

ORACLE[®]

PRIMAVERA

**P6 Compression Server Administrator's Guide
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Before You Begin

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Using the Administrator's 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 (only Oracle databases are supported)
- ▶ 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.

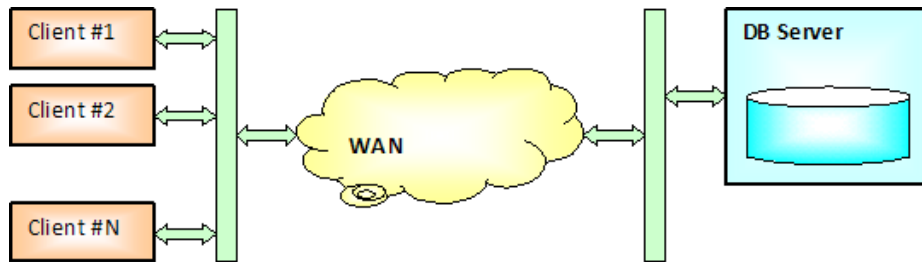


Figure 1. Current Architecture

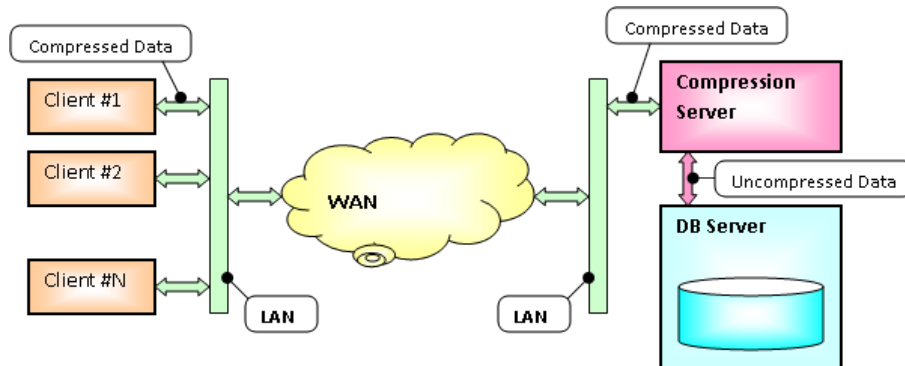


Figure 2. With P6 Compression Server

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 your Oracle database, 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). 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.

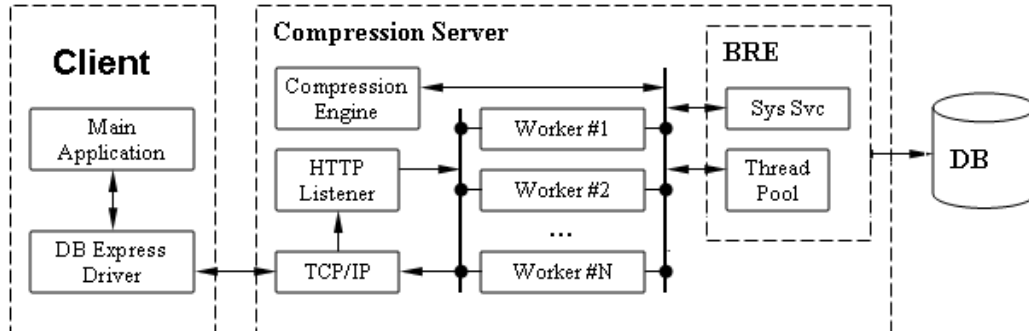


Figure 3. Architectural Detail

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

Compression Server requires the following, see the *Tested Configurations* document for the supported versions:

- ▶ Windows server
- ▶ Oracle database client (32-bit)
- ▶ Java SDK (32-bit)
- ▶ Weblogic application server
- ▶ 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 is compatible with only the same version of P6 Professional and can be connected to only one P6 database type. A single instance of P6 Compression Server can connect to a P6 Professional database or to a P6 Professional database, but not to both.
- ▶ 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, Dutch, English, French, German, Italian, Japanese, Korean, 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 23).

Client and Server Requirements

After determining your P6 Professional implementation plan, ensure that your hardware and software can support it.

For the full list of system requirements, versions, and tested configurations, see the *Tested Configurations* document.

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 Oracle database. 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

- 1) Install the supported Java SDK on the P6 Compression Server machine.
- 2) Install Oracle 11g or later on the P6 Compression Server machine.
- 3) Create a Weblogic domain for P6 Compression Server.
- 4) Install P6 Compression Server on the Windows server machine that you have identified.
- 5) Setup the P6 Compression Server configuration database during the installation process or once it completes.

The P6 Compression Server configuration database is a repository of database connection settings normally saved in a special table in your P6 Professional database. P6 Compression Server works with multiple databases provided that each database is the same database type (P6 Professional or P6 Professional). For example, after you setup the first P6 Compression Server configuration database, you can duplicate it for other databases provided that each database type is the same as the first.

The first database configured during P6 Compression Server installation contains the P6 Compression Server configuration.

- 6) Modify the startWebLogic.cmd file.
- 7) Deploy WebLogic on your P6 Compression Server.

Phase IV: Configure Clients

- 1) 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 (libjnzip2.dll and DbExpPrC.dll) and all the files needed to connect to P6 Compression Server.

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

P6 Compression Server Installation and Configuration

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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 <release_level>/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\jdk<version_number>) where you installed the Primavera P6 supported JDK as mentioned in the ***Installation Process Phases*** (on page 8) 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 **Tools\Compression Server\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.
- 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\11.2.0\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 pubuser user name and pubuser password settings.
 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 20) 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 24) 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 privuser user name and privuser password 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 24) 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 referred to by its SID name (by default) and IP address or by its Service Name and IP address, depending on whether you choose the Service Name or SID option when installing the P6 Compression Server.

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 privuser user name and privuser password 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 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. 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.

IpBufferSize [bytes]	64156	4096	131072	The socket send buffer size for P6 Professional 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.
TransactionMaxInactive Interval [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=COMPMSVR

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 the setDomainEnv.cmd File

To configure the setDomainEnv.cmd file:

- 1) In **My Computer**, browse to \<DOMAIN_HOME>\bin and open the **setDomainEnv.cmd** file in a text editor.
- 2) Enter classpath information.
 - a. Locate the text:
set LONG_DOMAIN_HOME=<DOMAIN_HOME>
After this text, enter the following on a new line:
Set EXT_PRE_CLASSPATH=<ORACLE-HOME>\jdbc\lib\ojdbc6.jar
 - b. Click **Save**.
- 3) Configure the -Xms and -Xmx parameters.
 - 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.

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 11) 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 18) 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/Primavera 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.

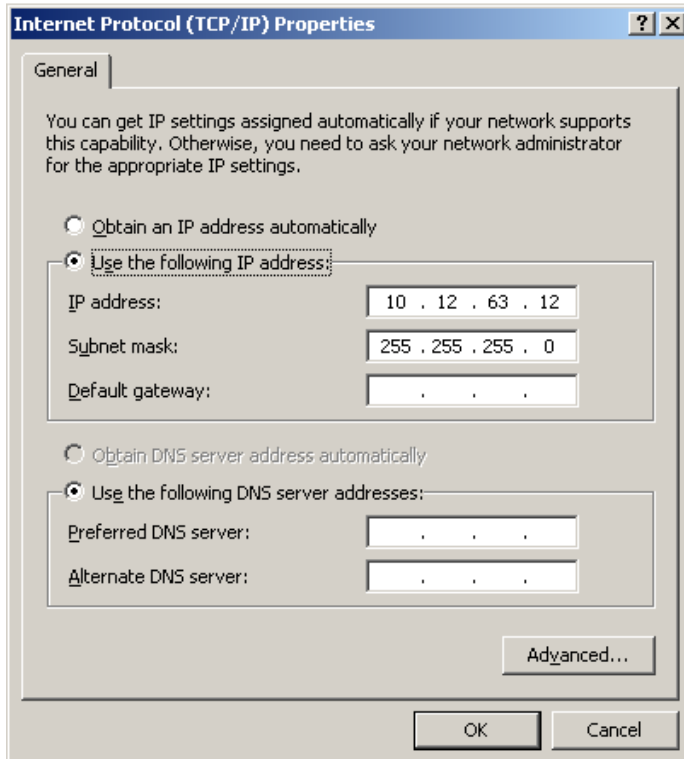
Note: One NIC might be sufficient for smaller deployments or databases.

To avoid unwanted routing, you can configure the NICs you are using for the P6 Professional 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 P6 Professional 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 IP_ADDRESS:port_no is the database server's public NIC IP address and port number, and SID is the SID of the database server.

- 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 13) 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 the setDomainEnv.cmd File* (on page 17) 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://www.oracle.com/technetwork/java/hotspotfaq-138619.html>
- ▶ 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://www.oracle.com/technetwork/java/gc-tuning-5-138395.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 **Tools\Compression Server\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 12) topic.

Updating the P6 Compression Server Configuration Version

AXBG4fPG

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/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 privuser user name and privuser password 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 19).

P6 Compression Server Telemetry

P6 Professional users 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 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.)
-

To change the telemetry user name and password, login to Primavera P6 Administrator using database privuser user name and privuser password. Then select Compression Server Configuration (default Primavera P6 Configuration). Expand to the Compression Server node. Then change the TelemetryUserName user name and the TelemetryPassword password, as applicable. Oracle strongly recommends that you change both the user name and password. The default user name and password are *csadmin/csadmin*. The password is case sensitive. The user name and password are used to login to the advanced control page.

To see a text file version of the summary page details for the load balancer (specific for the user environment), use the following URL:
<http://host:port/compressionserver/telemetry/summary?textfile=true>. The summary page presents details in the same order as the summary page, with memory in KB and all durations in ms.

Telemetry Item Descriptions

Summary page (This page appears when you enter this URL:
<http://host:port/compressionserver/telemetry/summary>.)

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 (This page appears when you login using telemetry credentials.)

Application Name

The value represents the name of the client application (P6 Professional) 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.

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Configuring P6 Compression Server Database Connection Settings

When using P6 Compression Server, P6 Professional is not directly connected to the database; instead, it is connected to the 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, or it can be run manually at a later time.

To configure the connection settings for P6 Compression Server:

- 1) Run the DB Config utility. Click **Start/All Programs/Oracle - Primavera P6/P6 Professional <release_level>/P6 Professional <release_level> Help & 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_CS.
 2. Select **Primavera Compression Server** from the **Driver type** list.
 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 14).
-
- 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 the test is successful, click **Finish**.

For More Information

Where to Get Documentation

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

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

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

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

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

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


Title	Description
<i>What's New in P6 Professional</i>	<p>Highlights the new and enhanced features included in this release.</p> <p>You can also use the <i>P6 Professional Cumulative Feature Overview Tool</i> to identify the features that have been added since a specific release level.</p> <p>All users should read this guide.</p>
<i>Planning Your P6 Professional Implementation</i>	<p>Explains planning your implementation and provides an installation process overview, frequently asked questions, client and server requirements, and security information.</p> <p>The P6 Professional network administrator/database administrator and P6 administrator should read this guide.</p>
<i>P6 Professional Installation and Configuration Guide</i>	<p>Explains how to install and configure P6 Professional using the P6 Professional Installation and Configuration wizards.</p> <p>The P6 Professional network administrator/database administrator and P6 administrator should read this guide.</p>
<i>P6 Professional Installation and Manual Configuration Guide</i>	<p>Explains how to install and configure the P6 Professional using the P6 Professional Installation wizards, and how to manually configure individual components.</p> <p>The P6 Professional network administrator/database administrator and P6 administrator should read this guide.</p>
<i>P6 Professional Post Installation Administrator's Guide</i>	<p>Describes how to get started using P6 Professional applications after you have installed and configured them. Complete the tasks in this guide before letting your users work with these applications. These tasks include information about configuring your users and security settings and privileges, configuring your Primavera P6 Administrator settings, and finalizing your P6 Integration API and P6 EPPM Web Services settings.</p> <p>The P6 Professional network administrator/database administrator and P6 administrator should read this guide.</p>
<i>Tested Configurations</i>	<p>Lists the configurations that have been tested and verified to work with P6 Professional.</p> <p>The network administrator/database administrator and P6 Professional administrator should read this document.</p>

Title	Description
<i>P6 User's Guide</i>	<p>Explains how to plan, set up, and manage projects in a multiuser environment. If you are new to P6, start with this guide to learn how to use the software effectively to plan and manage projects. When you need more detail, refer to the P6 Help.</p> <p>The program manager, project manager, resource/cost manager, team leader, and all P6 users should read this guide.</p>
<i>P6 Help</i>	<p>Explains how to use P6 to administer, plan, set up, and manage projects, portfolios, workflows, timesheets, documents, and reports in a multiuser environment. Describes how to analyze performance and ROI, and analyze budgets. If you are new to P6, use this Help to learn how to use the software effectively.</p> <p>The operations executive, P6 Professional and P6 administrator, program manager, project manager, resource/cost manager, team leader, and all users should read this Help.</p>
<i>P6 Data Dictionary</i>	<p>Defines fields used in P6.</p> <p>All P6 users should refer to this guide if they need a field definition.</p>
<i>P6 Team Member Web Help</i>	<p>Describes how to use P6 Team Member Web to provide status on activities.</p> <p>P6 Team Member Web users should read this Help.</p>
<i>P6 EPPM Web Services Programmer's Guide</i>	<p>Describes how to invoke, use, and troubleshoot the available services and operations within supported environments. When you need specific information about the services and operations available, refer to the P6 EPPM Web Services Reference Manual.</p> <p>Anyone who wants to develop applications that interact with P6 should read this guide.</p>
<i>P6 EPPM Web Services Reference Manual</i>	<p>Describes all services and operations available in P6 EPPM Web Services.</p> <p>Anyone who wants to develop applications that interact with P6 should read this guide.</p>

Title	Description
<i>P3 to P6 Professional Migration Guide</i>	<p>Provides best practices for migrating your P3 data to P6 Professional and details how P3 functionality maps to P6 Professional functionality.</p> <p>All administrators should read this guide if your organization is moving from P3 to P6.</p>

Distributing Information to the Team

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

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

Where to Get Training

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

<http://education.oracle.com>

Oracle Learning Library

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

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

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

Where to Get Support

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

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

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

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

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

Access to Oracle Support

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

Using Primavera's Support Resource Centers

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

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

PICs also provide access to:

- ▶ **Communities** which are moderated by Oracle providing a place for collaboration among industry peers to share best practices.
- ▶ **News** from our development and strategy groups.
- ▶ **Education** via a list of available Primavera product trainings through Oracle University. The Oracle Advisor Webcast program brings interactive expertise straight to the desktop using Oracle Web Conferencing technology. This capability brings you and Oracle experts together to access information about support services, products, technologies, best practices, and more.

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