installed). Determine to which interface(s) JBoss services should bind in order to enable remote access to the JBoss Application server. For security purposes, the default installation of JBoss currently binds its services to the local host (127.0.0.1) interface, which does not allow remote connections to the JBoss services. Refer to the *JBoss Application Server Installation And Getting Started Guide*, available at [www.jboss.org](http://www.jboss.org), for information on enabling and securing remote access to the appropriate interface(s).
- 3 As appropriate for your specific deployment, include the **-b** option in the run command to bind the JBoss services to the interface(s) determined in the previous step. For example:

**call %JBOSS\_HOME%\bin\run.bat -b ###.###.###.###**

### Deploying into Weblogic

Deploying P6 Web Services into Weblogic involves two steps:

- Creating a WebLogic domain for the Web Services application.
- Deploying P6 Web Services into the WebLogic domain.

### Creating a WebLogic Domain

- 1 Run the Oracle WebLogic Configuration Wizard.
- 2 In the Oracle WebLogic Configuration Wizard **Welcome** window, select **Create a new WebLogic domain** and click **Next**.
- 3 If the **Select Domain Source** window displays, click **Next**.
- 4 In the **Configure Administrator Username and Password** window, enter the user name and password information and click **Next**.
- 5 In the **Configure Server Start Mode and JDK** window, select **Production Mode** in the left pane. Select an appropriate JDK in the right pane and click **Next**.
- 6 In the **Customize Environment and Services Settings** window, click **Next**.
- 7 In the **Create WebLogic Domain** window, enter the domain and location information and click **Create**.
- 8 In the **Creating Domain** window, mark the **Start Admin Server** option and click **Done**.
- 9 When prompted, enter the user name and password that you entered in step 4.



## Deploying the P6 Web Services into the WebLogic domain

- 1 In the **Welcome** window of the Administration Console, log in using the user name and password that you entered in step 4 above.
- 2 In the **Change Center** pane of the Administration Console, click **Lock & Edit**.
- 3 In the **Domain Structure** pane, click **Deployments**.
- 4 In the **Summary of Deployments** pane, click **Install**.
- 5 In the **Path to the new application** pane, specify the path to the war file in the p6wshome folder. For example:  
`c:\p6wshome\server\p6ws.war`
- 6 Click **Next**.
- 7 In the **Install Application Assistant** pane, select **Install this deployment as an application** and click **Next**.
- 8 In the **Install Application Assistant** pane, click **Next** to accept the default options.
- 9 Review the configuration settings you have chosen and then click **Finish** to complete the installation.
- 10 In the **Settings for p6ws** window, click **Save**.
- 11 In the **Change Center** pane, click **Activate Changes**.
- 12 In the **Domain Structure** pane, click **Deployments**.
- 13 In the **Summary of Deployments** pane, select **p6ws**.
- 14 In the **Summary of Deployments** pane, click the down arrow to the right of the **Start** button and click **Servicing all requests**.
- 15 In the **Start Application Assistant** pane, click **Yes**.
- 16 In the **Summary of Deployments** pane, click the **start Running** link in the **State** column of the row that contains **p6ws**.
- 17 In the **Domain Structure** pane, click **Deployments**. The **p6ws** state column should be **Active**.

- 18** Before starting P6 Web Services, add the following JVM option to the startWeblogic startup script:

On Windows:

```
set JAVA_OPTIONS=%SAVE_JAVA_OPTIONS% -  
Djavax.xml.soap.MessageFactory=com.sun.xml.messaging.saaj.soap.ver  
1_1.SOAPMessageFactory1_1Impl -  
Djavax.xml.soap.SOAPConnectionFactory=weblogic.wsee.saaj.SOAPCon  
nectionFactoryImpl
```

On Linux:

```
JAVA_OPTIONS="{ SAVE_JAVA_OPTIONS} -  
Djavax.xml.soap.MessageFactory=com.sun.xml.messaging.saaj.soap.ver  
1_1.SOAPMessageFactory1_1Impl -  
Djavax.xml.soap.SOAPConnectionFactory=weblogic.wsee.saaj.SOAPCon  
nectionFactoryImpl"
```

## Deploying into P6 Web Services into WebSphere

### Before you begin

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

- 1 Ensure that WebSphere is installed in a location that does not have spaces in its path.
- 2 If it does not exist, create a folder named **endorsed** under the following folder:

`<WebSphere_Installation_Folder>/JAVA/JRE/LIB`

- 3 Download the jaxp jar files from the following location:

`https://jaxp.dev.java.net/1.4/index.html`

- 4 Run the following command from the command line to expand the jar files.

```
java -jar JAXP_142.jar
```

- 5 Copy the jar files from the `<jaxp_installation_folder>/lib` that was created in step 4 to the endorsed folder you created in step 2.

### Deploy P6 Web Services into WebSphere

- 1 Start the WebSphere Application Server.
- 2 Launch the WebSphere Application Server Administrative Console.
- 3 In the left-hand navigation pane, expand **Applications** and click **New Application**.
- 4 Click **New Enterprise Application**
- 5 In the **Path to the new application** dialog, specify the path to the war file in the `p6wshome` folder. For example:  

```
c:\p6wshome\server\p6ws.war
```
- 6 Click **Next**.
- 7 In the **How do you want to install the application** dialog, select the **Fast Path** option and click **Next**.
- 8 In the Step 1 section **Select Installation Options**, select the **Deploy Web Services** option, then click **Next**.
- 9 In the Step 2 section **Map Modules to Servers**, mark the **cxfr** checkbox, and click **Next**.

- 10 In the Step 3 section **Map Virtual Host for Web Modules**, mark the **cx** checkbox, and click **Next**.
- 11 In the Step 4 section **Map context roots for Web module**, for the **Context Root**, type **/p6ws** then click **Next**.
- 12 In the Step 5 screen **Summary**, click **Finish**. Note that the application war file is now deploying and this process may take several minutes.
- 13 To save the master WebSphere configuration, click **Save**. This process may also take several minutes.
- 14 On the Administrative Console Main screen, in the left-hand navigation, expand **Application Types** under **Applications** and click **WebSphere enterprise applications**.
- 15 Mark the checkbox next to **p6ws\_war**.
- 16 Click **Start**.

## Changing Database Configuration Settings

The Primavera Database Configuration wizard lets you create a new configuration or switch to a different configuration than the one specified during P6 Web Services installation.

The database you connect to during the installation stores one or more P6 Web Services configurations. Each configuration specifies a set of configurable parameters that determine how P6 Web Services operates. The first time you install P6 Web Services, if no configuration exists in the database, you must create a new configuration. For subsequent installs, you can choose an existing configuration or create a new one. After installation, you can use the Database Configuration wizard to select a different P6 Web Services configuration or create a new one.



*After selecting a different P6 Web Services configuration or creating a new configuration, you must stop and restart the server for the changes to take effect.*

---

### Starting the Database Configuration wizard

- On Windows, from the Start menu, choose **Programs > Oracle - Primavera P6 > Primavera P6 Web Services > Database Configuration**.
- On Solaris/Linux, change to the Primavera WebServices directory under the application server install directory and run the `dbconfig.sh` script.

## Enabling Access to P6 Web Services

**For more information on creating users and enabling access to applications, refer to the *Oracle Primavera P6 Administrator's Guide*, which is available in the \Documentation\  
<language> folder of the P6 physical media or download.**

You can enable access to P6 Web Services for any user defined in the Project Management module.

To enable access to P6 Web Services:

- 1 Log on to the Project Management module as a user with administrative privileges.
- 2 On the **Admin** menu, choose **Users**.
- 3 In the **Users** dialog box, select the appropriate user, then click the **Module Access** tab.
- 4 On the **Module Access** tab, mark the **Access** checkbox next to **Web Services**.

## Using the Primavera Administrator Application

As the system administrator, you can use the Primavera Administrator Application (also known as the P6 Administration Application) to review, modify, add, and delete server configurations. P6 Web Services server configurations are stored in the database specified during installation. These configurations contain all of the settings used to run the P6 Web Services server.



*Only experienced administrators should use the Administrator Application to modify configuration settings.*

---

## Starting the Primavera Administrator Application

After launching the Administrator Application, you will be prompted for a database level password for the **privuser** account.

### Starting the Administrator Application

- On Windows, from the Start menu, choose **Programs > Oracle - Primavera P6 > Primavera P6 Web Services > Primavera Administrator**.
- On Solaris/Linux, change to the `primavera-p6ws-7.0` directory under the application server install directory and run the `admin.sh` script.



## Reviewing and Modifying P6 Web Services Configurations

The Primavera Administrator Application presents configuration settings in a tabbed dialog box. Tree view and Table view display the current configurations and settings. Log displays a history of configuration changes, additions, or deletions for the current session.

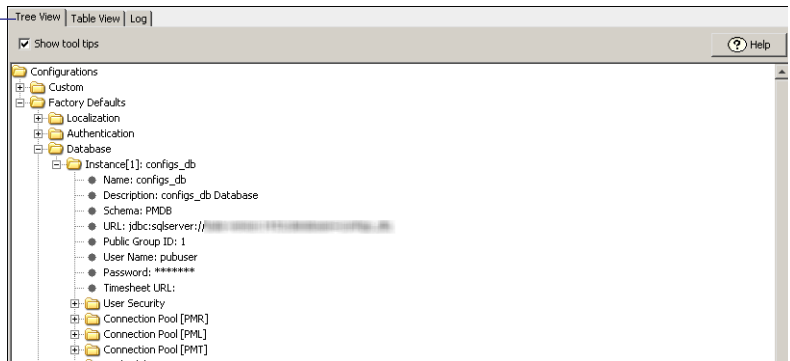


*You cannot edit the Factory Default configuration settings. You can only modify custom configurations.*

To display brief setting descriptions in Tree or Table view, mark the Show tool tips checkbox. Then, position the mouse over a setting to read the popup description.

*Click to display a hierarchical view of the configuration data.*

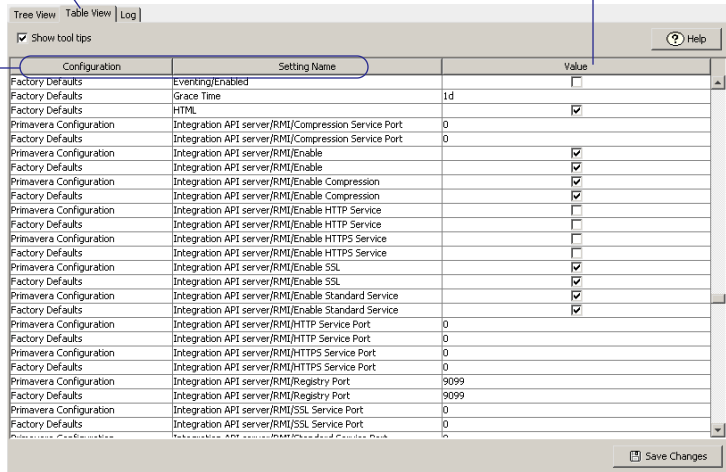
*To return a setting to its default value, select it, then right-click and choose Revert to default value. To change a setting value, triple-click on the setting name, then type a new value. On Windows, you can also press F2 to change to Edit mode.*



Click to display configuration settings in a table format.

To change a setting value, select the setting, click in the Value column, then type a new value.

To sort the table, click a column heading. Sorting can help you distinguish similar settings contained in multiple configurations.



**Add P6 Web Services configurations** To create a new configuration, you can duplicate an existing configuration.

- To duplicate a configuration, select the configuration name in Tree View, then right-click and choose Duplicate. Enter a name for the configuration, then click OK. Edit the settings as needed.
- To create a new configuration based on factory default settings, right-click on Factory Defaults in Tree View and choose Duplicate.

**Add database instances to a configuration** P6 Web Services enables you to access data from different project management databases. When you configure P6 Web Services to support multiple database instances, you can choose the instance you want at login.

To add a new database instance to a P6 Web Services configuration, you duplicate an existing instance.

- To duplicate a database instance, select the icon representing the instance, then right-click and choose Duplicate. Enter a unique name for the new instance and edit other settings as needed.

**Delete P6 Web Services configurations and database instances**

To delete a configuration or database instance, select it, then right-click and choose Delete.

You cannot delete the Factory Defaults configuration. You can delete any custom configuration, but not all of them. There must always be at least one custom configuration.

You can delete any database instance associated with a configuration, but not all of them. Each configuration must have at least one database instance.

For more information, see **Database.Instance.Driver** and **Database.Instance.URL** in the “P6 Web Services Configuration Settings” on page 38.

**Database driver configurations** The following table lists the database drivers P6 Web Services supports for each application server/database configuration. Use the `Database.Instance.Driver` configuration setting to specify the database driver you are using.

Application Server	Database Type	Database Driver	Default
WebLogic	Oracle, Oracle Database Express Edition	Oracle Thin Client	Y
WebLogic	SQL Server	SQL Server JDBC	Y
JBoss	Oracle, Oracle Database Express Edition	Oracle Thin Client	Y
JBoss	SQL Server	SQL Server JDBC	Y
WebSphere	Oracle, Oracle Database Express Edition	Oracle Thin Client	Y
WebSphere	SQL Server	SQL Server JDBC	Y

**Configure P6 Web Services Authentication** P6 Web Services uses a single configuration setting to support authentication.

■ `Authentication.Mode`

Because one P6 Web Services server instance may control more than one database, in addition to specifying an authentication mode for a database through the Authentication Configuration wizard, you use the `Authentication.Mode` configuration setting to specify the overall mode you want to use for the P6 Web Services server. For LDAP authentication with secure communication (SSL) between the P6 Web Services server and the LDAP server, two additional configuration settings are required.

For more information about each of these settings, refer to the “[[Authentication Settings](#)]” on page 39.



*A P6 Web Services configuration might include database instances that are not set to the same authentication mode as the P6 Web Services server. If a user connects and requests a database that is set to a different authentication mode than the P6 Web Services server, an error message displays. The user must select a database that matches the authentication mode set for the P6 Web Services server.*

---

**Configure Setting for JBoss and WebLogic on Microsoft SQL 2005 Databases** The following instructions apply when using Microsoft SQL Server 2005 databases. If the Microsoft SQL Server database is localized or installed on a localized operating system, it is necessary to use the SET DATEFORMAT setting in the Primavera Administrator Application. To use the SET DATEFORMAT setting, follow these steps:

- 1 In the Primavera Administrator Application, locate the Database folder for the Microsoft SQL Server database used by P6 Web Access.
- 2 In that folder, expand the appropriate Instance folder and then the Session Settings folder (choices will be from 1 to 5).
- 3 Use the following syntax to add a Session Setting:  
**set DATEFORMAT ymd**
- 4 Save the change.
- 5 Restart the application server, and the change will immediately take effect.

## Setting up Event Notification

Depending on administrative settings, events can be triggered when the P6 Web Access, P6 Web Services, or P6 API is used to update or create objects in the P6 database. When a change triggers an event, the P6 Event Notification system sends the event message to a user configured message queue. If you are planning to use Event Notification with P6 products, follow the steps below to set up Event Notification to work with your Java Messaging Service (JMS), the application server, and P6.

**Before you begin:** Add the JMS vendor jar files to the application classpath. Refer to the Oracle Primavera Support Knowledgebase for additional information and examples.

Then apply the eventing configuration settings as follows:

- 1 Set the “Database/Instance/Eventing/Enabled” setting to true.
- 2 Set additional Database/Instance/Eventing/ settings as appropriate.

Refer to the [P6 Web Services Configuration Settings](#) section for additional information about the database settings.

## P6 Web Services Configuration Settings

You can review and modify configuration settings in the Primavera Administrator Application Tree View or Table View. Configuration settings are stored in the P6 database specified during installation.



*Only experienced administrators should use the Primavera Administrator Application to modify configuration settings.*



*Localization settings are not applicable to P6 Web Services.*

You can specify durations (time-related values) in several ways:

- As a simple number, which is treated as milliseconds.  
For example, 240000 would be equivalent to 4 minutes (240000/60000).
- In the form <n>d<n>h<n>m<n>s, where “d” is days, “h” is hours, “m” is minutes, and “s” is seconds. All parts are optional.

For example, you can enter:

1d2h30m20s

4m

1h30s

### [Localization Settings]

Setting Name and Description	Default	Valid Ranges/Values
<b>Localization/System Language</b> Language for server string constants	en	—
<b>Localization/System Country</b> Country for server string constants	US	—

## [Authentication Settings]

Setting Name and Description	Default	Valid Ranges/Values
<b>Authentication/Mode</b> The method used for client authentication.	NATIVE	Native, LDAP, WebSSO
<p><b>Note:</b> If you use WebSSO with the P6 Web Services, users will be required to authenticate when they use P6 Web Services. Configure the LDAP settings below to facilitate this authentication.</p>		
<b>Authentication/Web Single Sign-On/User Name Header Key</b> The name of the http header you specified in SiteMinder.	smuser	—
<p>The value you specify must match the property of a SiteMinder response you have created under the policy domain/realm within which the Web server for P6 Web Access resides. The value of this response should be smuser=uid, where smuser is configurable and uid matches the LDAP server attribute that maps to the P6 database USER_Name field.</p>		
<b>Authentication/Web Single Sign-On/Context Path Override</b> The path used to pass web requests from the SiteMinder Web server to the server of P6 Web Access.	/Primavera	—
<b>Authentication/Web Single Sign-On/Server and Port Override</b> The fully qualified domain name and port for the Web server that SiteMinder is controlling.	http:// servername.domain.co m:82	—
<b>Authentication/LDAP/SSL Certificate Store</b> The full path to the keystore that holds the SSL certificate for the LDAP server.	—	—
<b>Authentication/LDAP/SSL Store Password</b> The password for the keystore that holds the SSL certificate.	—	—

[Database Settings]

Setting Name and Description	Default	Valid Ranges/Values
<b>Database/Instance/Name</b> The name of this database instance.	—	up to 32 characters
<b>Database/Instance/Description</b> A description of this database instance.	—	up to 128 characters
<b>Database/Instance/Schema</b> The schema that will be defined for the database.	PMDB	—
<b>Database/Instance/URL</b> The database URL used to establish a connection to the P6 database.	—	—
Oracle example: jdbc:oracle:thin:@xx.xxx.xxx.xx:yyyy:zzzz		
SQL example: jdbc:sqlserver://xxxx:yyyy;database=zzzz;		
x = IP address or hostname y = database listen port z = database name		
<b>Database/Instance/Public Group ID</b> The public group ID used to establish a connection to the database.	1	—
<b>Database/Instance/User Name</b> The name used to establish a connection to the database.	pubuser	—
<b>Database/Instance/Password</b> The password used to establish a connection to the database.	pubuser	—
<b>Database/Instance/Timesheet URL</b> URL for invoking the P6 Progress Reporter module. To verify that the URL entered for this setting is valid, right-click over the setting, then select ‘Test Connection.’	—	—
Example format: http://<server name>:<listen port>/pr/		
<b>Database/Instance/User Security/Log Login Attempts</b> Specifies whether or not login attempts to P6 Web Access are tracked in the Web Access logs.	All	All, None, Failed Attempts, Successful Attempts



**[Database Settings]**

<b>Setting Name and Description</b>	<b>Default</b>	<b>Valid Ranges/Values</b>
<p><b>Database/Instance/User Security/Login Lockout Count</b> The number of times a user can attempt to login before the account is locked. A setting of “0” allows an unlimited number of attempts. The count resets after each successful login.</p>	0	0-100000
<p><b>Database/Instance/User Security/Login Lockout Duration</b> The length of time that a user is blocked from logging into P6 Web Access, starting from the point at which the Logging Lockout Count was exceeded. This setting will be overridden if a user’s session is manually reset by an Admin Superuser.</p>	1h	0-24d
<p><b>Database/Instance/User Security/Allow Multiple User Sessions</b> Specifies whether a single user can be simultaneously logged into Web Access. A setting of “Yes” will allow a single user to login multiple times on any machine. A setting of “No” restricts a user to logging in only once on any machine. A setting of “Single Machine” allows a user to log in multiple times on the same machine, as long as the application server is configured properly to determine the IP address of the machine making the request. For example, if the application server is behind a proxy server, this setting will default to “Yes” instead of “Single Machine.”</p>	Yes	Yes, No, Single Machine
<p><b>Database/Instance/Connection Pool [aaa]/Resize Rate</b> The timeout period after which the system will adjust the number of database connections to be equal to the maximum number of database connections simultaneously used during the last period. [PMR] Used for the standard connection pool, which is the most frequently used connection pool in the Business Rule Engine. [PML] Used for the long running connection pool, which is used in the Business Rule Engine when scheduling long running jobs. [PMT] Used for the transactional connection pool, which is used in the Business Rule Engine when a client transaction is requested.</p>	4m	4m - 12h

### [Database Settings]

Setting Name and Description	Default	Valid Ranges/Values
<b>Database/Instance/Connection Pool [aaa]/ Maintenance Frequency</b> The run frequency of the maintenance that ensures leases have not exceeded the maximum duration. [PMR] Used for the standard connection pool, which is the most frequently used connection pool in the Business Rule Engine. [PML] Used for the long running connection pool, which is used in the Business Rule Engine when scheduling long running jobs. [PMT] Used for the transactional connection pool, which is used in the Business Rule Engine when a client transaction is requested.	1m	10s - 1h
<b>Database/Instance/Connection Pool [aaa]/ Lease Request Wait Timeout</b> The amount of time a request for a database connection will wait. [PMR] Used for the standard connection pool, which is the most frequently used connection pool in the Business Rule Engine. [PML] Used for the long running connection pool, which is used in the Business Rule Engine when scheduling long running jobs. [PMT] Used for the transactional connection pool, which is used in the Business Rule Engine when a client transaction is requested.	30s	5s - 2h
<b>Database/Instance/Connection Pool [aaa]/ Maximum Connections</b> The maximum number of connections the server will have to the database. [PMR] Used for the standard connection pool, which is the most frequently used connection pool in the Business Rule Engine. [PML] Used for the long running connection pool, which is used in the Business Rule Engine when scheduling long running jobs. [PMT] Used for the transactional connection pool, which is used in the Business Rule Engine when a client transaction is requested.	50	5 - 15000

**[Database Settings]**

Setting Name and Description	Default	Valid Ranges/Values
<p><b>Database/Instance/Connection Pool [aaa]/Fetch Size</b>            A hint to the database driver for how many rows to fetch at a time.            [PMR] Used for the standard connection pool, which is the most frequently used connection pool in the Business Rule Engine.            [PML] Used for the long running connection pool, which is used in the Business Rule Engine when scheduling long running jobs.            [PMT] Used for the transactional connection pool, which is used in the Business Rule Engine when a client transaction is requested.</p>	120	—
<p><b>Database/Instance/Connection Pool [aaa]/Trace SQL</b>            Trace all SQL sent to the database.            [PMR] Used for the standard connection pool, which is the most frequently used connection pool in the Business Rule Engine.            [PML] Used for the long running connection pool, which is used in the Business Rule Engine when scheduling long running jobs.            [PMT] Used for the transactional connection pool, which is used in the Business Rule Engine when a client transaction is requested.</p>	false	true/false
<p><b>Database/Instance/Connection Pool [aaa]/Renewable Free Limit</b>            The minimum number of connections that should be available for leases to be renewed.            [PMR] Used for the standard connection pool, which is the most frequently used connection pool in the Business Rule Engine.            [PML] Used for the long running connection pool, which is used in the Business Rule Engine when scheduling long running jobs.            [PMT] Used for the transactional connection pool, which is used in the Business Rule Engine when a client transaction is requested.</p>	3	3 - 5

### [Database Settings]

Setting Name and Description	Default	Valid Ranges/Values
<b>Database/Instance/Connection Pool [aaa]/Renewable Leases</b> If false, each connection can be leased only for the MaxLeaseDuration period. If true, connection leases are renewed if database statements are completed within the MaxLeaseDuration time period. When true, the code can hold onto the connection as long as it needs, provided SQL statements are completed within the MaxLeaseDuration period. When true, the connection is revoked if no SQL statements are issued within the MaxLeaseDuration period or if one statement takes longer to execute than that period. [PMR] Used for the standard connection pool, which is the most frequently used connection pool in the Business Rule Engine. [PML] Used for the long running connection pool, which is used in the Business Rule Engine when scheduling long running jobs. [PMT] Used for the transactional connection pool, which is used in the Business Rule Engine when a client transaction is requested.	PMR - false PML - false PMT - true	true/false
<b>Database/Instance/Connection Pool [aaa]/Maximum Lease Duration</b> The maximum amount of time a database connection can be leased before it is revoked. [PMR] Used for the standard connection pool, which is the most frequently used connection pool in the Business Rule Engine. [PML] Used for the long running connection pool, which is used in the Business Rule Engine when scheduling long running jobs. [PMT] Used for the transactional connection pool, which is used in the Business Rule Engine when a client transaction is requested.	PMR - 2m PML - 10m PMT - 10m	PMR - 5s - 4h PML - 5s - 6h PMT - 5s - 6h
<b>Database/Instance/Methodology Management/Name</b> Name of this database instance.	—	—
<b>Database/Instance/Methodology Management/Description</b> Description of this database instance.	—	—

**[Database Settings]**

<b>Setting Name and Description</b>	<b>Default</b>	<b>Valid Ranges/Values</b>
<b>Database/Instance/Methodology Management/URL</b> Database URL used to establish a connection to the P6 database.  Oracle example: jdbc:oracle:thin:@xx.xxx.xxx.xx:yyyy:zzzz  SQL example: jdbc:sqlserver://xxxx:yyyy;database=zzzz;  x = IP address or hostname y = database listen port z = database name	—	—
<b>Database/Instance/Methodology Management/User Name</b> The name used to establish a connection to the database.	—	—
<b>Database/Instance/Methodology Management/Password</b> The password used to establish a connection to the database.	—	—
<b>Database/Instance/Methodology Management/Public Group ID</b> The Group ID used to establish a connection to the database.	1	—
<b>Database/Instance/Methodology Management/Database Alias</b> The DB Alias name used by the Project Architect job service to create a project plan from a methodology.	MMDB	—
<b>Database/Instance/Methodology Management/Connection Pool [MMR]/Resize Rate</b> The timeout period after which the system will adjust the number of database connections to be equal to the maximum number of database connections simultaneously used during the last period.	4m	4m - 12h
<b>Database/Instance/Methodology Management/Connection Pool [MMR]/Maintenance Frequency</b> The run frequency of the maintenance that ensures leases have not exceeded the maximum duration.	1m	10s - 1h
<b>Database/Instance/Methodology Management/Connection Pool [MMR]/Lease Request Wait Timeout</b> The amount of time a request for a database connection will wait.	30s	5s - 2h

[Database Settings]

Setting Name and Description	Default	Valid Ranges/Values
<b>Database/Instance/Methodology Management/ Connection Pool [MMR]/Maximum Connections</b> The maximum number of connections the server will have to the database.	50	5 - 15000
<b>Database/Instance/Methodology Management/ Connection Pool [MMR]/Fetch Size</b> A hint to the database driver for how many rows to fetch at a time.	120	—
<b>Database/Instance/Methodology Management/ Connection Pool [MMR]/Trace SQL</b> Trace all SQL sent to the database.	false	true/false
<b>Database/Instance/Methodology Management/ Connection Pool [MMR]/Renewable Free Limit</b> The minimum number of connections that should be available for leases to be renewed.	3	3 - 5
<b>Database/Instance/Methodology Management/ Connection Pool [MMR]/Renewable Leases</b> If false, each connection can be leased only for the MaxLeaseDuration period. If true, connection leases are renewed if database statements are completed within the MaxLeaseDuration time period. When true, the code can hold onto the connection as long as it needs, provided SQL statements are completed within the MaxLeaseDuration period. When true, the connection is revoked if no SQL statements are issued within the MaxLeaseDuration period or if one statement takes longer to execute than that period.	false	true/false
<b>Database/Instance/Methodology Management/ Connection Pool [MMR]/Maximum Lease Duration</b> The maximum amount of time a database connection can be leased before it is revoked.	2m	5s - 4h
<b>Database/Instance/Content Repository/Type</b> The application that will be used to host content repository data in P6.	None	JackRabbit, Oracle, SharePoint, None

After choosing the content repository type, enter the appropriate settings below for the type selected.

**[Database Settings]**

<b>Setting Name and Description</b>	<b>Default</b>	<b>Valid Ranges/Values</b>
<b>Database/Instance/Content Repository/Apache JackRabbit/URL</b> The URL used to establish a connection to the JackRabbit database.  Oracle example: embedded://jdbc:oracle:thin:@xx.xxx.xxx.xx:yyyy:zzzz  SQL example: embedded://jdbc:sqlserver://xxxx:yyyy;database=zzzz;  x = IP address or hostname y = database listen port z = database name	—	—
<b>Database/Instance/Content Repository/Apache JackRabbit/Database User Name</b> The name used to establish a connection to the JackRabbit database. By default, this is admuser for Oracle and sa for SQL Server.	—	—
<b>Database/Instance/Content Repository/Apache JackRabbit/Database Password</b> The password used to establish a connection to the JackRabbit database. By default, this is admuser for Oracle and sa for SQL Server.	—	—
<b>Database/Instance/Content Repository/Apache JackRabbit/Repository Home</b> Location where content repository files are stored on the JackRabbit server. Specify a location, or type a name and a folder will be created for you in the Bootstrap home directory.	—	—
<b>Database/Instance/Content Repository/Apache JackRabbit/Admin User Name</b> Application name for the content repository.	—	—
<b>Database/Instance/Content Repository/Apache JackRabbit/Admin Password</b> Application superuser password for the content repository.	—	—

[Database Settings]

Setting Name and Description	Default	Valid Ranges/Values
<b>Database/Instance/Content Repository/Apache JackRabbit/Enable Connection Pooling</b> A setting of “true” provides a pool of shared database connections to the content repository. Utilizes the c3po connection pool.	true	true/false
<b>Database/Instance/Content Repository/Apache JackRabbit/Maximum Connections</b> The maximum number of connections that the content repository connection pool will have to the database.	25	2-5000
<b>Database/Instance/Content Repository/Apache JackRabbit/Autovue/VueServlet URL</b> The URL of the server hosting the AutoVue VueServlet.	—	—
<b>Database/Instance/Content Repository/Apache JackRabbit/Autovue/Enable</b> Set to true to enable the use of AutoVue.	false	true/false
<b>Database/Instance/Content Repository/Oracle Universal Content Management/Host</b> The machine name or IP address of the Universal Content Management server.	—	—
<b>Database/Instance/Content Repository/Oracle Universal Content Management/Port</b> The port number of the Universal Content Management server. By default, this is 4444.	—	—
<b>Database/Instance/Content Repository/Oracle Universal Content Management/Oracle Home</b> Path to the P6 content repository files on the Universal Content Management server.	—	—
Example: \\Contribution Folders\Production\OraclePrimavera\		
<b>Database/Instance/Content Repository/Oracle Universal Content Management/Oracle Security Group</b> The name of the Security Group for P6 documents.	—	—
<b>Database/Instance/Content Repository/Oracle Universal Content Management/Oracle Security Account</b> The name of the Security Account for P6 documents.	—	—



**[Database Settings]**

Setting Name and Description	Default	Valid Ranges/Values
<b>Database/Instance/Content Repository/Oracle Universal Content Management/Oracle Document Type</b> The Universal Content Management document type for P6 documents.	—	—
<b>Database/Instance/Content Repository/Oracle Universal Content Management/Metadata Prefix</b> The prefix added to P6 metadata fields.	—	—
<b>Database/Instance/Content Repository/Oracle Universal Content Management/Admin User</b> A Universal Content Management user name with administrative privileges. This setting is required.	—	—
<b>Database/Instance/Content Repository/Oracle Universal Content Management/Authentication Mode</b> The authentication mode used for access to the Universal Content Management server. Content repository functions will not be available to P6 users if these conditions are not met. If “Multiple User” is chosen, all P6 content repository-related user names must match the equivalent Universal Content Management user name. For example, a P6 user named “Joe” must have an equivalent user named “Joe” in Universal Content Management. If “Single User” is chosen, the administrator user specified in the setting above must have access to all appropriate Security Groups in order to browse to documents outside of the P6 home folder.	Multiple User	Multiple User, Single User
<b>Database/Instance/Content Repository/Oracle Universal Content Management/Autovue/VueLink URL</b> The URL of the server hosting AutoVue VueLink.  Example format: http://<vuelinkpath>/csiApplet.jsp	—	—
<b>Database/Instance/Content Repository/Oracle Universal Content Management/Autovue/Enable</b> Set to true to enable the use of AutoVue.	false	true/false
<b>Database/Instance/Content Repository/SharePoint/Login Name</b> A SharePoint user name with administrative privileges, this setting is required.	—	—

[Database Settings]

Setting Name and Description	Default	Valid Ranges/Values
<p><b>Database/Instance/Content Repository/SharePoint/Password</b>                      The password for the SharePoint login name.</p>	—	—
<p><b>Database/Instance/Content Repository/SharePoint/Authentication Mode</b>                      The mode used to connect to the SharePoint content repository database. Content repository functions will not be available to P6 users if these conditions are not met. If “Multiple User” is chosen, all P6 content repository-related user names must match the equivalent SharePoint user name. For example, a P6 user named “Joe” must have an equivalent user named “Joe” in SharePoint. If “Single User” is chosen, the administrator user specified in the setting above must have access to all appropriate SharePoint libraries in order to browse to documents outside of the P6 home folder.</p>	Multiple User	Multiple User, Single User
<p><b>Database/Instance/Content Repository/SharePoint/Host Name</b>                      The machine name or IP address of the SharePoint server.</p>	—	—
<p><b>Database/Instance/Content Repository/SharePoint/Domain</b>                      The domain in which the SharePoint server resides.</p>	—	—
<p><b>Database/Instance/Content Repository/SharePoint/Document Library URL</b>                      The URL of the P6 document library on SharePoint. The URL includes the machine name (or IP address) of the content repository server and the path to the content repository library.</p> <p>Example format:                      http://&lt;host&gt;/&lt;library path&gt;</p>	—	—
<p><b>Database/Instance/Content Repository/SharePoint/Web Service URL</b>                      The URL of the Web Service used to connect P6 to SharePoint. The URL includes the machine name (or IP address) of the content repository server, port number of the server, and web service name.</p> <p>Example format:                      http://&lt;host&gt;:&lt;port&gt;/&lt;virtual_dir&gt;</p>	—	—

**[Database Settings]**

Setting Name and Description	Default	Valid Ranges/Values
<b>Database/Instance/Content Repository/SharePoint/External Document Library URL</b> The URL of an external document library. This is only required if you need to connect to a non-P6 document library.  Example format: http://<host>:<port>/<virtual_dir>	—	—
<b>Database/Instance/Content Repository/SharePoint/Autovue/VueLink URL</b> The URL of the of the server hosting AutoVue VueLink.  Example format: http://<vuelinkpath>/vue.aspx	—	—
<b>Database/Instance/Content Repository/SharePoint/Autovue/Enable</b> Set to true to enable the use of AutoVue.	false	true/false
<b>Database/Instance/Workflow Repository/URL</b> Database URL used to establish a connection to the Workflow Repository database.  Oracle example: jdbc:oracle:thin:@xx.xxx.xxx.xx:yyyy:zzzz  SQL example: jdbc:sqlserver://xxxx:yyyy;database=zzzz;	—	—
x = IP address or hostname y = database listen port z = database name		
<b>Database/Instance/Workflow Repository/User Name</b> The name used to establish a connection to the database. By default, this is admuser for Oracle and sa for SQL.	—	—
<b>Database/Instance/Workflow Repository/Password</b> The password used to establish a connection to the database. By default, this is admuser for Oracle and sa for SQL.	—	—
<b>Database/Instance/Workflow Repository/Enable Connection Pooling</b> Provides a pool of shared database connections to the workflow system. Utilizes the c3po connection pool.	true	true/false

### [Database Settings]

Setting Name and Description	Default	Valid Ranges/Values
<b>Database/Instance/Workflow Repository/Maximum Connections</b> The maximum number of connections that the workflow repository connection pool will have to the database.	25	1-5000
<b>Database/Instance/Workflow Repository/Timeout</b> The number of seconds a connection can remain pooled, but unused, before being discarded. If a value of zero is entered, idle connections will never expire.	1m	5s-1h
<b>Database/Instance/Workflow Repository/Connection Test Period</b> The time, in seconds, in which all idle connections will be tested. If a value of zero is entered, no connections will be tested.	5m	5s-1d
<b>Database/Instance/Session Settings/Setting 1-5</b> “Alter session” commands used to establish cursor sharing, rule-based mode, SQL trace, and more. Invalid settings in these fields are ignored.	—	alter session set _ = _
<b>Database/Instance/Cost Based Optimization Settings/Enable</b> Enable Cost Based Optimization if true.	false	true/false
<b>Database/Instance/Cost Based Optimization Settings/Dump Matching SQL</b> Set to true to dump the SQL where a match is found in the QUERYLIB table for a given SQL statement. Set to false to dump the SQL where a match is not found in the QUERYLIB table for a given SQL statement. You must set your logging level to INFO to see these entries.	false	true/false
<b>Database/Instance/Eventing/Enabled</b> Set to true to enable the sending of events for P6 Web Access, P6 Web Services, and P6 Integration API.	false	true/false
<b>Database/Instance/Eventing/Interval</b> The length of time that the Event Notification System uses to determine how often it sends events to the message queue. Specifying a smaller time increases the frequency with which the Event Notification System reports event occurrences to the message queue.	5m	1s-10m

**[Database Settings]**

<b>Setting Name and Description</b>	<b>Default</b>	<b>Valid Ranges/Values</b>
<b>Database/Instance/Eventing/Job Events Wait Interval</b> The duration of time that the Event Notification System waits for jobs to finish processing with a completed, failed, or cancelled status. Jobs that take longer to process than the specified time will not trigger an event if a completed, failed, or cancelled status eventually becomes available.	5m	10m-30m
<b>Database/Instance/Eventing/Job Events Monitor Interval</b> The length of time that the Event Notification System uses to determine how often it monitors the Job Service for jobs that have a completed, failed, or cancelled status. Specifying a smaller time increases the frequency with which the Event Notification System looks at the status of jobs.	5m	15s-10m
<b>Database/Instance/Eventing/Max Queue Size</b> The amount of memory allocated to the queue for events. Once exceeded, events will be published immediately.	1000	10-5000
<b>Database/Instance/Eventing/Show Costs</b> Set to true to enable the display of cost fields in event notifications.	false	true/false
<b>Database/Instance/Eventing/Connection Factory</b> The JNDI name of the JMS Connection Factory.	—	—
<b>Database/Instance/Eventing/Destination Name</b> The JNDI name of the queue or topic to which to publish events.	—	—
<b>Database/Instance/Eventing/Configuration</b> Options for which Business Object changes and Special Operation processes trigger event notifications. Right-click to select the node, then choose Configure to select the desired options. For detailed information about these options, refer to the <i>P6 Web Services Reference Manual</i> . Note: The “Timesheet” business object only has update notification functionality.	—	—
<b>Database/Instance/AIA/Enabled</b> Set to true to enable integration with AIA components.	false	true/false

### [Database Settings]

Setting Name and Description	Default	Valid Ranges/Values
<p><b>Database/Instance/AIA/URL</b>                      The URL of the Oracle database instance running AQ functionality.</p> <p>Oracle example:                      jdbc:oracle:thin:@xx.xxx.xxx.xx:yyyy:zzzz</p> <p>SQL example:                      jdbc:sqlserver://xxxx:yyyy;database=zzzz;</p> <p>x = IP address or hostname                      y = database listen port                      z = database name</p>	—	—
<p><b>Database/Instance/AIA/Username</b>                      The database user name of the AQ queue owner.</p>	—	—
<p><b>Database/Instance/AIA/Password</b>                      The password for the database user name of the AQ queue owner.</p>	—	—
<p><b>Database/Instance/AIA/Queue Name</b>                      The name of the AQ queue receiving AIA messages.</p>	AIA_ProjP6EP PMJMSQueue	—
<p><b>Database/Instance/AIA/System Id</b>                      The system identification code that AIA will use to identify P6.</p>	P6-001	—
<p><b>Database/Instance/AIA/Target System Id</b>                      The external system identification code that AIA will use to identify a supported Oracle ERP application.                      Examples:                      JDE-001 for JDEdwards                      EBS-001 for E-Business Suite</p>	—	—

---

**[Thread Pool Settings]**

Setting Name and Description	Default	Valid Ranges/Values
<b>Thread Pool/Number of Threads</b> The number of server threads.	25	2-300
<b>Thread Pool/Maximum Task Duration</b> The maximum duration a thread can be used for one task.	3m	10s - 24d
<b>Thread Pool/Maximum Long Running Task Duration</b> The maximum duration a thread can be used for a long running task.	5m	10s - 24d
<b>Thread Pool/Maintenance Frequency</b> The frequency at which threads are checked for excess time durations.	45s	15s - 24d

**[Log Settings]**

Setting Name and Description	Default	Valid Ranges/Values
<b>Log/Console Logger/Severity Level</b> Log severity level for the Console Logger.	error	debug, info, warning, error
The ranges are inclusive. For example, choose “debug” to log all messages; choose “warning” to log both warning and error level messages.		
<b>Log/Console Logger/Enabled</b> Enable the Console Logger	false	true/false
<b>Log/File Logger/Archive Size</b> The minimum size (in Kb) a log file must be before it is archived.	1024	1024 - 2073600000
<b>Log/File Logger/Severity Level</b> Log severity level for the HTML Logger.	error	debug, info, warning, error

The ranges are inclusive. For example, choose “debug” to log all messages; choose “warning” to log both warning and error level messages.

[Log Settings]

Setting Name and Description	Default	Valid Ranges/Values
<b>Log/File Logger/Number of Archive Files</b> Maximum number of log files to be used. The default files are named WebAccessLog0.html through WebAccessLog5.html.	6	2 - 2073600000
<b>Log/File Logger/HTML</b> Log as HTML.	true	true/false
<b>Log/File Logger/Enabled</b> Enable the HTML Logger.	true	true/false
Log files are created in a folder named WebAccessLogs, located as follows:		
JBoss on Windows: <i>&lt;webaccesshome&gt;\WebAccessLogs</i>		
JBoss on Red Hat Enterprise Linux: <i>/mount_point/&lt;webaccesshome&gt;/AppServer/</i> <i>WebAccessLogs</i>		
WebLogic on Windows: <i>&lt;webaccesshome&gt;\WebAccessLogs</i>		
WebSphere on Windows: <i>&lt;webaccesshome&gt;\WebAccessLogs</i>		
WebSphere on Red Hat Enterprise Linux: <i>/mount_point/WebSphere/AppServer/WebAccessLogs</i>		
<b>Log/Email Logger/SMTP Host</b> SMTP server that will send the email message.	—	—
<b>Log/Email Logger/From Email Address</b> Set to the email address from which you would like log messages sent.	—	—
<b>Log/Email Logger/To Email Address</b> Set to the email address to which you would like log messages sent.	—	—
<b>Log/Email Logger/Email subject</b> The default Email subject.	P6 Web Access error	—
<b>Log/Email Logger/Enabled</b> Enable the Email logger.	false	true/false
<b>Log/Asynchronous</b> Log messages asynchronously for better performance.	true	true/false

---



**[Directory Services Settings]**

Setting Name and Description	Default	Valid Ranges/Values
<b>Directory Services/Provider URL</b> The URL of the JNDI provider used for eventing.	—	—
<b>Directory Services/Initial Context Factory</b> The class name of the initial context factory for the JNDI connection for eventing. Example: weblogic.jndi.WLInitialContextFactory	—	—
<b>Directory Services/Security Principal</b> Principal used to connect to the JNDI provider for eventing.	—	—
<b>Directory Services/Security Credential</b> Credentials used to connect to the JNDI provider for eventing.	—	—
<b>Directory Services/Security Level</b> Security level used to authenticate to the directory service for eventing.	SIMPLE	NONE, SIMPLE, STRONG
<b>Directory Services/Lookup</b> The lookup used when testing the directory connection for eventing.	—	—

**[Application Settings]**

Setting Name and Description	Default	Valid Ranges/Values
<b>Application/Prototype User</b> Prototype user login used to create and store default Dashboards and Global Preference settings for new P6 Web Access users.	—	—
<b>Application/Ignore Daylight Savings Time</b> Set to false to account for daylight savings time.	true	true/false
<b>Application/Internet Explorer Java Plugin URL</b> URL for Internet Explorer users to download Java Plug-in (JRE).	Defaults to the plug-in version 1.6.0_14 that is installed during setup.	—

[Application Settings]

Setting Name and Description	Default	Valid Ranges/Values
<b>Application/FireFox Java Plugin URL</b> URL for Firefox users to download Java Plug-in (JRE).	Defaults to the plug-in version 1.6.0_14 that is installed during setup.	—
<b>Application/Internet Explorer Java Plugin Version</b> JRE version used by applets in Internet Explorer	—	—
<b>Application/FireFox Java Plugin Version</b> JRE version used by applets in Firefox	—	—
<b>Application/JRE Version for Java Web Start (JNLP)</b> The Java version that Java Web Start should use when launching Timesheet Approval either as a standalone application or from the Project Management client.	1.6+	
<b>Application/Maximum Transactions for Excel Import</b> The maximum number of transactions (activities or resources) that can be imported at once from a .xls or .csv file	2000	100 - 2000
<b>Application/Maximum Excel Import File Size</b> The maximum size of the .xls or .csv file uploaded during an import attempt (KB)	1048	64 - 4096
<b>Application/Allow Auto-Summarize Option</b> Set to true to allow automatic summarization to be available in resource staffing user preferences.	true	true/false
<b>Application/Database Dropdown Key</b> Keyword to use for enabling database selection control in the login page. Pass this as a URL parameter db=keyword. Set this to an empty string if you do not want to require the keyword.	—	—
<b>Application/Logout URL</b> Directs P6 Web Access to a specific URL when the user exits with the Logout/Close icon in the banner of P6 Web Access. Any valid URL can be used. If no URL is specified, P6 Web Access directs the user to the launch page of P6 Web Access.	—	—
<b>Application/Compress Applet Communication</b> Set to true to compress communication between applets and the server.	true	true/false
<b>Application/Compress HTML Content</b> Set to true to compress HTML-related content generated by P6 Web Access, including .html, .js, and css files, and Ajax content.	true	true/false

**[Application Settings]**

<b>Setting Name and Description</b>	<b>Default</b>	<b>Valid Ranges/Values</b>
<b>Application/Maximum Projects in Portfolio</b> The maximum number of projects returned when creating a portfolio with a filter.	1000	1 - 100000
<b>Application/Maximum Loaded Resource Planning Projects</b> The maximum number of projects that can be open in the Resource Planning spreadsheet.	100	1 - 1000
<b>Application/Maximum Portlets per Dashboard</b> The maximum number of portlets that can be displayed in a dashboard on the Dashboards Home page.	12	1 - 50
<b>Application/Maximum Projects per Portfolio View</b> The maximum number of projects that can be displayed in a portfolio view on the Portfolio Analysis tab and in Portfolio View portlets on dashboards.	5000	1 - 20000
<b>Application/Maximum Activities per Activity View</b> The maximum number of activities that can be displayed in the Activities tab of the Projects section. If greater than 5000, the Maximum memory allocated to Java Applets setting (below) must be 128 or greater.	2000	1 - 15000
<p>If using a JRE prior to version 1.6.0_10, the maximum number of activities displayed will be 5000. Also, Oracle recommends that the maximum value be set to 5000 (or lower) if users need to display Earned Value or Baseline-related information. Otherwise, database timeouts may occur.</p>		
<b>Application/Maximum memory allocated to Java Applets</b> The maximum amount of memory, in megabytes, that can be used by Java Applets. If the Maximum Activities per Activity View setting (above) is greater than 5000, the memory allocation must be set to 128 or greater.	64	64-1024
<p>This setting is only valid when using JRE version 1.6.0_10 (or later).</p>		
<b>Application/Maximum MRU List Items</b> The maximum number of items that can be displayed in a Most Recently Used (MRU) list.	5	1 - 10
<b>Application/Maximum Project Activity Codes</b> The maximum number of projects that can be selected and displayed in the Projects tab of the Activity Codes section.	350	1-350

[Application Settings]

Setting Name and Description	Default	Valid Ranges/Values
<p><b>Application/Maximum Activity Code Values</b>                      The maximum number of activity code values that can be created or selected per Activity Code.</p>	100000	1-1m
<p><b>Application/Custom Portlet URL Encryption Key</b>                      Encryption key for custom portlet user password. Assigning a key causes the password that is passed as part of the URL for a custom portlet to be encrypted. If you do not assign a value, the password is not encrypted. The value can be any alphanumeric character or string of characters. This encryption uses the Sun/Blowfish algorithm.</p>	—	—
<p><b>Application/Transaction Monitor Execution Interval</b>                      The frequency at which the transaction monitor job runs, which ensures transactions have not been orphaned.</p>	10m	1s - 24d20h31m23s647
<p><b>Application/Enable Cross Site Scripting Filter</b>                      Enable or disable the cross site scripting filter. Set to true to allow P6 to check for unsafe http requests from the browser and unsafe responses from P6 Web Access, including requested documents. In general, requests and responses that contain Javascript, which was not generated explicitly by P6 Web Access, are considered unsafe. An error message will be displayed for all unsafe page requests. For Internet Explorer 7, an attempt to download an unsafe document will result in an error message. For Internet Explorer 8 and Firefox, users will be prompted to download the document file instead of viewing the document directly in the P6 Web Access browser. It is not necessary to restart the server after changing the value of this setting.</p>	false	true/false
<p><b>Application/Notifications/Enable Issue Notifications</b>                      Enable or disable automated notifications when Issues are added or modified.</p>	false	true/false
<p><b>Application/Notifications/Enable Invitation Notifications</b>                      Enable or disable automated notifications when Invitations are added.</p>	false	true/false
<p><b>Application/Notifications/Enable Initiation Notifications</b>                      Enable or disable automated notifications when Invitations are pending.</p>	false	true/false

**[Application Settings]**

<b>Setting Name and Description</b>	<b>Default</b>	<b>Valid Ranges/Values</b>
<b>Application/Notifications/Override Notification Email from User</b> Set to true to always use the system's From email address. Set to false to use the email address of the user who causes notifications to be sent, if their email address is configured.	false	true/false
<b>Application/Notifications/Notification from Email User</b> The email address from which Notifications will be sent when either NotificationsFromEmailOverride is true or the user's email address is not configured	—	—
<b>Application/Contract Management Encryption Key</b> Encryption key for communication between P6 and Contract Management version 13. The default key is based on the string, "Oracle Primavera." Type a string of your choosing, and it will be converted to a UUID (Universally Unique Identifier). The UUID will be used for encrypting the password needed to connect to Contract Management. This encryption uses the Sun/Blowfish algorithm.	F55BB352-B5FE-3AB2-A91C-189F0079D31E	—

**[Services Settings]**

<b>Setting Name and Description</b>	<b>Default</b>	<b>Valid Ranges/Values</b>
<b>Services/Module Access Service/Update Rate</b> The rate at which a Business Rule Engine synchronizes with the database for license counts.	30s	100 - 1m
<b>Services/Module Access Service/Expiration Check Rate</b> The rate at which licenses are checked to see if they should expire.	2m	500 - 15m
<b>Services/Timestamp Service/Refresh Rate</b> The rate at which the database is queried to determine if a table change notification is necessary.	1m	15s - 1h
<b>Services/Registry Service/Refresh Rate</b> The rate at which the database is updated with the status of the Business Rule Engine.	1m30s	15s - 1h

### [Services Settings]

Setting Name and Description	Default	Valid Ranges/Values
<b>Services/Registry Service/Stale Period</b> The duration of inactivity that indicates an inoperable Business Rule Engine.	4m	1m - 10m
<b>Services/Registry Service/Port</b> The TCP/IP port on which requests to revive dead Business Rule Engines will be received.	9192	1024 - 65535
<b>Services/Next Key Service/Refresh Rate</b> The rate at which nextkey cache is refreshed.	1m	15s - 1h
<b>Services/Next Key Service/Maximum Cached Keys</b> Maximum nextkeys to cache per table	10	1 - 100
<b>Services/Performance/Use Enterprise Summary</b> Use enterprise level summary data for resources and roles.	false	true/false
This setting specifies whether you want to use EPS level records or Project level records to draw Resource Manager histograms. If true, performance is better because only one record (EPS record) is used for the histogram. If false, a much larger number of records (Project records) is used to draw the histogram chart, so performance is slower. However, it is important to note that histogram data is more accurate when the setting is false, using Project records.		
<b>Services/Performance/Maximum Summary Node Count</b> The threshold for displaying summarized data in views such as Resource Usage and Resource Analysis. If the number of child elements contained in a node exceeds this number, no data is displayed.	1000	1-50000
<b>Services/Web Scheduler/Enabled</b> If true, scheduling for jobs from P6 Web Access is performed using the Web Scheduler. If false, scheduling is performed using the Job Service Scheduler.	true	true/false
<b>Services/Web Scheduler/Scheduling Interval</b> Amount of time the Web Scheduler will wait before scheduling the next available job.	5m	1s - 24d20h31m23s647
<b>Services/Web Scheduler/Concurrent Schedulers</b> The number of processes (active schedulers) used for scheduling on this server. A value of 0 (zero) indicates that scheduling will not be performed on this server.	2	0-20

## [Services Settings]

Setting Name and Description	Default	Valid Ranges/Values
<b>Services/Web Scheduler/Active Scheduler Mode</b> If true, jobs are processed continuously until all jobs are scheduled. If false, each job is processed according to the Scheduling Interval.	true	true/false
<b>Services/Web Scheduler/ASAP Cleanup Rate</b> The rate at which completed scheduler jobs are removed from the database.	1d	1h - 24d20h31m23s647
<b>Services/Store Period Performance/Enabled</b> Service for storing period performance. If true, ThisPeriod values are stored in the specified financial period.	true	true/false
<b>Services/Store Period Performance/Execution Interval</b> Amount of time the service will wait before checking for any period performance jobs.	5m	1s - 24d20h31m23s647
<b>Services/Store Period Performance/Concurrent Tasks</b> The number of processes used for the PeriodPerformance service on this server. A value of 0 (zero) indicates that the service is not available on this server.	2	0 - 20
<b>Services/Sync Actual This Period/Enabled</b> Service for synchronizing actuals and ActualThisPeriod values. If true, recalculates actual units and costs for ThisPeriod.	true	true/false
<b>Services/Sync Actual This Period/Execution Interval</b> Amount of time the service will wait before checking for any SyncActualThisPeriod jobs.	5m	1s - 24d20h31m23s647
<b>Services/Sync Actual This Period/Concurrent Tasks</b> The number of processes used for the SyncActualThisPeriod service on this server. A value of 0 (zero) indicates that the service is not available on this server.	2	0 - 20

[Services Settings]

Setting Name and Description	Default	Valid Ranges/Values
<p><b>Services/Project Hierarchy Cache/Cache Policy</b>                      The cache policy to use. The cache policy determines how much data is in the cache and which data is removed to reclaim memory.</p> <p>The allowable values are:  <b>FIFO</b> (First In First Out-projects are cleared from the cache in the same order they were added to memory)  <b>LRU</b> (Least Recently Used projects are cleared from the cache before more recently used ones)  <b>JVMM</b> (Java Virtual Machine Managed-uses soft references to cached elements; memory used by soft references is reclaimed by the JVM as required)  <b>PRR</b> (Projects are selected at random to be cleared from cache)  <b>PRFIFO</b> (Periodic Refresh First In First Out-same as FIFO, except policy is enforced based on MaintenanceFrequency)  <b>PRLRU</b> (Periodic Refresh Least Recently Used-same as LRU, except policy is enforced based on MaintenanceFrequency)  <b>PRCC</b> (Periodic Refresh Clear Cache-ignores CacheLimit to flush the entire cache, based on MaintenanceFrequency)</p>	PRR	FIFO, LRU, JVMM, PRR, PRFIFO, PRLRU, PRCC
<p><b>Services/Project Hierarchy Cache/Cache Limit</b>                      The maximum number of projects stored in memory.</p>	5000	1000 - 30000
<p><b>Services/Project Hierarchy Cache/Maintenance Frequency</b>                      The frequency for applying the specified cache policy. Application of the cache policy might result in memory used by the cache to be reclaimed.</p>	5h	1m - 24d
<p><b>Services/Collaboration Synchronization Service/Synchronization Interval</b>                      The interval at which the collaboration synchronization service will run. The synchronization service deletes documents and workflows for projects that have been deleted.</p>	1h	1m - 24d20h31m23s647
<p><b>Services/Asynchronous Jobs/Purge Interval</b>                      The frequency at which long running job records will be removed from the database.</p>	1h	0 - 24d20h31m23s647
<p><b>Services/Asynchronous Jobs/Grace Time</b>                      The minimum age of long running job records removed during purge.</p>	1d	0 - 24d20h31m23s647



## [Services Settings]

Setting Name and Description	Default	Valid Ranges/Values
<b>Services/Mail Service/Email Notification Server</b> Hostname or IP address of the email notification server for Timesheet Approval.	—	—
<b>Services/Mail Service/SMTP Port</b> The tcp/ip port of the outgoing SMTP server.	25	1 - 65535
<b>Services/Mail Service/Send Interval</b> The frequency at which queued mail messages are sent.	1m	0 - 24d20h31m23s647
<b>Services/Mail Service/Maximum Queue Length</b> The maximum size of the mail message queue	250	0 - 2147483647
<b>Services/Mail Service/Authorized User Name</b> The name of the account to use to send mail from this mail server.	—	—
<b>Services/Mail Service/Authorized User Password</b> The password of the account used to send mail from this mail server.	—	—
<b>Services/Import/Export Options/Temporary File Location</b> The location to store the temporary file during the XML import/export process.	—	—
<b>Services/Import/Export Options/Maximum file size</b> The maximum file size for XML import/export.	—	64KB - 1MB
<b>Services/Import/Export Options/ASAP Cleanup Rate</b> The rate at which completed and failed scheduler jobs are removed from the database.	1d	1h - 24d
<b>Services/Configuration Management/Collection Enabled</b> Allows P6 Web Access to collect configuration settings at the configured collection time.	false	true/false
<b>Services/Configuration Management/Collection Time</b> The time of day that the settings will be collected on a daily basis.	12AM	drop-down selection

**[Performance Monitor Settings]**

<b>Setting Name and Description</b>	<b>Default</b>	<b>Valid Ranges/Values</b>
<b>Performance Monitor/Enabled</b> Performance monitor packets are sent when true.	false	true/false
<b>Performance Monitor/Monitor Host</b> The destination IP or machine name for the performance monitor packets	localhost	—
<b>Performance Monitor/Monitor Port</b> The destination port for the performance monitor packets	6990	1024 - 65535
<b>Performance Monitor/Update Interval</b> The rate at which the performance monitor packets are sent.	1s	250 - 1m

**[Tracer Settings]**

<b>Setting Name and Description</b>	<b>Default</b>	<b>Valid Ranges/Values</b>
<b>Tracer/Enabled</b> If true, debugging messages are sent to Tracer application.	false	true/false
<b>Tracer/Server Name</b> Hostname or IP address of destination for sending tracer information.	localhost	—
<b>Tracer/Port</b> Port to use for Tracer socket connection	9210	1024-65535
<b>Tracer/Use Background Send Thread</b> If true, use background thread for sending TCP messages to tracer.	true	true/false

**[Integration API Server Settings]**

<b>Setting Name and Description</b>	<b>Default</b>	<b>Valid Ranges/Values</b>
<b>Integration API server/RMI/Registry Port</b> The port for the RMI Registry. This value is usually set to at least 1024.	9099	1024 - 65535
<b>Integration API server/RMI/Enable</b> The setting that enables the RMI server.	true	true/false
<b>Integration API server/RMI/Enable Compression</b> The setting that enables compression service mode.	true	true/false
<b>Integration API server/RMI/Enable SSL</b> The setting that enables SSL service mode.	true	true/false
<b>Integration API server/RMI/Enable Standard Service</b> The setting that enables Standard service mode.	true	true/false
<b>Integration API server/RMI/Enable HTTP Service</b> The setting that enables HTTP tunneling mode.	false	true/false
<b>Integration API server/RMI/Enable HTTPS Service</b> The setting that enables secure HTTP (SSL) tunneling mode.	false	true/false
<b>Integration API server/RMI/Compression Service Port</b> The port to use for Compression service mode. A setting of 0 indicates that any available port will be used. If the server will be accessed across a firewall, you must set this to a specific port.	0	0 - 65535
<b>Integration API Server/RMI/SSL Service Port</b> The port to use for SSL service mode. A setting of 0 indicates that any available port will be used. If the server will be accessed across a firewall, you must set this to a specific port.	0	0 - 65535
<b>Integration API Server/RMI/Standard Service Port</b> The port to use for Standard service mode. A setting of 0 indicates that any available port will be used. If the server will be accessed across a firewall, you must set this to a specific port.	0	0 - 65535

### [Integration API Server Settings]

Setting Name and Description	Default	Valid Ranges/Values
<b>Integration API Server/RMI/HTTP Service Port</b> The port to use for HTTP tunneling mode. A setting of 0 indicates that any available port will be used.	0	0 - 65535
<b>Integration API Server/RMI/HTTPS Service Port</b> The port to use for secure HTTP tunneling mode. A setting of 0 indicates that any available port will be used.	0	0 - 65535
<b>Integration API Server/Session Timeout</b> The amount of time after which an idle client connection will be terminated.	120	1 - 24d

---

# Configuring Authentication Modes

---

***In this chapter:***

**Authentication Modes**

**Implementing Non-Native Authentication**

**Choosing an Authentication Scheme**

**Running the Authentication Configuration Wizard**

**Configuring P6 Web Services Authentication**

**Login/Logout Changes to Support Authentication Modes**

This chapter describes the authentication modes available and explains how to configure P6 Web Services to operate using a non-native authentication scheme.

## Authentication Modes

P6 Web Services supports the following authentication modes to validate user logons:

- **Native**

Native mode is the original P6 authentication scheme and is the default for all applications. When a user attempts to log on to a P6 application, native mode confirms the user's identity in the project management or methodology management database.

- **LDAP (Lightweight Directory Access Protocol)**

LDAP mode is available for the P6 Project Management client module, P6 Web Access, the API, and P6 Web Services. In this mode, when a user attempts to log on to a P6 application, the user's identity is confirmed in a directory server database.

## Implementing Non-Native Authentication

By default, all P6 applications are installed using native authentication. Native authentication is handled directly through the P6 application with the P6 database acting as the authority.

To implement non-native authentication for P6 applications

- uninstall current versions of P6 applications, if you are upgrading
- install the new version of P6 client applications and additional components required for your implementation
- run the Authentication Configuration Wizard to choose an authentication scheme for the project management database (PMDB) and, if applicable, methodology management database (MMDB)
- configure administrative settings for P6 Web Services

---

*The Borland Database Engine and the database client software must be installed on the machine used to run the Authentication Configuration Wizard.*

---

This guide describes the procedures for choosing an authentication scheme and configuring new administrative settings for P6 Web Services.

For detailed procedures on installing and uninstalling P6 client applications and server components and upgrading the methodology management database, refer to the *Oracle Primavera P6 Administrator's Guide*.

## Choosing an Authentication Scheme

To specify the authentication scheme you want to use for P6 applications, you use the Authentication Configuration Wizard. Although you specify authentication modes for client/server applications and Web applications separately, you must use a consistent authentication scheme within the P6 suite. For example, client/server and Web applications must *both* be configured for either LDAP authentication or native authentication. For Custom mode, which is available only for client/server applications, you can choose LDAP for Web applications.

Authentication mode is database-driven, so the configuration utility enables you to first specify a database connection setting, then choose authentication modes for the applications that access that database.

For LDAP authentication, the configuration utility also enables you to specify LDAP servers, map LDAP attributes to P6 database fields, and provision users.



## Running the Authentication Configuration Wizard

Use the Authentication Configuration wizard to

- Select an authentication mode and configure LDAP servers
- Provision LDAP user information to a P6 database

### To select an authentication mode and configure LDAP servers

- 1 From the Database\ldap\_config folder of the P6 physical media or download, double-click LDAPCfgWiz.exe.
- 2 Select the database alias you want to configure for authentication, then type the database username and password.

**Authentication Configuration**

**Setup Database Alias**

Select the Alias you want to configure for authentication. Please enter the database user name and password.

Alias	Connection Type
MMDB	SQLServer
PMDB	SQLServer

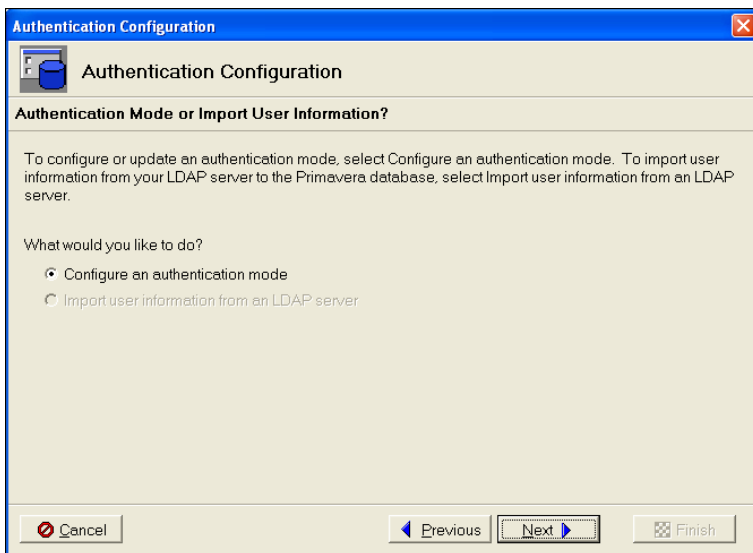
DB User Name:

DB User Password:



*Even if the password that you enter above is incorrect, you will still be logged into the database if you have valid domain credentials that grant you private database access.*

### 3 Choose to configure an authentication mode.

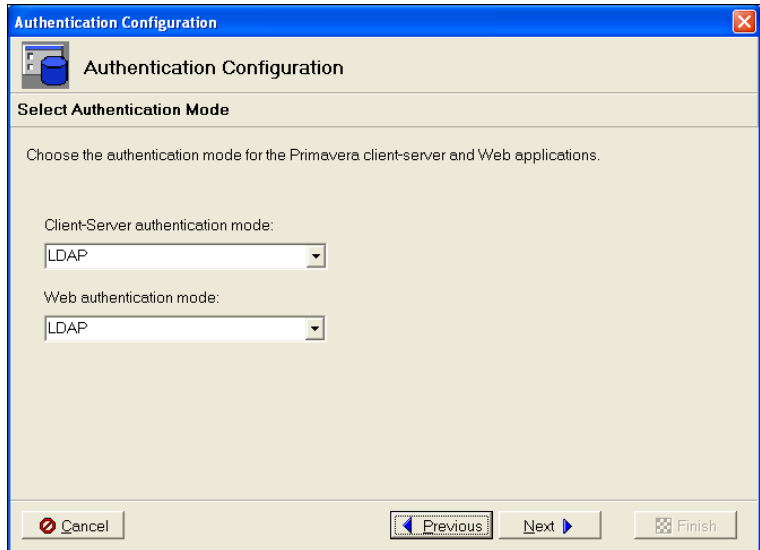


*The Import option is active only if the database has previously been configured for LDAP mode.*

---

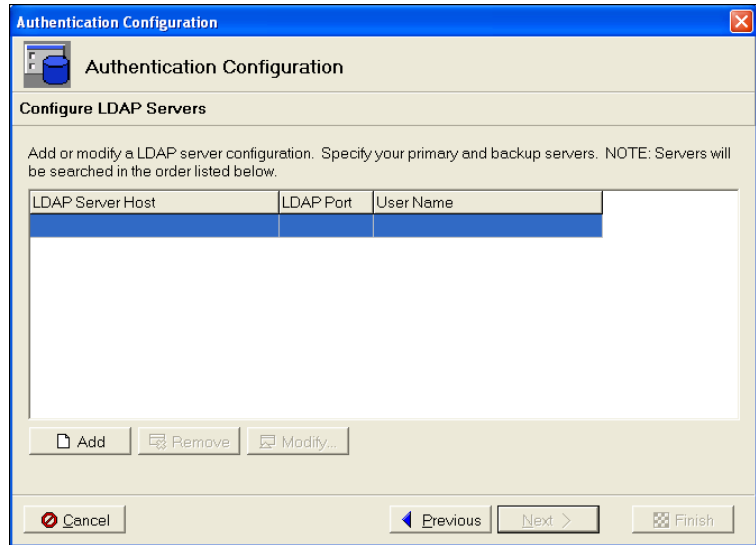
- 4 Choose an authentication mode for the client-server and Web applications.

If you choose Native, the Finish button becomes active so you can exit the wizard. For other modes, continue through the wizard to configure additional information as described in the following steps.



- 5 To add a new LDAP server, click Add.

If previously configured LDAP servers are listed, you can modify the information or remove server entries.



- 6 On the General tab, specify the LDAP directory server host name or IP address, listening port, and Base Directory Node.

For Base Directory Node, specify the location in the directory information tree (DIT) that is the location from which to start the search for module users during login. Base Directory Node is also the location where the provisioning function begins the search for directory server users.

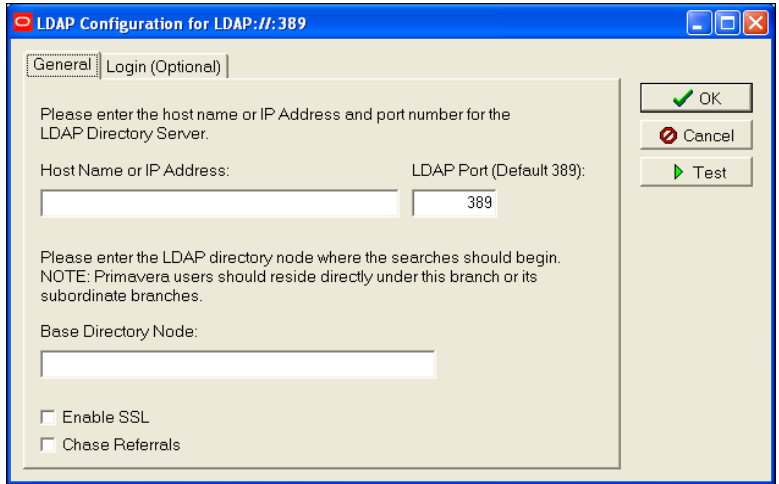
SSL protocol is recommended for secure communication to the LDAP server. To use SSL protocol for communication with the LDAP server, mark the Enable SSL checkbox.

Referrals chasing allows authentication to extend to another domain. To use referrals, mark the Chase Referrals checkbox.

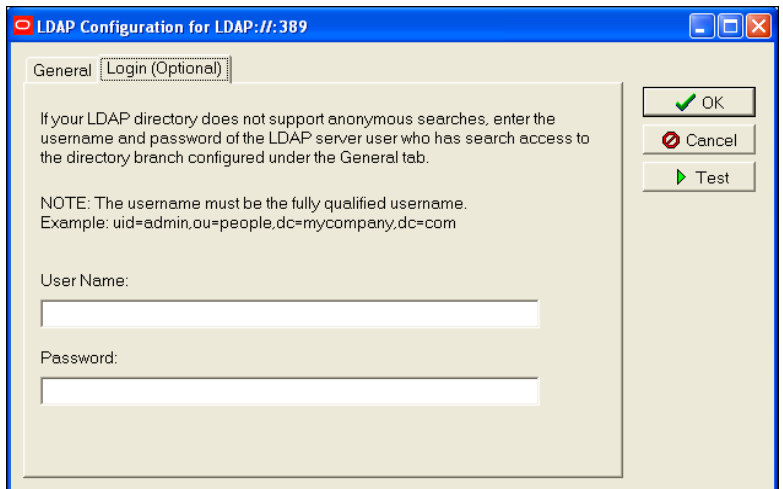


*Referral chasing is supported with Oracle Internet Directory and Microsoft Windows Active Directory. For Oracle Internet Directories, referrals chasing only works when the directories are configured to allow anonymous searches.*

---



If the LDAP server does not allow anonymous searches, click the Login tab. Type the user name and password of an LDAP server user who has search access for the Base Directory Node you specified on the General tab.



When you are finished configuring the LDAP server, click OK or, to validate connection with the LDAP server, click Test and click OK after a successful connection message.

## 78 Configuring Authentication Modes

*USER\_NAME is a required field that must be mapped and can not be deleted. Up to four fields can be mapped between the LDAP store and the project management/methodology management database.*

- 7 Select an LDAP server. Then, in the LDAP attribute column, specify the term/field in the LDAP store that corresponds to the P6 project management/methodology management database USER\_NAME field.

Optionally, specify the LDAP term/field for e-mail address, actual name, and office phone number. To add fields, click Add. To remove a field, select it and click Remove.



*If you are unsure of the correct LDAP terms, check with your LDAP directory server administrator.*

Authentication Configuration

**Create Mappings**

Highlight the appropriate LDAP server:

LDAP Server

Select a database field from the drop-down list and enter the corresponding LDAP attribute. NOTE: Field mappings for primary and backup servers should be synchronized to avoid data loss.

Database Field Name	LDAP Attribute
EMAIL_ADDR	mail
ACTUAL_NAME	name
OFFICE_PHONE	telephoneNumber

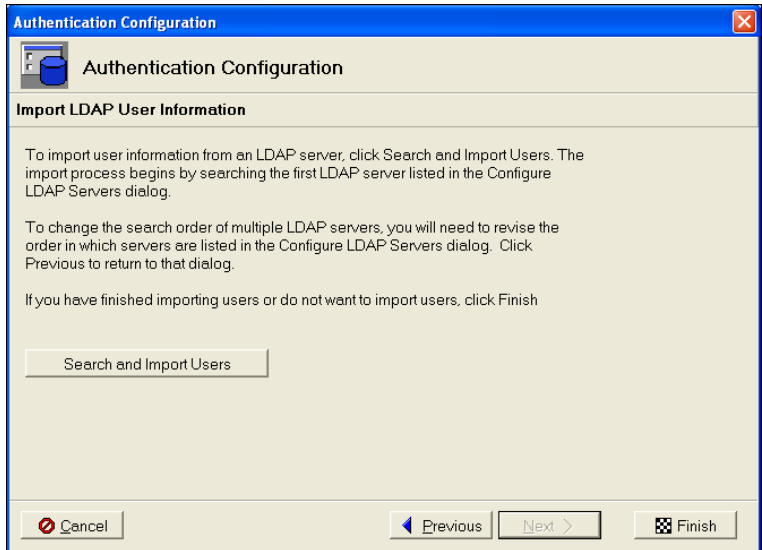
Add Remove

Cancel Previous Next Finish

- 8 To provision LDAP user information to the P6 database, click Next. You can search the LDAP directory server or import an LDIF file to provision users.

To exit the wizard, click Finish.

- 9 Click Search and Import Users.



*When you provision users from the LDAP directory, changed records are updated in the P6 database and new users are added. However, users that have been deleted from the LDAP directory are not automatically removed from the P6 database. You will need to manually delete these users.*

**10 To import from an LDIF file**, click Load LDIF, then navigate to the file you want to import and click OK.

**To import from an LDAP server**, you can run an existing search or define a new search.

If one or more previously defined searches exist, the name of the most recently run search is displayed next to the Search Name drop-down list. To initiate the current search, click Run Search. Results display in the Available Users section. To specify a new search, click Define Criteria.

The screenshot shows the 'Import LDAP Users' dialog box. At the top, there is a section for 'LDAP User Search Criteria' with a 'Search Name' dropdown and a 'Current LDAP Server' text field. Below this are 'Define Criteria' and 'Run Search' buttons. On the right side of the dialog are 'Close', 'Import Users', 'View Errors', and 'Load LDIF' buttons. The main area is divided into 'Available:' and 'Selected:' sections, each containing a table with columns for 'User Name', 'Actual Name', and 'E-Mail Address'. Between these tables are navigation buttons: '>', '>>', '<<', and '<'. A 'Clear' button is located above the 'Available' table, and 'View Updates' and 'Clear' buttons are above the 'Selected' table. Callouts provide instructions on how to use these elements.

*Displays the name of the current search.*

*Starts the search based on the filter selected in the Search Name drop-down list.*

*Click to save information for the selected users to the P6 database.*

*Click to remove the current search results or currently selected users.*

*After running a search, select the Available users you want to add to the P6 database, then click the right arrow button. To remove a user from the Selected users list, click the left arrow button. Click the double arrows to add or remove all listed users.*

*For the selected users, click to compare records between the P6 db and LDAP store. Status is indicated by background color. White indicates a match, blue indicates that the db record differs from the record in the LDAP store, and red indicates that the user record does not exist in the database.*

When you click Define Criteria, the Select/Define Searches dialog box displays so you can add, modify, and delete searches.

- To add a search, click Add. Type a unique name for the search. In the Search criteria field, specify the LDAP search filter you want to use. When finished specifying criteria, click Save and Close.





*Search filter syntax should adhere to the rules outlined in RFC 2254.*

- To modify a search name or criteria, edit the existing information, then click Save and Close.
- To delete a search, select it. Click Remove, then Close.

Search Name	Search Criteria
all	uid=*

---

*After provisioning users, you will need to set up P6 user accounts for the imported users by assigning security profiles and module access through the P6 Project Management Module.*

---

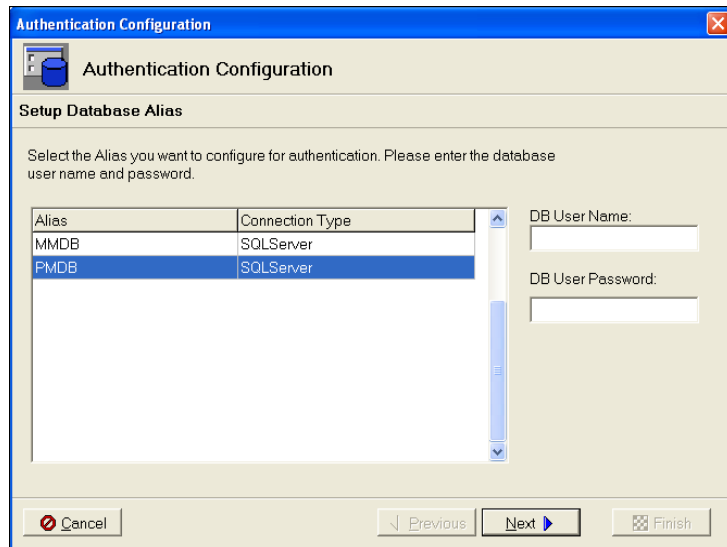
- 11 When finished importing user information, in the Import LDAP Users dialog box, click Close. To exit the Authentication Configuration wizard, click Finish.

### Provisioning LDAP user information to the P6 database

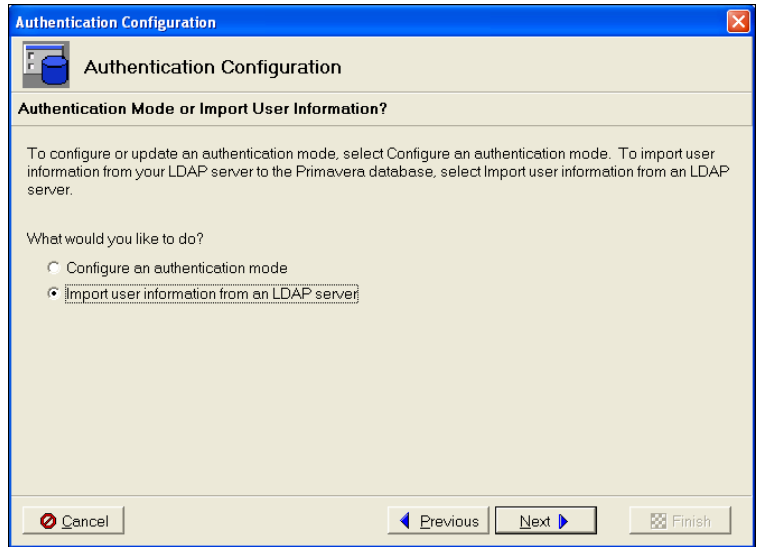


When you provision users, changed records are updated in the P6 database and new users are added. However, users that have been deleted from the LDAP directory or LDIF file are not automatically removed from the P6 database. You will need to manually delete these users.

- 1 From the Database\ldap\_config folder of the P6 physical media or download, double-click on the file LDAPCfgWiz.exe.
- 2 Select the database alias you want to provision LDAP information for, then type the database user name and password.



- 3 Choose to import user information.



*The Import option is active only if the database has previously been configured for either LDAP or Single Sign-On.*

- 4 Follow steps 9 - 11 (beginning on page 78), which describe how to provision users.

## Configuring P6 Web Services Authentication

Because one P6 Web Services server instance may control more than one database, in addition to specifying an authentication mode for a database through the Authentication Configuration wizard, you use an administrative configuration setting to specify the overall mode you want to use for the P6 Web Services server. P6 Web Services uses a single P6 configuration setting, `Authentication.Mode`, to support authentication selection. For LDAP authentication with secure communication (SSL) between the P6 Web Services server and the LDAP server, two additional configuration settings are required.

Use the Primavera Administrator (also known as the P6 Administration Application) to specify these configuration settings. For more information about the Primavera Administrator and these configuration settings, see [“Using the Primavera Administrator Application”](#) on page 31.



*A P6 Web Services configuration might include database instances that are not set to the same authentication mode as the Web Services server. If a user connects and requests a database that is set to a different authentication mode than the Web Services server, an error message displays. The user must select a database that matches the authentication mode set for the Web Services server.*

---

## Login/Logout Changes to Support Authentication Modes

### In Native mode

- In Native mode, the use of passwords may be optional, depending on the password policy chosen in Administrative Preferences in the Project Management module.

### In LDAP mode

- All P6 applications require a logon password.

Additionally, because passwords are stored and authenticated against an LDAP directory, the capability for users to change passwords within a P6 module is disabled.

### In Custom mode

- Client/server applications require a logon password. Custom mode is not supported by P6 Web Services.



# Index

## A

- Administrator application
  - adding P6 Web Services configurations 34
  - modify configurations 33
  - starting 32
  - using 31
- Application servers
  - configuring HTTP(s) 20, 22, 23
  - deploying into 20, 22, 23
  - supported 14
- Authentication
  - configuration settings 84
- Authentication modes
  - choosing 72
  - configuring 69
  - login/logout changes 85
  - overview 70
  - select using LDAP Configuration utility 73

## B

- BEA WebLogic
  - supported version 14

## C

- Configuration settings 38
- Configurations 33
  - adding 34
  - adding database instances 34
  - deleting 35
  - duplicating 34
- Configure authentication modes 69
- Configure database settings 29

## D

- Database configuration
  - change settings 29

- starting wizard 29
- Database driver configurations 35
- Database instances
  - adding 34
  - deleting 35
  - managing access to multiple 35
- Database requirements 14
- Deploying P6 Web Services 20, 22, 23
  - into JBoss on Windows 23
  - into WebSphere 27

## F

- Factory Default configuration 33

## H

- HTTP(s) 23

## I

- IBM WebSphere
  - deploying into 27
  - supported version 14
- Installation 11
  - requirements 13

## J

- Java JDK 13
- Java Runtime Environment 13
- JBoss
  - deploying into 23
  - supported version 14

## L

- LDAP
  - provisioning 82
- LDAP authentication

- configure servers 73
- description 70
- login procedure 85
- provision user information 78, 82
- running LDAP utility 73

## **N**

- Native authentication 70
  - login procedure 85
- Non-native authentication, implementing 71

## **O**

- Operating systems, supported 14

## **P**

- P6 Web Services
  - authentication 36
  - authentication, configure settings 84
  - configuration settings 38
  - configurations, adding 34
  - configurations, adding database instances 34
  - configurations, deleting 35
  - configurations, duplicating 34
  - database driver configurations 35
  - deploying 20, 22, 23
  - enabling access to 30
  - installing 11, 15–19
  - modify configurations 33
  - overview 12
  - system requirements 13
- Project Management database, supported version 14
- Provision LDAP user information 78, 82

## **R**

- Running Authentication Configuration Wizard 73

## **S**

- SOAP (Simple Object Access Protocol) 12
- Supported operating systems 14
- System requirements 13

## **W**

- WSDL (Web Services Description Language) 12

## **X**

- XML (Extensible Markup Language) 12