

ORACLE[®]

PRIMAVERA

**P6 Compression Server Administrator's Guide
Release 8.1**

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Oracle Primavera P6 Compression Server Administrator's Guide

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Contents

Copyright.....	2
Preface.....	7
P6 Professional Documentation.....	7
Where to Get Documentation Updates.....	11
Where To Get Training	11
Where to Get Support	11
Before You Begin	13
Using the Administration Guide.....	13
What is P6 Compression Server.....	14
Overview of P6 Compression Server Architecture.....	14
Security in P6 Compression Server.....	15
Confidentiality for P6 Compression Server.....	15
P6 Compression Server Installation Requirements.....	15
Before You Begin the Installation.....	16
Installation Process Phases.....	16
P6 Compression Server Installation and Configuration.....	19
Creating a WebLogic Domain for P6 Compression Server	19
Installing P6 Compression Server	20
Configuring the P6 Compression Server Administrator Application.....	21
Reviewing and Modifying P6 Compression Server Configurations	22
Configuring the startWebLogic.cmd File	25
Configuring -Xms and -Xmx Parameters	26
Deploying P6 Compression Server in WebLogic.....	26
Adding P6 Compression Server as a WebLogic Application.....	27
Starting the P6 Compression Server Application in WebLogic.....	27
Stopping the P6 Compression Server	28
Changing P6 Compression Server Database Connection Settings.....	28
Network Settings for P6 Compression Server	28
Troubleshooting.....	31
Uninstalling the Current Version of P6 Compression Server	32
Updating the P6 Compression Server Configuration Version.....	32
P6 Compression Server Telemetry.....	33
Telemetry Item Descriptions.....	33
P6 Professional Installation and Configuration	37
Configuring P6 Compression Server Database Connection Settings	37
Configuring Direct Database Connections.....	38

Preface

In This Chapter

P6 Professional Documentation	7
Where to Get Documentation Updates.....	11
Where To Get Training.....	11
Where to Get Support	11

P6 Professional Documentation

You can access product manuals and technical documents from the P6 Professional Documentation Center, located in the \Documentation\<language> folder of the P6 Professional physical media or download. Most documentation assumes a standard setup of the product, with full access rights to all features and functions.

Media packs include all files necessary to install P6 Professional applications, all manuals and technical documents related to the installation, administration, and use of P6 Professional modules, and the Quick Install Guide. For information on the contents of the P6 Professional Media Pack, see the *P6 Professional Quick Install Guide*.

The following table describes documentation publications and lists the recommended readers by role. P6 Professional roles are described in the *P6 Professional Administrator's Guide*.

Title	Description
<i>P6 Professional Administrator's Guide</i>	Explains how to set up the P6 Professional database, servers, and modules; it also provides an overview of all the modules in the P6 Professional solution. The guide describes the procedures required to administer P6 Professional, including setting up security and configuring global preferences. The P6 Professional network administrator/database administrator and P6 administrator should read this guide.
<i>Tested Configurations</i>	Lists the configurations that have been tested and verified to work with P6 Professional. The network administrator/database administrator and P6 Professional administrator should read this document.

Title	Description
<i>P6 Professional User's Guide</i>	This guide explains how to plan, set up, and manage projects in a multiuser environment. If you are new to P6 Professional, start with this guide to learn how to use the software effectively to plan and manage projects. When you need more detail, refer to the P6 Help. The program manager, project manager, resource/cost manager, and team leader should read this guide.
<i>P6 Data Dictionary</i>	This data dictionary defines fields used in P6.
<i>P6 Team Member for iPhone App User's Guide</i>	This guide explains how to update status using P6 Team Member for iPhone App.
<i>P6 Professional Help</i>	Explains how to use P6 Professional to plan, set up, and manage projects in a multiuser environment. If you are new to P6 Professional, use this Help to learn how to use the software effectively to plan and manage projects. The P6 Professional administrator, program manager, project manager, resource/cost manager, and team leader should read this Help.
<i>P6 Help</i>	Describes how to create, manage, plan, and schedule projects, group projects into portfolios, administer all enterprise data, application settings, user accounts, and security profiles, maintain both the organizational breakdown structure (OBS) and enterprise project structure (EPS), manage resources and roles, track risks, issues, and notebooks, create and reuse templates, evaluate budgets, analyze performance and ROI for project portfolios, participate in workflows and document reviews, approve timesheets, and generate reports. The operations executive, P6 Professional and P6 administrator, program manager, project manager, resource/cost manager, and team leader should read this Help.
<i>P6 Progress Reporter Administrator Help</i>	Describes how to enter database connection information for the P6 Progress Reporter server and modify P6 Progress Reporter server and application settings. The P6 Professional network administrator/database administrator should read this Help.

Title	Description
<i>P6 Progress Reporter Help</i>	Describes how to use P6 Progress Reporter to enter and update time spent on assignments. Team members should read this Help.
<i>Primavera Timescaled Logic Diagram Help</i>	Describes how to create, modify, and manage Timescaled Logic Diagrams. Timescaled Logic Diagrams condense the project schedule displayed in the Gantt Chart into a more readable, easier to understand format that provides a snapshot of the entire project plan and the chains of activities that drive the project schedule. The Timescaled Logic Diagram application can be used only with P6 Professional.
<i>P6 Integration API Administrator's Guide</i>	Explains how to install and configure the P6 Integration API, which allows direct access to P6 Professional via Java. Those creating client code in Java and needing direct access to the P6 Professional database should read this guide.
<i>P6 Web Services Administrator's Guide, P6 Web Services Programmer's Guide, and P6 Web Services Reference Manual</i>	Explains how to install and configure P6 Web Services, which enables organizations to seamlessly integrate P6 Professional functionality into other applications using web services standards. The <i>P6 Web Services Programmer's Guide</i> , available as an HTML help system, describes how to invoke, use, and troubleshoot the available services/operations within supported environments. The <i>P6 Web Services Reference Manual</i> , also available as an HTML help system, describes all services and operations available in P6 Web Services in a comprehensive manner.
<i>P6 SDK Web-based documentation</i>	Describes how to use the P6 SDK to connect to the P6 Professional database. The tables, fields, and stored procedures that you can access through the P6 SDK are described. Examples are also provided to show how you can use the P6 SDK to perform several basic tasks, such as creating a new project or assigning a resource to a project activity. The P6 Professional network administrator/database administrator and P6 administrator should read this documentation, which is available in <i>local drive\Program Files\Oracle\Primavera P6\P6 Optional Client\PMSDK\Doc\</i> by default. Double-click the INDEX.HTML file to open the Table of Contents.

Title	Description
<i>P3 to P6 Professional Migration Guide</i>	This guide provides best practices for migrating your P3 data to P6 Professional, and details how P3 functionality maps to P6 Professional functionality.
<i>P6 Reporting Database Administrator's Guide</i>	This document explains how to install and configure the P6 Reporting Database application, and generate the ODS and Star database. It describes how to install and configure the Oracle Gateway if the P6 Reporting Database is installed on a Microsoft SQL Server. It also provides information about how to run the Configuration Utility.
<i>P6 Reporting Database User's Guide</i>	Provides information about using ODS and Star with the P6 Professional database to extract data that you can use to create reports.
<i>P6 Analytics Administrator's Guide</i>	This guide is a step-by-step guide to installing and configuring P6 Analytics. This guide provides information about P6 Analytics administrative tasks. It also includes information for Star security configuration, OBI installation and configuration, Financial Periods installation and configuration, and for configuring the Secure Sockets layer.
<i>P6 Analytics User's Guide</i>	This guide explains how to use Star Schema Database (Star) to extract data for use in creating reports through the Oracle Business Intelligence Suite.
<i>P6 Extended Schema White Paper</i>	Provides an overview of the P6 Extended Schema and Publication Services. Provides information about configuration, sizing, performance, reporting, and eventing.

Distributing Information to the Team

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

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

Where to Get Documentation Updates

For the latest updates to the P6 Professional Documentation library, go to:

http://download.oracle.com/docs/cd/E20686_01/index.htm

Where To Get Training

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

<http://education.oracle.com>

Where to Get Support

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

<http://www.oracle.com/us/support/index.html>

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

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit **<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info>** or visit **<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs>** if you are hearing impaired.

Before You Begin

In This Section

Using the Administration Guide	13
What is P6 Compression Server	14
Overview of P6 Compression Server Architecture	14
Security in P6 Compression Server	15
P6 Compression Server Installation Requirements.....	15
Before You Begin the Installation.....	16
Installation Process Phases.....	16

Using the Administration Guide

Before you Begin Provides an overview of the components of P6 Compression Server, discusses how to plan an implementation for your organization, and offers an overview of the process of installing and configuring P6 Compression Server.

Server Installation and Configuration Provides the steps for installing the server-side components of P6 Compression Server, including the following:

- ▶ Setting up the database connections for P6 Compression Server
- ▶ Configuring databases
- ▶ Configuring P6 Compression Server settings

Client installation and configuration Provides the steps to install the client-side components compatible with P6 Compression Server, including how to configure your database connection during or after installation.

What is P6 Compression Server

P6 Compression Server is a layer between the database server and P6 Professional that compresses data before sending it to the client. The basis is that high latency/low bandwidth networks cause serious degradation in time taken to transfer data to the client. Figure 1 illustrates the current architecture and Figure 2 illustrates how P6 Compression Server fits into the application architecture. In Figure 1, clients 1 to N interact with the database server over a WAN. In Figure 2, with P6 Compression Server, the clients still send and receive data over the WAN, but the data from the database server is compressed on P6 Compression Server, and then sent across the WAN to the clients.



Figure 1. Current Architecture

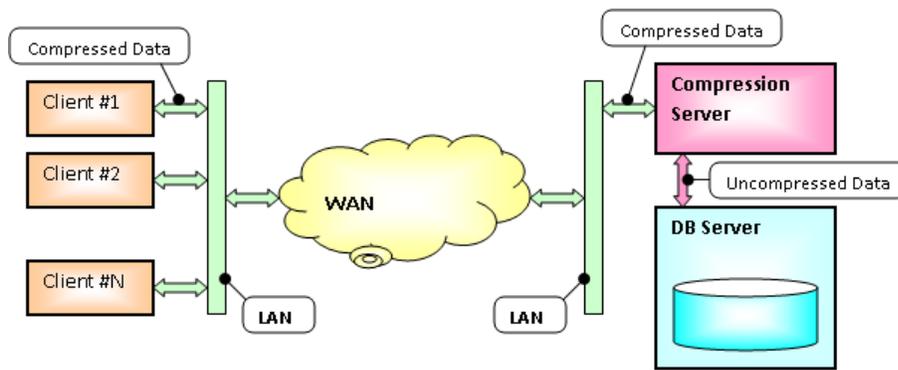


Figure 2. With P6 Compression Server

Overview of P6 Compression Server Architecture

Figure 3 provides more detail about the P6 Professional/P6 Compression Server architecture. P6 Professional reads and writes data using Borland DBExpress technology. P6 Professional provides a DBExpress driver that communicates with P6 Compression Server. P6 Compression Server does the actual work of fetching and sending requests and response data. As a result, no change is made in P6 Professional. Instead of a DBExpress driver connecting to Oracle or SQL Server, the driver connects to P6 Compression Server.

On the P6 Compression Server end, the details of scheduling threads are handled by the BRE (Business Rule Engine), which is the same engine used in P6. For each P6 Professional request, a worker thread will perform the necessary work, running the query and fetching the dataset before returning the data back to the client.

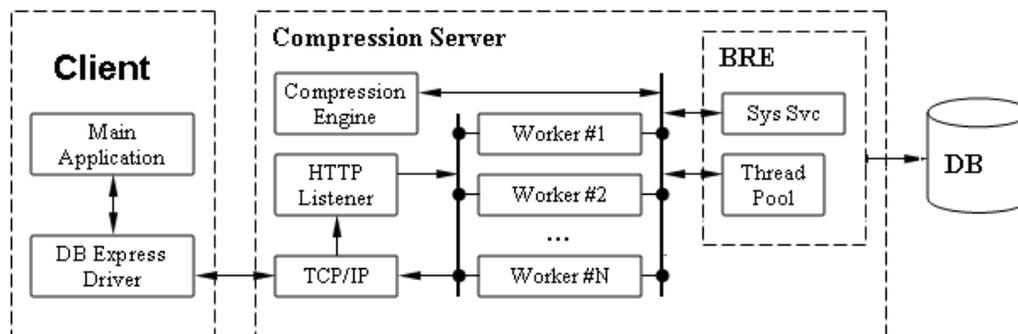


Figure 3. Architectural Detail

Security in P6 Compression Server

This section provides an overview of security in P6 Compression Server.

Confidentiality for P6 Compression Server

Confidentiality ensures that stored and transmitted information is disclosed only to authorized users. In addition to the documentation included with other applications and hardware components, follow the P6 Compression Server-specific guidance below.

For data moving between the database and P6 Compression Server, refer to the documentation included with the database server for instructions on securing the database.

P6 Compression Server Installation Requirements

- ▶ Windows 2003 Server Service Pack 2 or Windows 2008 Server.
- ▶ Oracle 11gR1 client (32-bit) on the P6 Compression Server machine.
- ▶ 32-bit Java SE Development Kit (JDK) JDK 6 Update 21 (JDK 1.6.0_21) on the P6 Compression Server machine. This version is available online at <http://oracle.com/technetwork/java/index.html>.
- ▶ WebLogic 11g R1 (10.3.3.0). This version is available online at <http://oracle.com/technology/documentation/bea.html>. Oracle recommends that you install the application server to a folder with a short name.
- ▶ Minimum 3GB RAM and 2 GHz or more processor (multi-processor recommended) on P6 Compression Server machine is recommended.

- ▶ The databases should already be installed using the database configuration for the application.
- ▶ Install the P6 Professional DBExpress driver on the client machines using P6 Professional setup.
- ▶ Use the Database Configuration utility to configure the application to connect to P6 Compression Server using HTTP.
- ▶ P6 Compression Server version 8.1 is compatible with P6 Professional or P6 Optional Client. The P6 Professional database and the P6 EPPM database cannot share a single instance of P6 Compression Server 8.1.
- ▶ Only English is supported as the operating system locale and input language for P6 Compression Server; using other languages might cause errors. However, for P6 Professional clients that connect to P6 Compression Server, the following operating system locales and input languages are supported: Brazilian Portuguese, English, French, German, Japanese, Spanish, Russian, Simplified Chinese, and Traditional Chinese.

Before You Begin the Installation

P6 Compression Server requires you to completely uninstall any previous version of P6 Compression Server using Add/Remove Programs (Settings, Control Panel). See ***Uninstalling the Current Version of P6 Compression Server*** (on page 32).

Installation Process Phases

Phase I: Plan Your Installation

Plan your P6 Compression Server installation. Identify the network and hardware that you will need. If required, install and configure database server software (Oracle).

Phase II: Set Up Your Database Servers using P6 Professional

P6 Compression Server is compatible with P6 Professional R8.1. Oracle recommends that you setup your database servers using the P6 Professional setup, or use a copy of a database already configured to work with P6 Professional.

Phase III: Configure P6 Compression Server

Install the Oracle 11gR1 client (32-bit) on the P6 Compression Server machine. Install Primavera P6 supported jdk-6u21-windows-i586.exe (JDK 1.6.0_21) on P6 Compression Server machine. Create a WebLogic domain for P6 Compression Server.

Install P6 Compression Server on the Windows 2003 or 2008 server machine that you have identified. During the installation, or once it is complete, you can setup the P6 Compression Server configuration database. The P6 Compression Server configuration database is a repository of database connection settings normally saved in a special table in your P6 Professional database. You can then configure P6 Compression Server to run against multiple databases.

Modify the startWebLogic.cmd file. Deploy WebLogic 11gR1 (10.3.3.0) on your P6 Compression Server.

Phase IV: Configure Clients

Install P6 Professional on a client workstation. During installation, you can configure a connection to your regular Oracle database. P6 Professional setup installs the necessary P6 Compression Server client drivers (libjnbzip2.dll and DbExpPrC.dll) and all the files needed to connect to P6 Compression Server.

Use client DB Config to setup a connection through P6 Compression Server.

P6 Compression Server Installation and Configuration

In This Section

Creating a WebLogic Domain for P6 Compression Server.....	19
Installing P6 Compression Server.....	20
Configuring the P6 Compression Server Administrator Application.....	21
Reviewing and Modifying P6 Compression Server Configurations.....	22
Configuring the startWebLogic.cmd File.....	25
Configuring -Xms and -Xmx Parameters.....	26
Deploying P6 Compression Server in WebLogic.....	26
Changing P6 Compression Server Database Connection Settings.....	28
Network Settings for P6 Compression Server.....	28
Troubleshooting.....	31
Uninstalling the Current Version of P6 Compression Server.....	32
Updating the P6 Compression Server Configuration Version.....	32
P6 Compression Server Telemetry.....	33

Creating a WebLogic Domain for P6 Compression Server

To create a WebLogic domain:

- 1) Run the **Oracle WebLogic Configuration Wizard**. On your machine, click **Start/All Programs/Oracle WebLogic/WebLogic Server 11gR1/Tools/Configuration Wizard**.
- 2) On the **Welcome** page of the **Oracle WebLogic Configuration Wizard**, select **Create a new WebLogic domain** and click **Next**.

Notes:

- If the **Select Domain Source** page displays, click **Next**.
 - If the **Specify Domain Name and Location** page displays, enter a domain name and location and click **Next**.
-

- 3) On the **Configure Administrator User Name and Password** page:
 - a. In the **Name** field, enter a user name.
 - b. In the **User password** field, enter a password.
 - c. In the **Confirm user password** field, reenter your password.
 - d. Click **Next**.
- 4) On the **Configure Server Start Mode and JDK** page:
 - a. In the **WebLogic Domain Startup Mode** pane, select **Production Mode**.

- b. In the **JDK Selection** pane, select **Other JDK** and browse to the folder (default location C:\Program Files\Java\jdk1.6.0_21.) where you installed the Primavera P6 supported JDK version 1.6.0_21 as mentioned in the **Installation Process Phases** (on page 16) topic.
- c. Click **Next**.

Note: If the Select Optional Configuration page displays, click Next.

- 5) On the **Configuration Summary** page, review the summary information and click **Create**.
- 6) On the **Creating Domain** page, select the **Start Admin Server** option and click **Done**.
- 7) When prompted, enter the administrator user name and password in the **cmd** dialog box.

Installing P6 Compression Server

To install P6 Compression Server:

- 1) On the P6 Professional physical media or download site, browse to the **\win\Disk1\install** directory from the location to which you extracted the server files and double-click the **setup.exe** file to begin the installation.

Note: Due to the global nature of the Oracle Universal Installer (OUI), the OUI online help is not applicable for references to P6 Professional documentation. Instead, refer to this guide for instructions to install and uninstall P6 Compression Server.

- 2) In the **Oracle Universal Installer** window:
 - a. On the **Welcome** page, click **Next**.
 - b. On the **Specify Home Details** page, enter a name and installation path for the P6 Compression Server and click **Next**.
 - c. On the **Choose Oracle Client Directory** page, browse to the Oracle home location (default location C:\app\Administrator\product\11.1.0\client_1) and click **Next**.
 - d. On the **Choose Weblogic Domain Home Directory** page, browse to the location of the Weblogic domain home (default location C:\Oracle\Middleware\user_projects\domains\Next.
 - e. On the **Summary** page, review the install location and click **Install** to begin the installation. The **Install** page will display.
 - f. On the **Configuration Assistants** page, wait for the first **Database Configuration** dialog box to appear.
- 3) In the **Database Configuration** dialog box:
 - a. Enter database connection settings:

1. Configure your database user name and password settings. (The default user name and password is *pubuser*.)
2. In the **Database Name** field, enter the Service Name or the SID.
3. Select the **Service Name** or **SID** option, depending on the information you entered in the **Database Name** field.
4. In the **Database Host Address** field, enter the server machine name or IP address where Oracle is installed.
5. In the **Database Host Port** field, enter the port number that Oracle is using. (The default is 1521.)

Note: See **Network Settings for P6 Compression Server** (on page 28) if the Database Host Address pertains to a P6 Compression Server-dedicated connection.

6. Click **Next**.
- b. Select an existing or create a new configuration and click **Next**. Click **OK** in the **Configuration of the Primavera P6 database completed successfully** dialog box.

Notes:

- Oracle strongly recommends that you create a new configuration when you install P6 Compression Server.
 - See **Updating the P6 Compression Server Configuration Version** (on page 32) for instructions on updating an existing configuration.
 - If there is no configuration information in the database, a default configuration will be saved to the database.
-

- 4) In the **Oracle Universal Installer** window, click **Exit** on the **End of Installation** page.

Configuring the P6 Compression Server Administrator Application

As the system administrator, you can use the P6 Compression Server Administrator Application to review, modify, add, and delete P6 Compression Server configurations. P6 Professional configurations are stored in the P6 Compression Server database specified during installation. These configurations contain all of the settings used to run P6 Compression Server. Only administrators should use the P6 Compression Server Administrator Application to modify configuration settings.

To configure the P6 Compression Server Administrator Application:

- 1) Run the P6 Compression Server Administrator Application. On your machine, click **Start/All Programs/Oracle - Primavera P6/Primavera Compression Server/Administrator**. Wait for the **Primavera P6 Administrator** dialog box to open.
- 2) In the **Primavera P6 Administrator** login dialog box, enter the database user name and password (*privuser* by default) and click **OK**.

- 3) In the **Primavera P6 Administrator** dialog box, click the **Configurations** tab.
- 4) On the **Configurations** tab:
 - a. Expand **Custom/Primavera P6 Configuration**.
 - b. To upgrade the configuration to the latest version, right-click the **Primavera P6 Configuration** folder and select **Update to latest version**.

Note: Oracle strongly recommends that you create a new configuration when you install P6 Compression Server. See **Updating the P6 Compression Server Configuration Version** (on page 32) if you choose to upgrade an existing 5.0 SP1 or earlier configuration for additional required steps.

- c. To create one or more databases that P6 Compression Server can load data against on behalf of P6 Professional clients (repeat the following steps for each database you want to create):
 1. Expand the **Database** folder.
 2. Right-click the **Instance** folder and select **Duplicate**. Change the copy name to represent any database you need for P6 Compression Server.
 3. Expand the **Instance** folder in the copy and edit the fields as appropriate for the new database.

Note: When editing the URL field, remember that a database is always referred to by its SID name and IP address.

Tips

- ▶ If you create a new configuration with the P6 Compression Server Installation wizard or with the Database Configuration wizard, you must use the P6 Compression Server Administration Application to change the URL for the Database.Instance.URL parameter to ensure the format is set correctly. This is required for API applications (export/import Primavera P6 (XML), update baseline, and Schedule Comparison/Claim Digger).

Ensure that the URL contains *no spaces*. For example:

- ▶ jdbc:oracle:oci:@10.12.62.78:1521/Oracle_ServiceName
- ▶ jdbc:oracle:oci:@10.12.62.78:1521:Oracle_SID

Reviewing and Modifying P6 Compression Server Configurations

Another set of important parameters available through the P6 Compression Server Administrator Application is the set of parameters controlling P6 Compression Server performance. In most situations, the default settings are enough.

To review and modify P6 Compression Server configurations:

- 1) Run the P6 Compression Server Administrator Application if it is not already running. On your machine, click **Start/All Programs/Oracle - Primavera P6/Primavera Compression Server/Administrator**. Wait for the **Primavera P6 Administrator** dialog box to open.
- 2) In the **Primavera P6 Administrator** login dialog box, enter the database user name and password (*privuser* by default) and click **OK**.
- 3) In the **Primavera P6 Administrator** dialog box, click the **Configurations** tab.
- 4) On the **Configurations** tab, expand **Custom/Primavera P6 Configuration/Compression Server**.
- 5) In the **Compression Server** node:
 - ▶ Review the settings.
 - ▶ Modify the settings as necessary. Refer to the table for more information on the settings.

The following table summarizes the Compression Server node settings:

Variable Name	Value	Min	Max	Tool tip
TelemetryUserName	csadmin			Telemetry user name.
TelemetryPasswordName	csadmin			Telemetry password.
DefaultPort	80	0	65535	Port value for P6 Professional.
DefaultJobDelay [ms]	0	0	125	Scheduling delay of a compression job. For networks with high latency (>250ms) if using huge compression buffers (>512KB) a job delay might be acceptable in order to speed-up jobs that return a lot of Blob data.
CompressionBufferSize [bytes]	262144	16384	1048576	Size of the main compression buffer. The larger the buffer, the

				<p>better the compression ratio. For 2GIPS machines compression speed is 1KB/ms. Each compression job uses memory up to 12 times the size of the main compression buffer.</p> <p>Note: This value should not be increased beyond the maximum JVM heap size setting. If you want to increase this value, you must ensure the maximum JVM heap size setting is at least as large as this value.</p>
IpBufferSize [bytes]	64156	4096	131072	The socket send buffer size for PM client connection.
FetchSize	254	0	255	Number of rows in a database data block.
JobMaxTime [ms]	1800000	60000	14400000	Maximum time allowed for a job to complete.
TaskMaxTime [ms]	300000	10000	14400000	Maximum time allowed for a compression task to complete. A job consists of one or more compression tasks.

UseThreadPoolForRequests	false	false	true	When CPU goes beyond 95% the thread pool might respond with 25ms to 600ms latency. This can have a negative impact on performance. Creating and garbage-collecting threads can provide better performance on Windows machines in this case.
UseThreadPoolForResponses	false	false	true	
SOCKET_LINGER_TIME [ms]	2000	0	30000	Socket linger time.
TransactionMaxInactiveInterval [ms]	900000	60000	720000	The Timeout interval for an inactive session that has a pending database transaction.
SessionMaxInactiveInterval [ms]	720000	60000	720000	The Timeout interval for an inactive session.

From a performance tuning standpoint, the Threadpool folder of the Primavera P6 Configuration folder would be of interest.

From a debugging standpoint, the SeverityLevel field of the Log/File Logger folder would be of interest. (The default is *error*. Setting SeverityLevel to *debug* makes the log very verbose.)

Configuring the startWebLogic.cmd File

To configure the startWebLogic.cmd file:

- 1) In **My Computer**, browse to `\<DOMAIN_HOME>\bin` and open the **startWebLogic.cmd** file in a text editor.
- 2) In the file:
 - a. Locate the text: **call "%DOMAIN_HOME%\bin\setDomainEnv.cmd"**

After this text, enter the following text on a new line:

```
set PATH=%DOMAIN_HOME%\bin;%PATH%
```

- b. Locate the text: **set JAVA_OPTIONS=**

On the same line, set JAVA_OPTIONS to equal:

```
%SAVE_JAVA_OPTIONS% -Djava.library.path="%PATH%"  
-Dprimavera.bootstrap.home=<name of P6 Compression Server folder>  
-Dadmin.type=COMPSVR
```

Note: Where <name of P6 Compression Server folder> is the folder where the server was installed. For example, C:\PrimaveraCompressionServer_1.

- c. Click **Save** and exit out of the file.

Configuring -Xms and -Xmx Parameters

To configure -Xms and -Xmx parameters:

- 1) In **My Computer**, browse to \<DOMAIN_HOME>\bin and open the **setDomainEnv.cmd** file in a text editor.
- 2) In the file:
 - a. Locate the text:

```
if "JAVA_VENDOR%"=="Sun" (  
set WLS -MEM -ARGS -64 BIT=-Xms256m -Xmx512m  
set WLS -MEM -ARGS -32 BIT=-Xms256m -Xmx512m
```

Change the text to:

```
if "JAVA_VENDOR%"=="Sun" (  
set WLS -MEM -ARGS -64 BIT=-Xms1200m -Xmx1200m  
set WLS -MEM -ARGS -32 BIT=-Xms1200m -Xmx1200m
```

- b. Click **Save** and exit out of the file.

Deploying P6 Compression Server in WebLogic

Follow the instructions below to deploy P6 Compression Server into the WebLogic domain.

Related Topics

Adding P6 Compression Server as a WebLogic Application	27
Starting the P6 Compression Server Application in WebLogic.....	27

Adding P6 Compression Server as a WebLogic Application

To add P6 Compression Server as a WebLogic application:

- 1) Launch the WebLogic **Administration Console** if it is not already open.
 - a. Click **Start/All Programs/WebLogic/Projects/<name of domain>/Start Admin Server for Weblogic Server Domain**.
 - b. Click **Start/All Programs/Oracle WebLogic/User Projects/<name of domain>/Admin Server Console**.

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

- 2) On the **Welcome** page, log in using the user name and password that you created in the **Creating a WebLogic Domain for P6 Compression Server** (on page 19) topic.
- 3) In the **Change Center** pane, click **Lock & Edit**.
- 4) In the **Domain Structure** pane, click **Deployments**.
- 5) In the **Summary of Deployments** pane, click the **Control** tab and click **Install**.
- 6) In the **Install Application Assistant** pane:
 - a. In the **Locate deployment to install and prepare for deployment** section:
 1. In the **Path** field, enter the P6 Compression Server home directory. For example, `C:\PrimaveraCompressionServer`.
 2. Select the **compressionserver.war** file.

Note: You may need to click Next before the `compressionserver.war` file will display.

3. Click **Next**.
 - b. In the **Choose targeting style** section:
 1. Select the **Install this deployment as an application** option.
 2. Click **Next**.
 - c. In the **Optional Settings** section, click **Next** to accept the default options.
 - d. In the **Review your choices and click Finish** section, review the configuration settings you have chosen and click **Finish** to complete the installation.
- 7) In the **Settings** pane, click **Save**.

Starting the P6 Compression Server Application in WebLogic

To start the P6 Compression Server application in WebLogic:

- 1) Launch the WebLogic **Administration Console** if it is not already open.
 - a. Click **Start/All Programs/Oracle WebLogic/Projects/<name of domain>/Start Admin Server for Weblogic Server Domain**.

- b. Click **Start/All Programs/Oracle WebLogic/User Projects/<name of domain>/Admin Server Console**.
- 2) In the **Change Center** pane, click **Activate Changes**.
- 3) In the **Domain Structure** pane, click **Deployments**.
- 4) In the **Summary of Deployments** pane, click the **Control** tab.
- 5) On the **Control** tab:
 - a. Select the option for the P6 Compression Server deployment you created in the **Adding P6 Compression Server as a WebLogic Application** (on page 27) topic.
 - b. Click the **Start** button and select **Servicing all requests**.
- 6) In the **Start Application Assistant** pane, click **Yes**.
- 7) In the **Summary of Deployments** pane, click the link in the **State** column for the deployment you created. Wait a few minutes, and then click **Refresh**. The **State** column should show **Active**.

Stopping the P6 Compression Server

To stop the P6 Compression Server application in WebLogic:

Go to the WebLogic terminal console and press **Ctrl+c**.

Changing P6 Compression Server Database Connection Settings

The Database Configuration wizard enables you to change the P6 Compression Server connection settings that you specified during installation. The database you connect to during the P6 Compression Server installation stores one or more P6 Compression Server database configurations. Each P6 Compression Server configuration specifies a set of configurable parameters that determine how P6 Compression Server operates. Once P6 Compression Server is installed, you can select an existing P6 Compression Server configuration or create a new one.

To run the Database Configuration wizard:

On your machine, click **Start/All Programs/Oracle - Primavera P6/Compression Server/Database Configuration**.

Network Settings for P6 Compression Server

You can configure the network settings for P6 Compression Server and the database server to function more efficiently in a multi-user setting. P6 Compression Server needs to communicate with P6 Professional clients and the database server concurrently, with as little network impediments as possible. For example, if the P6 Compression Server machine uses only one network interface card (NIC), a potential risk for switch collision could lead to poor performance. To avoid this risk, you can use at least two NICs for P6 Compression Server. One NIC should be used for the data transfer with P6 Professional clients and another NIC for the communication with the database server.

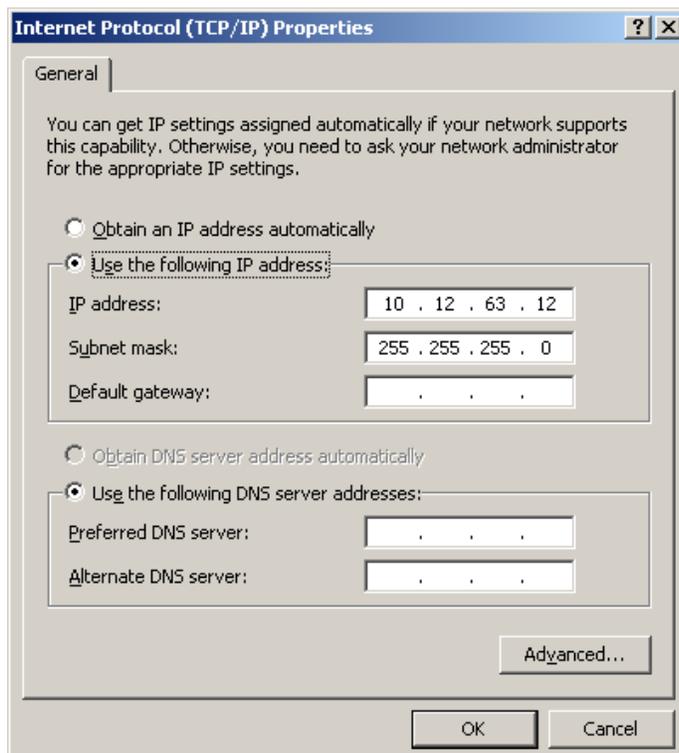
Note: One NIC might be sufficient for smaller deployments or databases.

To avoid unwanted routing, you can configure the NICs you are using for the PM clients and database on separate subnets. Also, the routing table should not have any entries configured for routes between the two NICs.

The following example shows one possible way to configure the network for P6 Compression Server. All configurations must meet the following two requirements:

- ▶ One NIC should serve data transferred between the P6 Compression Server and P6 Professional clients. For example, you can use an IP address that is accessible to everyone in the corporate network of the organization.
- ▶ The second NIC should serve data transferred between the P6 Compression Server and the DB Server. As an example, the following configuration meets this requirement:

The IP address of the second NIC should not be accessible from any other machine in the corporate network of the organization, except the DB server machine. This minimizes traffic on the second NIC and also ensures the fastest possible connection between P6 Compression Server and the database server. To achieve this, Oracle recommends that you use an IP address with a subnet not visible in the corporate network. In the following example, changing the IP address to 10.12.63.XX would make the second NIC visible only for the subnet 63.



Oracle recommends that the DB Server machine use a dedicated NIC for the P6 Compression Server connection. This connection will support the traffic of uncompressed data for all PM clients. If the expected traffic through this connection is low, then the DB Server machine can use one NIC with IP multiplexing. The routing table of the DB server should not have any entry configured for routes between the two NICs.

Note:

- The IP address of the second NIC, or the second IP of a single NIC, must have the same unknown (invisible) subnet as the second NIC of P6 Compression Server. In the example above, the IP would say 10.12.63.YY.
- This configuration is the equivalent of using a direct crossover patch network cable between P6 Compression Server and the database.

If the DB Server machine uses a dedicated NIC for the P6 Compression Server connection, the applications that need to connect directly to the database might have to use another NIC. To inform these applications about the fact that the parameters of the P6 Compression Server connection to Oracle cannot be used for direct connection, you have to add a new entry in the ADMIN_CONFIG table of the configuration database.

Note: This is only required if your database server is configured to support more than one network interface card (NIC) and uses an IP address that is not public.

To add a new entry in the ADMIN_CONFIG table:

- 1) Using SQL*Plus, run the following SQL command on the database server:

```
INSERT INTO ADMIN_CONFIG (CONFIG_NAME, CONFIG_TYPE, CONFIG_VALUE)  
VALUES('CompressionServerPublicConfig', 'CS.ORA', 'IP_ADDRESS:port_no:SID');  
COMMIT;
```

Where SID is the SID of the database server, and the IP_ADDRESS:port_no is the database server's public NIC IP address and port number.

- 2) Run the following SQL command to delete the existing INTERNAL_PLUGINS configuration from the ADMIN_CONFIG TABLE.

```
DELETE FROM ADMIN_CONFIG WHERE UPPER(CONFIG_NAME)=  
'MYPRIMAVERA.BRE.INTERNAL_PLUGINS'; COMMIT;
```

Note: This step is necessary only if the INTERNAL_PLUGINS configuration currently exists in the ADMIN_CONFIG TABLE.

Troubleshooting

P6 Compression Server users are receiving "Socket Error #10054..." messages:

Java offers the `Socket.setSoLinger` method to control how long a socket lingers, that is, the amount of time a socket waits to close when there is still unsent data. P6 Compression Server uses this `setSoLinger` method. The value is controlled via the P6 Compression Server Administrator Application, under the **/Configurations/Custom/Primavera P6 Professional Configuration/Compression Server/SocketLingerTime** setting.

Note: See **Configuring the P6 Compression Server Administrator Application** (on page 21) for more information on the Administrator Application.

By default, the `SocketLingerTime` value is 2s (2000ms). For noisy networks, 2s might not be sufficient, resulting in the socket closing before the data is fully read. Users will then receive the following error message:

Error: Socket Error #10054 Connection reset by peer. Received data is invalid!

To avoid this error, Oracle recommends that you adjust the `SocketLingerTime` setting to a higher value and restart P6 Compression Server from the services dialog. You will need to set the value according to how noisy your network is. For example, during in-house testing, increasing the `SocketLingerTime` setting to 10s on a network with a 5% packet loss eliminated the error messages and loss of data.

Note: Since sockets tend to be open longer with higher settings in this parameter, there could be a slight loss of performance.

For more information on the `Socket.setSoLinger` method, please visit <http://mindprod.com/jgloss/socket.html>.

P6 Compression Server does not start:

You might see errors like *Error occurred during initialization of VM -- Could not reserve enough space for object heap*.

In this case, the administrator should edit `-Xms` and `-Xmx` parameters in the **setDomainEnv.cmd** file in the `\<DOMAIN_HOME>\bin` directory. See **Configuring -Xms and -Xmx Parameters** (on page 26) for more information.

Note: Oracle recommends that you use a value be no greater than 1024 kilobytes for the `-Xss` (`-Xss1024k`). The default maximum stack size used by C code is sufficient for the native implementation of the compression library.

For more information, refer the following:

- ▶ FAQ about the Java HotSpot VM:
<http://java.sun.com/docs/hotspot/PerformanceFAQ.html#22>

- ▶ FAQ ABOUT SUN ONE[tm] APPLICATION SERVER PERFORMANCE: What's a good way to size the heap?
<http://java.sun.com/docs/performance/appserver/AppServerPerfFaq.html>
- ▶ Tuning Garbage Collection with the 5.0 JavaTM Virtual Machine:
http://java.sun.com/docs/hotspot/gc5.0/gc_tuning_5.html
- ▶ Tuning Garbage Collection with the 1.4.2 JavaTM Virtual Machine:
<http://java.sun.com/docs/hotspot/gc1.4.2/>

Uninstalling the Current Version of P6 Compression Server

To uninstall the current version of P6 Compression Server:

- 1) Display the **Oracle Universal Installer Welcome** page with one of the following methods:
 - ▶ On the P6 Professional physical media or download site, browse to the the `\win\Disk1\install` directory from the location to which you extracted the server files and double-click the **setup.exe** file.
 - Or
 - ▶ Click **Start/All Programs/Oracle - OraClient 11g_home1/Oracle Installation Products/Universal Installer**.
- 2) On the **Welcome** page, click **Deinstall Products...**
- 3) In the **Inventory** dialog box, click the **Contents** tab.
- 4) On the **Contents** tab, select the P6 Compression Server option and click **Remove**.
- 5) Delete the P6 Compression Server deployed files when the current version is uninstalled:
 - a. Delete all files at `<DOMAIN_HOME>\servers\AdminServer\tmp` and `<DOMAIN_HOME>\servers\AdminServer\stage`.
 - b. Delete the P6 Compression Server folder following the same path you used when you installed P6 Compression Server in the **Installing P6 Compression Server** (on page 20) topic.

Updating the P6 Compression Server Configuration Version

During P6 Compression Server installation, if you choose an existing configuration, you will see a message requesting that you update to the latest version. Click Yes to upgrade the configuration.

To update an existing 5.0 SP1 or earlier configuration:

- 1) Run the P6 Compression Server Administrator Application. On your machine, click **Start/All Programs/Oracle - Primavera P6 Professional/Compression Server/Administrator**. Wait for the **Primavera P6 Administrator** dialog box to open.
- 2) In the **Primavera P6 Administrator** login dialog box, enter the database user name and password (*privuser* by default) and click **OK**.

- 3) In the **Primavera P6 Administrator** dialog box, click the **Configurations** tab.
- 4) On the **Configurations** tab, expand **Custom/Primavera P6 Configuration/Compression Server**.
- 5) In the **Compression Server** folder, right-click **SocketLingerTime** and select **Revert to default value**.
- 6) In the **Primavera P6 Administrator** dialog box, click **Save Changes** and close the dialog.
- 7) Restart P6 Compression Server from the command line. See **Starting the P6 Compression Server Application in WebLogic** (on page 27).

P6 Compression Server Telemetry

P6 Professional customers wanted to be able to perform the following actions with P6 Compression Server:

- ▶ Monitor overall health of P6 Compression Server.
- ▶ Monitor the health of each user's session within the server.
- ▶ Delete the selected user sessions in P6 Compression Server (administrator use only).
- ▶ Set P6 Compression Server in a standby state for administration maintenance purposes.

To meet these requests, P6 Compression Server is now deployed as a WAR file under a WebLogic server. Visit <http://host:port/compressionserver/telemetry/summary> to view basic telemetry of P6 Compression Server.

Notes:

- Where *host* is the machine name of P6 Compression Server.
 - Where *port* is the WebLogic port. (The port is 7001 by default.)
-

You can login to an advanced control page to change your user name and password. The default user name and password are *csadmin/csadmin*. The password is case sensitive.

A load balancer (specific for the user environment) receives summary page details in the same order as the summary page, with memory in KB and all durations in ms, when it requests following URL:
<http://host:port/compressionserver/telemetry/summary?textfile=true>.

Telemetry Item Descriptions

Summary page

Machine Name

The value is a string representing the P6 Compression Server host name.

Standby

The value is a Boolean Yes/No representing the standby state of P6 Compression Server.

Note: The standby state can be used in a load balancer.

Available Memory

The value represents the amount of free memory in the Java Virtual Machine that runs P6 Compression Server.

Total Memory

The value represents the total amount of memory in the Java Virtual Machine that runs P6 Compression Server.

Number of Pending Transactions

The value represents the number of pending database transactions.

Number of Sessions

The value represents the total number of client sessions in P6 Compression Server.

Number of Active Sessions

The value represents the number of client sessions that have connections involved in pending database activity.

Minimum Session Inactive Duration

The value represents the minimum duration of inactivity across all the client sessions at the moment of page loading.

Maximum Session Inactive Duration

The value represents the maximum duration of inactivity across all the client sessions at the moment of page loading.

Average Transaction Duration

The value represents the average time spent in database transactions across all the existing client sessions since the start of P6 Compression Server.

Maximum Transaction Duration

The value represents the maximum time spent in database transactions across all the existing client sessions since the start of P6 Compression Server.

Advanced Control page

Application Name

The value represents the name of the client application that uses a P6 Compression Server session.

Client Identifier

The value represents the client's HDD serial number concatenated with the client's IP address.

Database Name

The value represents the SID used by the client's database connection.

Database User Name

The value represents the user name used by the client's database connection.

Average Transaction Duration

The value represents the average time the database connection spent in a transaction since the session creation.

Minimum Transaction Duration

The value represents the minimum time the database connection spent in a transaction since the session creation.

Pending Transaction Duration

The value represents the time spent by the database connection in the pending transaction. If there is no pending transaction, this value is 0.

Pending Request Duration

The value represents the time spent by the database connection for serving the current client request. If there is no pending request, this value is 0.

Inactive Duration

The value represents the elapsed time since the end of serving the last client request.

Pending Request Data

The value represents the text of the latest request. If there is no pending request this value is an empty string.

Put P6 Compression Server in standby mode/Start P6 Compression Server

A toggle link that changes the status of Standby mode of P6 Compression Server on the Summary page.

Note: P6 Compression Server can only be started from the Windows Services dialog box.

Delete

Click to delete the selected P6 Compression Server client sessions.

Logout

Click to logout of the advanced control page.

P6 Professional Installation and Configuration

See the applicable administration guide for installation instructions.

In This Section

Configuring P6 Compression Server Database Connection Settings	37
Configuring Direct Database Connections	38

Configuring P6 Compression Server Database Connection Settings

P6 Professional is not directly connected to the database, instead, it is connected to P6 Compression Server that has a database specified for it. You can run the Database Configuration utility to configure the connection settings for P6 Compression Server. The DB Config utility for P6 Professional is run during P6 Professional installation.

To configure the connection settings for P6 Compression Server:

- 1) Run the DB Config utility. Click **Start/All Programs/Oracle - Primavera P6/P6 Professional R8.1/P6 Professional R8.1 Help and Tools/Database Configuration**.
- 2) In the **Database Configuration** dialog box:
 - a. On the **Welcome to DB Config** page, click **Next**.
 - b. On the **Select Database Alias Task** page, select to modify or create a database alias.
 - c. On the **Select or Create Alias** page:
 1. Select an alias from the **Database alias** list or enter a new database alias. For example, type PMDB_PE.
 2. Select **Primavera Compression Server** from the **Driver type** list.

Note: For a direct database connection, select Oracle or Microsoft SQL Server/SQL Express. See **Configuring Direct Database Connections** (on page 38).

3. Click **Next**.
- d. On the **Configure Compression Server Connection** page:
 1. Enter the name of the database you want to access in the **Compression Server Database Name** field.

Note: Ensure that the database you select here is configured as a Database Instance in the P6 Compression Server Administration Application.

2. Enter the IP address of the P6 Compression Server machine in the **Host Name/IP Address** field.
3. Enter the port number in the **Port** field.
4. Click **Next**.

Notes:

- P6 Compression Server listens by default on Port 80.
- Ensure that the port number equals the number you entered in the DefaultPort field of the Compression Server folder of the P6 Compression Server Administration Application. See **Reviewing and Modifying P6 Compression Server Configurations** (on page 22).
- In general, if you only use one P6 Professional database, and this was configured during the P6 Compression Server installation, you should not have any need to run the P6 Compression Server Administration Application to configure additional databases.

-
- e. On the **Enter Public Login Information** page:
 1. Enter a user name and password.
 2. Select a **Public group ID**. This field defaults to 1.
 3. Click **Next**.
 - f. On the **Validate Database Connection** page, validate your settings and click **Next**.
 - If the connection test is not successful, click **Back** and modify your settings. Test the settings again.
 - If prompted to configure Methodology Manager, click **Cancel**.
 - If the test is successful, click **Finish**.

Configuring Direct Database Connections

To configure direct database connections:

- 1) Run the DB Config utility. Click **Start/All Programs/Oracle - Primavera P6/P6 Professional R8.1/P6 Professional R8.1 Help and Tools/Database Configuration**.
- 2) In the **Database Configuration** dialog box:
 - a. On the **Welcome to DB Config** page, click **Next**.
 - b. On the **Select Database Alias Task** page, select to modify or create a database alias.
 - c. On the **Select or Create Alias** page:

1. Select an alias from the **Database alias** list or enter a new database alias. For example, type PMDB_PE.
 2. Select **Oracle** or **Microsoft SQL Server/SQL Express** from the **Driver type** list.
- d. On the **Configure Connection** page:
- If you selected **Oracle** from the **Driver type** list, enter the Oracle connection string in the field and click **Next**.
 - If you selected **Microsoft SQL Server/SQL Express** from the **Driver type** list, enter the host and database names and click **Next**.
- e. On the **Enter Public Login Information** page:
1. Enter a user name and password.
 2. Select a **Public group ID**. (This field defaults to 1.)
 3. Click **Next**.
- f. On the **Validate Database Connection** page, validate your settings and click **Next**.
- If the connection test is not successful, click **Back** and modify your settings. Test the settings again.
 - If prompted to configure Methodology Manager, click **Cancel**.
 - If the test is successful, click **Finish**.