

Oracle[®] Primavera[®] P6[™]
Compression Server
Administration Guide

Version 7.0

Copyright © 2005, 2009, Oracle and/or its affiliates.

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

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

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

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

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

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

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

To view the P6 Commercial Notices and Disclosures for Documentation, go to the \Documentation\

Table of Contents

TABLE OF CONTENTS	3
PREFACE	4
USING THE ADMINISTRATION GUIDE.....	4
WHERE TO GET SUPPORT	4
BEFORE YOU BEGIN	5
WHAT IS THE PRIMAVERA P6 COMPRESSION SERVER	5
OVERVIEW OF THE COMPRESSION SERVER ARCHITECTURE	6
COMPRESSION SERVER INSTALLATION REQUIREMENTS	7
BEFORE YOU BEGIN THE INSTALLATION	8
UNINSTALLING PRIMAVERA COMPRESSION SERVER SERVICE.....	8
THE INSTALLATION PROCESS PHASES.....	9
Phase I: Plan Your Installation.....	9
Phase II: Set Up Your Database Servers Using P6	9
Phase III: Configure the Compression Server	9
Phase IV: Configure Clients.....	9
SERVER INSTALLATION AND CONFIGURATION	10
INSTALLING THE COMPRESSION SERVER.....	10
CONFIGURING JBOSS SERVER CONNECTIONS SETTINGS.....	17
STARTING AND STOPPING THE COMPRESSION SERVER.....	19
CHANGING COMPRESSION SERVER DATABASE CONNECTION SETTINGS	19
NETWORK SETTINGS FOR COMPRESSION SERVER.....	20
TROUBLESHOOTING.....	23
USING THE COMPRESSION SERVER ADMINISTRATION APPLICATION.....	25
REVIEWING AND MODIFYING COMPRESSION SERVER CONFIGURATIONS	28
UNINSTALLING THE CURRENT VERSION OF PRIMAVERA P6 COMPRESSION SERVER	30
UPDATING THE VERSION OF THE COMPRESSION SERVER CONFIGURATION.....	32
COMPRESSION SERVER TELEMETRICS.....	33
Telemetry item descriptions	33
CLIENT INSTALLATION AND CONFIGURATION	36
INSTALLING CLIENT APPLICATIONS.....	36
CHANGING COMPRESSION SERVER CONNECTION SETTINGS	36
CONFIGURING DATABASE CONNECTIONS DIRECTLY AGAINST ORACLE.....	40

Preface

Using the Administration Guide

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

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

- Setting up the database connections for the compression server
- Configuring databases
- Configuring compression server settings

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

Where to Get Support

For instructions on how to submit a service request for technical support for your products, go to <http://www.oracle.com/primavera/support.html>. This page provides the latest information for contacting support and the support renewals process.

Before You Begin

What is the Primavera P6 Compression Server

The Primavera P6 Compression Server is a layer between the database server and the Project Management module that compresses data before sending 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 the compression server fits into the Primavera P6 architecture. In Figure 1, clients 1 to N interact with the database server over a WAN. In Figure 2, with a compression server, the clients still send and receive data over the WAN, but the data from the database server is compressed on the compression server, and then sent across the WAN to the clients.

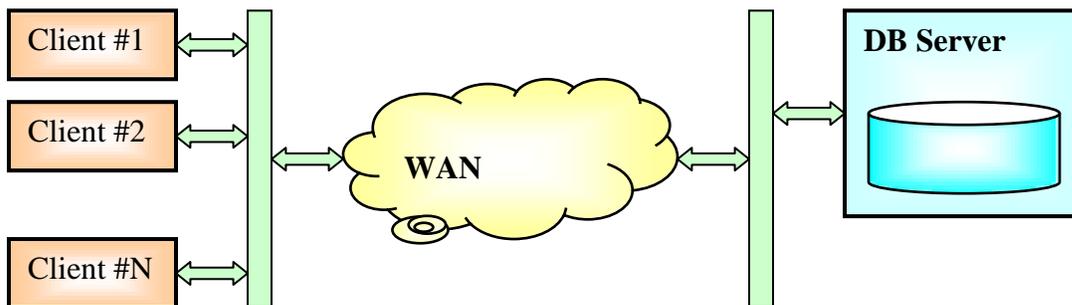


Figure 1. Current Architecture

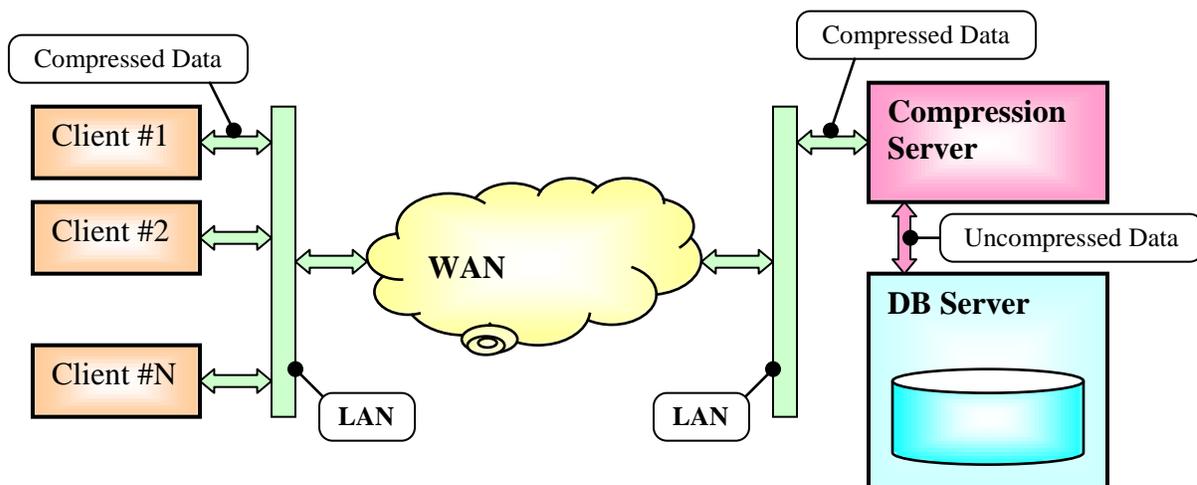


Figure 2. With Compression Server

Overview of the Compression Server Architecture

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

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

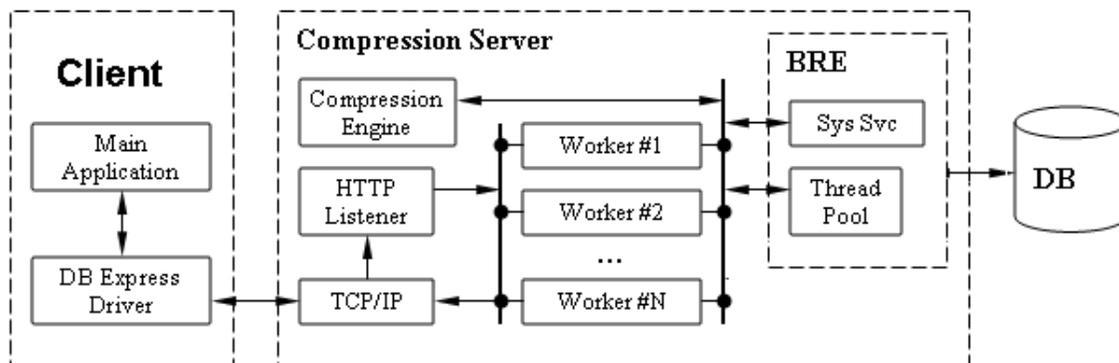


Figure 3. Architectural Detail

Compression Server Installation Requirements

- Windows 2003 Server Service Pack 2 or Windows 2008 Server.
- Oracle 11g client (32-bit) on the compression server machine.
- 32-bit Java SE Development Kit (JDK) JDK 6 Update 14 (JDK 1.6.0_14) on the compression server machine. This version is available online at <http://java.sun.com>.
- Download JBoss 5.0.1 (jboss-5.0.1.GA-jdk6.zip). This version is available online at <http://jboss.org/jbossas/downloads>.
- Minimum 3GB RAM and 2 GHz or more processor (multi-processor recommended) on compression server machine is recommended.
- The databases should already be installed using the database configuration for the P6 Project Management module.
- Install the Primavera P6 DB Express driver on the client machines using the Project Management module setup.
- Use the Database Configuration utility to configure the Project Management module to connect to the compression server using HTTP.
- Only the Project Management module version 5.0 SP3 or later is compatible with the Compression Server.
- Only English is supported as the operating system locale and input language for the compression server; using other languages may cause errors. However, for the Project Management module clients that connect to the compression server, the following operating system locales and input languages are supported: English, French, German, Spanish, Japanese, Russian, Simplified Chinese, and Traditional Chinese.

Before You Begin the Installation

The P6 Compression Server requires you to completely uninstall any previous version of the Compression Server using Add/Remove Programs (Settings, Control Panel).

Uninstalling Primavera Compression Server Service

If Compression Server 5.0 was installed manually as a service:

1. Open the Windows Services applet and find the Primavera Compression Server service.
2. Stop the service.
3. Open a DOS command prompt, and then navigate to the directory where the Compression Server is installed.
4. Next, at the DOS command prompt, type the following command to uninstall the service: **cssvc.exe /uninstall**
5. Once the service is uninstalled, the message “Service uninstalled successfully” is displayed. Click OK to close the information message box.
6. Delete the cssvc.exe file.
7. Uninstall the Compression Server using Add/Remove Programs (Settings, Control Panel).

If Compression Server 5.0 was not installed as a service, or 5.0 SP1 or later is installed:

You must uninstall the Compression Server using Add/Remove Programs (Settings, Control Panel).

The Installation Process Phases

Phase I: Plan Your Installation

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

Phase II: Set Up Your Database Servers Using P6

(Use the P6 Administrator's Guide for this phase)

The compression server is compatible with the Project Management module version 5.0 Service Pack 3 or later. We recommend that you setup your database servers using the P6 setup, or use a copy of a database already configured to work with P6.

Phase III: Configure the Compression Server

Install the Oracle 11g client (32-bit) on the compression server machine. Install jdk-6u14-windows-i586.exe (JDK 1.6.0_14) on the compression server machine. Unzip jboss-5.0.1.GA-jdk6.zip on your compression server.

Install the 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 Compression Server configuration database. The Compression Server configuration database is a repository of database connection settings normally saved in a special table in your Project Management database. You can then configure compression server to run against multiple databases.

Phase IV: Configure Clients

1. Install the Project Management module on a client workstation. During installation, you can configure a connection to your regular Oracle database. The Project Management module setup installs the necessary compression server client drivers (DbExpprc.dll and libjnbzip2.dll) into your System32 folder. This will also install the necessary entries into the Dbxconnections.ini and Dbxdrivers.ini files.
2. Use client DBConfig to setup a connection through the compression server.

Server Installation and Configuration

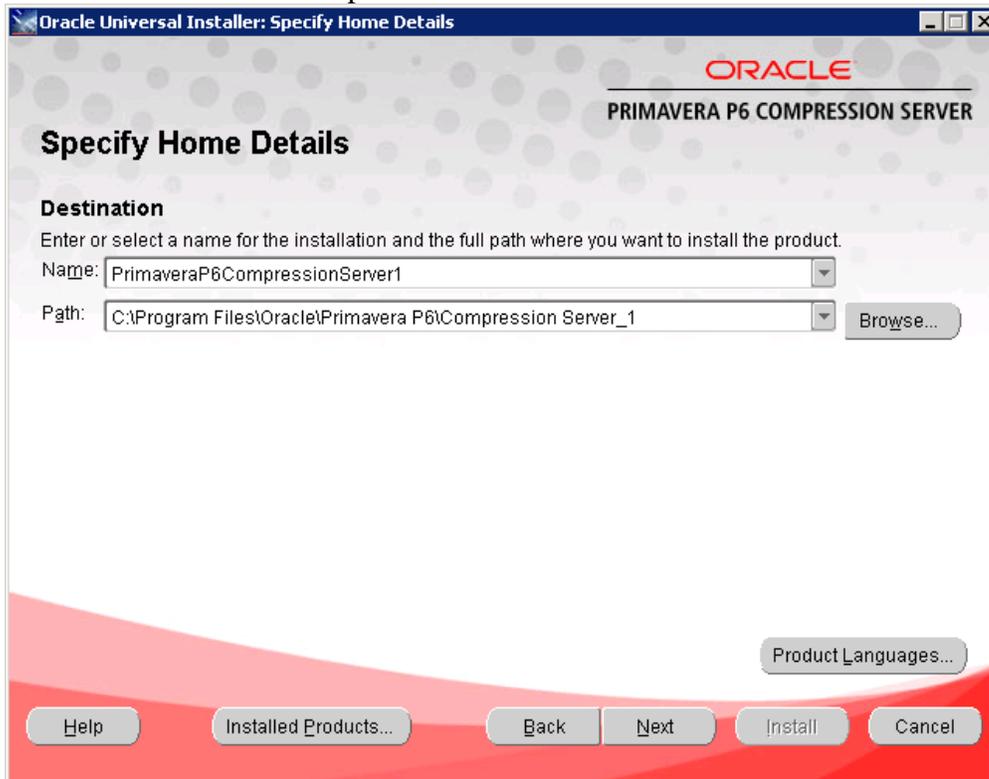
Installing the Compression Server

- On the P6 physical media or download site, browse to the \P6_70_Tools\Compression Server\disk1\install directory and double-click the setup.exe file to begin the installation.

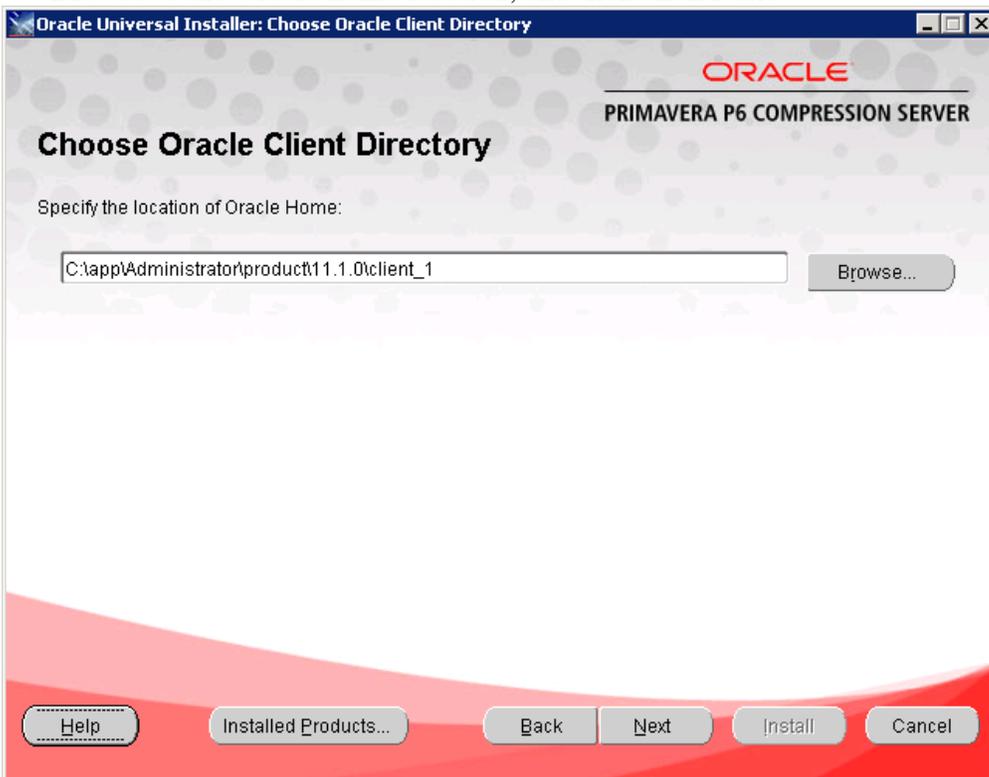
 Due to the global nature of the Oracle Universal Installer (OUI), the OUI online help is not applicable for installing or uninstalling the Compression Server or for references to P6 documentation. Instead, refer to this guide for instructions to install and uninstall the Compression Server.



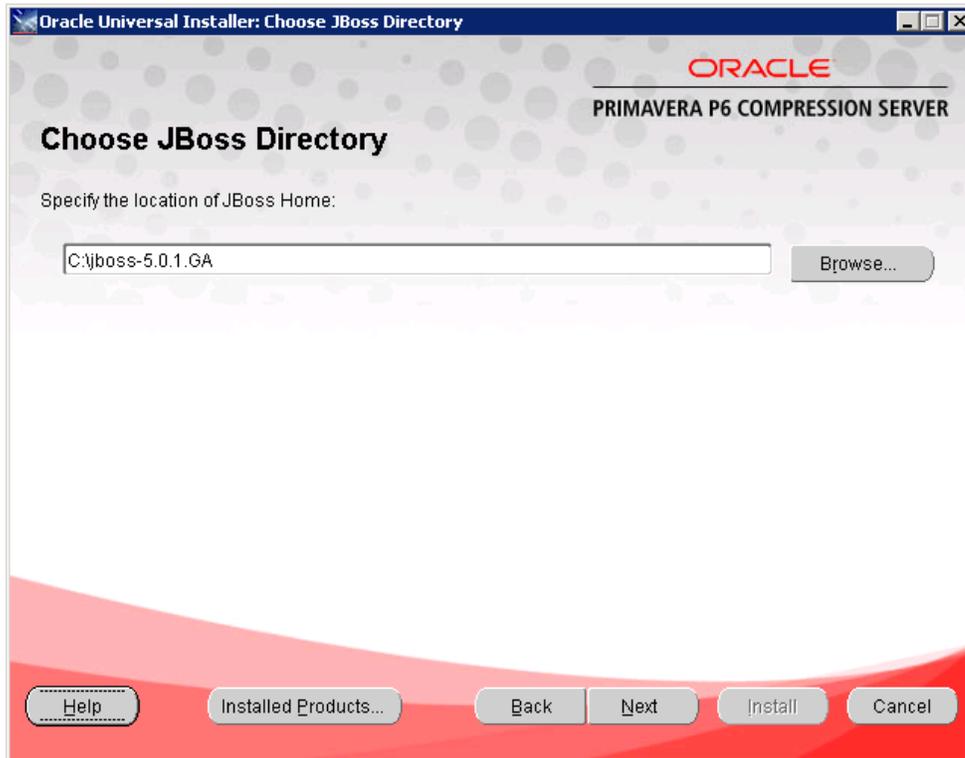
- Enter a name for the Compression Server and browse to the directory where you want to install the Compression Server. Click Next.



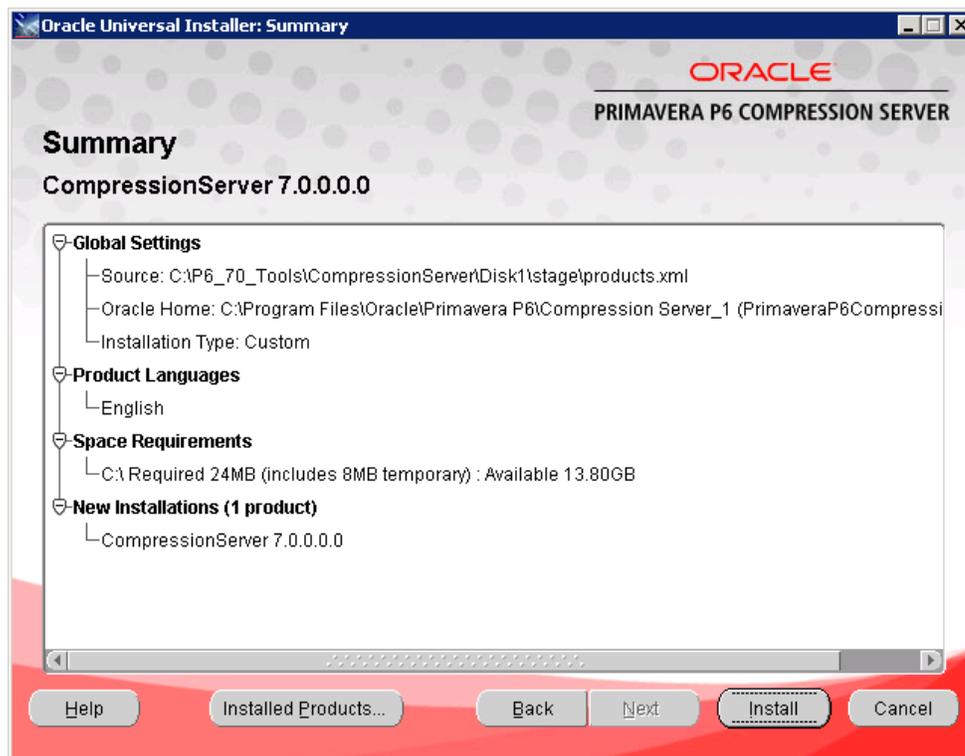
- Browse to the Oracle home location, and then click Next.



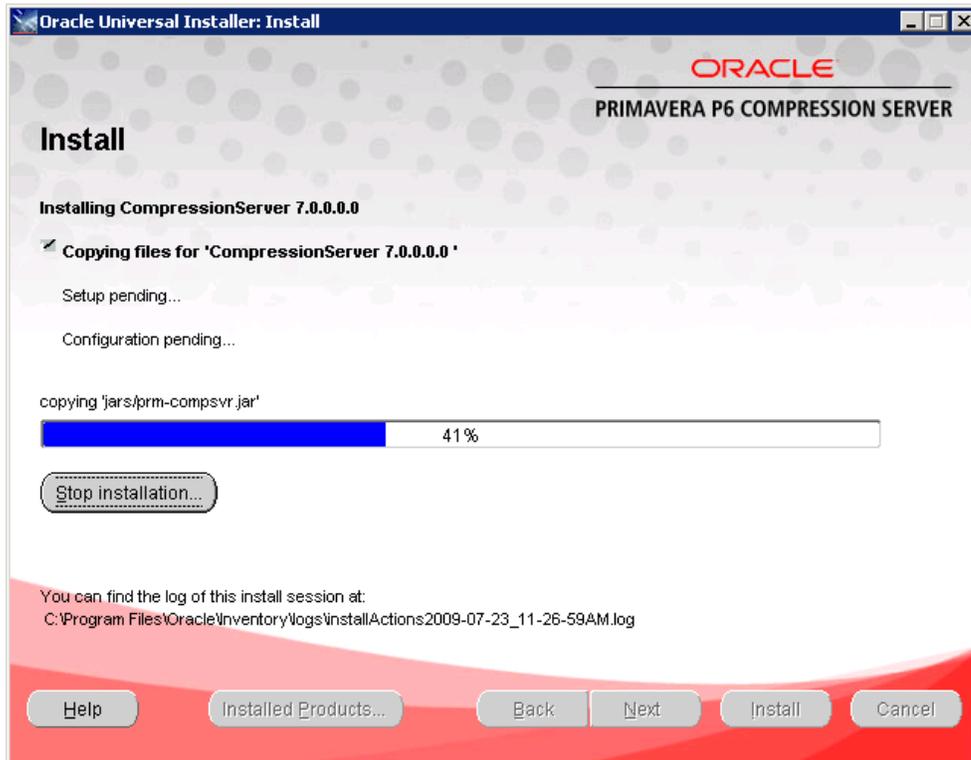
- Browse to the location of the JBoss 5.0.1 server, and then click Next.



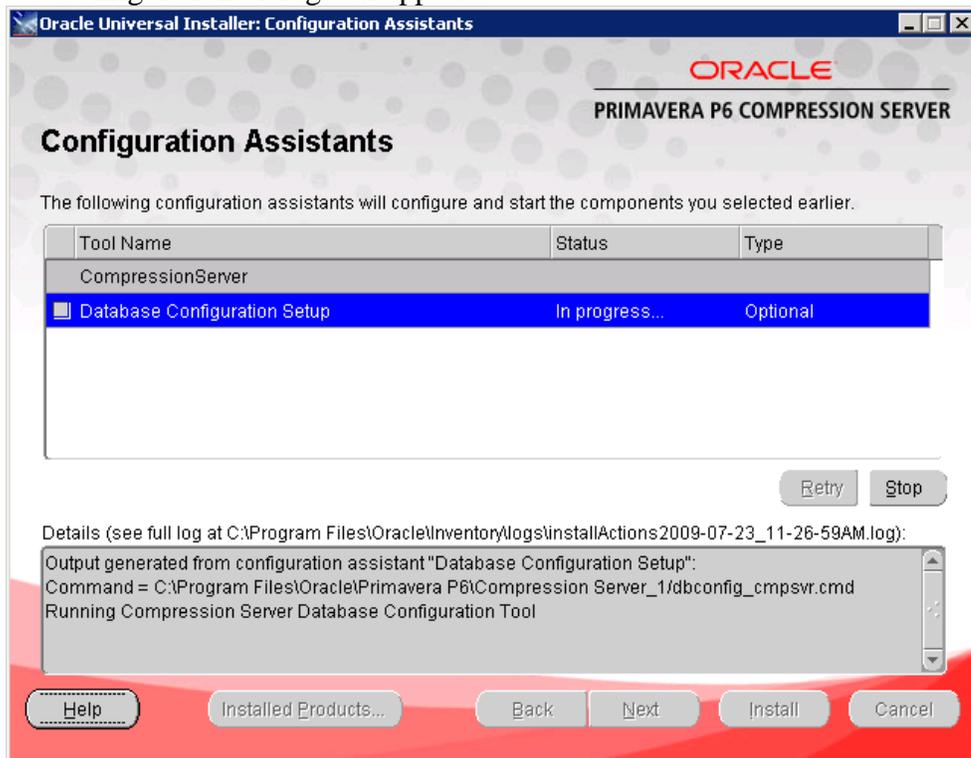
- Review the install location and then click Install to begin the installation.



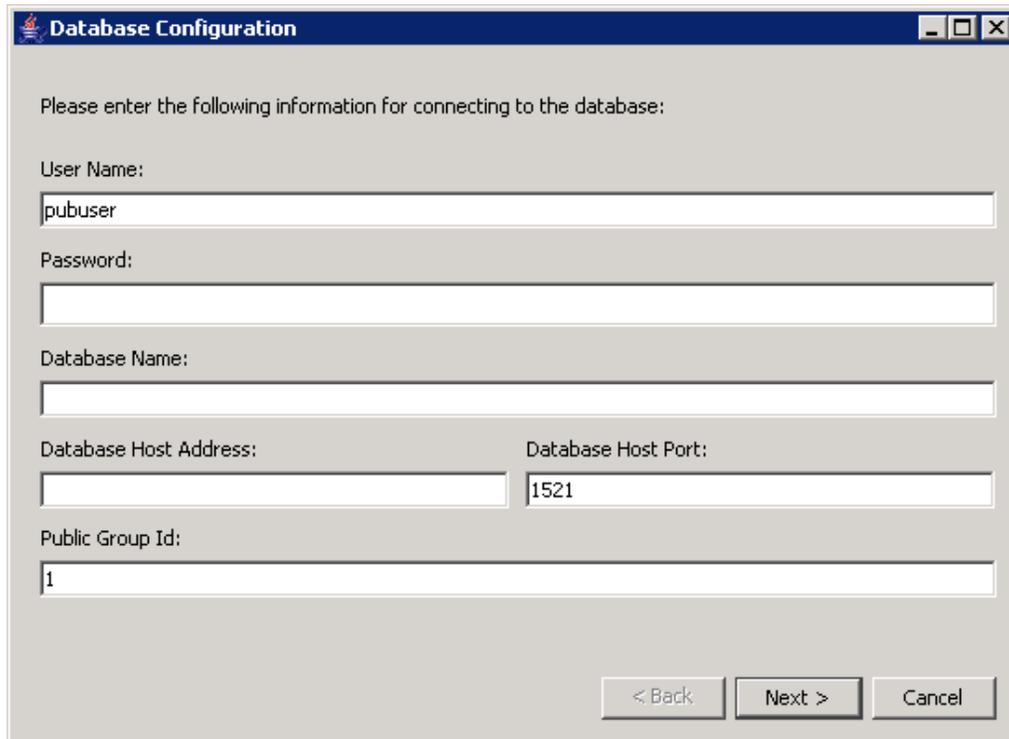
- The install progress dialog box appears.



- The Configuration Assistants dialog box appears, and then the first Database Configuration dialog box appears.



- Setup your database username and password settings. Pubuser is the default username and password. Enter the Oracle Connection String / TNS entry (Alias), Oracle Host IP address, Oracle Host port and Public Group ID. Choose a database with a valid P6 schema. If the Database Host Address pertains to a compression sever dedicated connection, then make sure you review and do the steps in the subsection “Network Settings for Compression Server” under “Changing Compression Server Database Connection Settings” later in this guide.

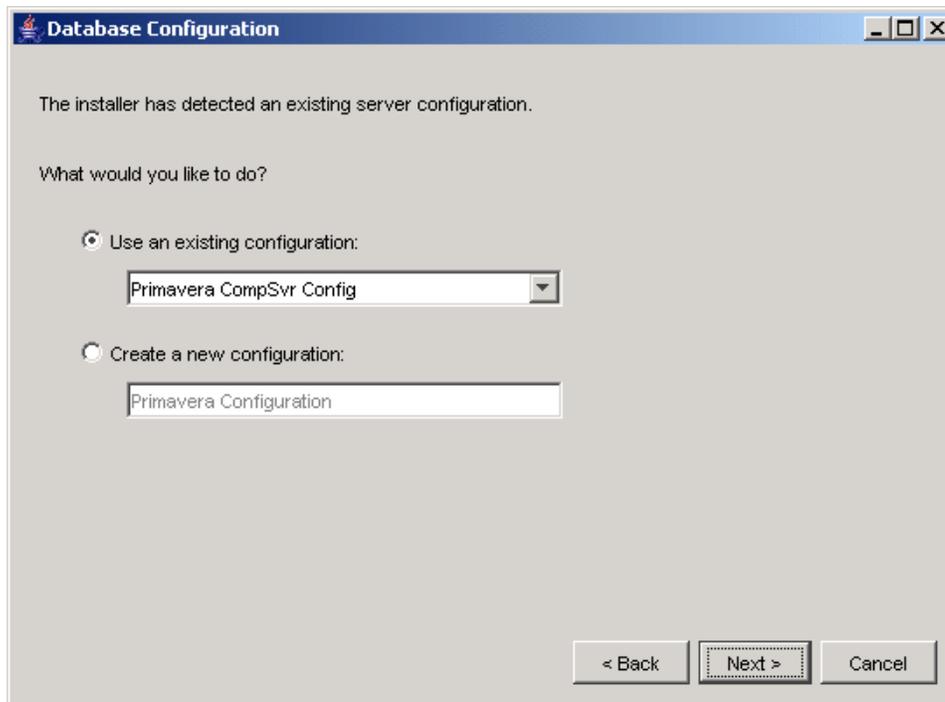


The screenshot shows a window titled "Database Configuration" with a standard Windows-style title bar. The main content area contains the following fields and labels:

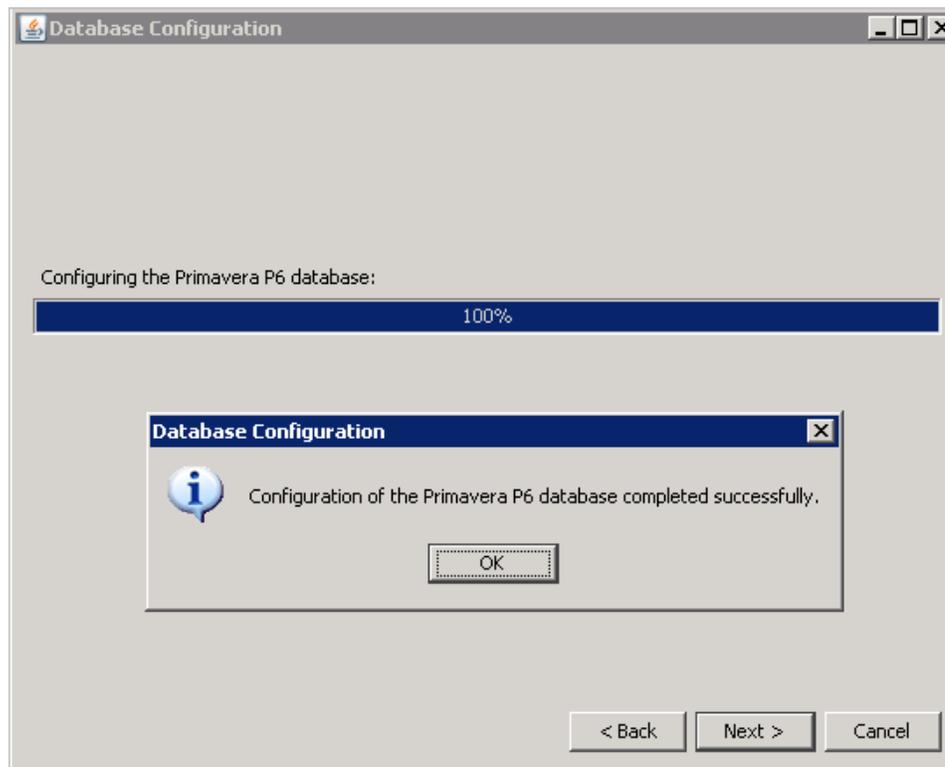
- Please enter the following information for connecting to the database:**
- User Name:** A text box containing "pubuser".
- Password:** An empty text box.
- Database Name:** An empty text box.
- Database Host Address:** An empty text box.
- Database Host Port:** A text box containing "1521".
- Public Group Id:** A text box containing "1".

At the bottom right, there are three buttons: "< Back", "Next >", and "Cancel".

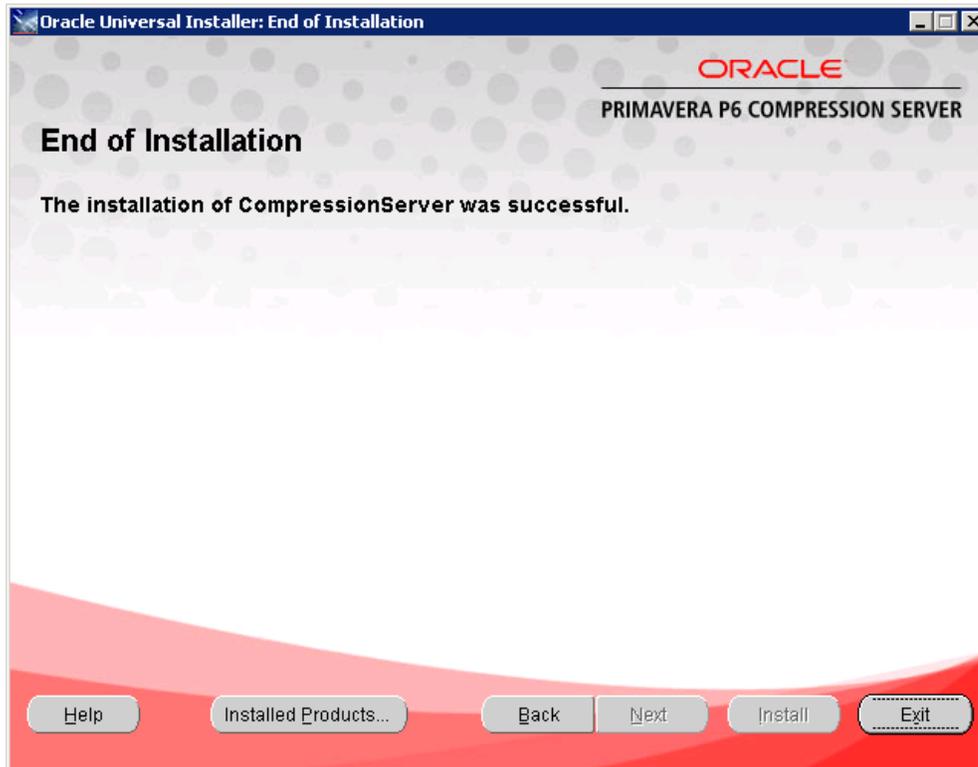
- After the initial installation, the Database Configuration tool shows an existing configuration. You may choose the Create a New Configuration option to type an appropriate name for the new configuration. Then click Next. If there is no configuration information in the database you will not see the following dialog box during the initial setup. In this case a default configuration will be saved to the database.



- Click OK.



- Click Exit.



Configuring JBoss Server Connections Settings

Proceed as follows to edit the run.bat file in the jboss-5.0.1.GA bin folder:

1. Locate the following text:

```
set JBOSS_CLASSPATH=%RUN_CLASSPATH%
```

Set the JBOSS_CLASSPATH path for the ojdbc5.jar available at your oracle jdbc\lib folder, such as C:\app\Administrator\product\11.1.0\client_1\jdbc\lib, by adding the following text:

```
C:\app\Administrator\product\11.1.0\client_1\jdbc\lib\ojdbc5.jar
```

So the whole string should be as follows:

```
set JBOSS_CLASSPATH=%RUN_CLASSPATH%;C:\app\Administrator\product\11.1.0\client_1\jdbc\lib\ojdbc5.jar
```

2. Locate the following text:

```
set JAVA_OPTS=%JAVA_OPTS% -Dsun.rmi.dgc.client.gcInterval=3600000 -Dsun.rmi.dgc.server.gcInterval=3600000
```

Set the compression server Home settings by adding the following sample text to the above text:

```
"-Dprimavera.bootstrap.home=C:\Program Files\Oracle\Primavera P6\Compression Server_1" -Dadmin.type=COMPSVR
```

 *The path you type following -Dprimavera.bootstrap.home=, above, must match the path you selected for the Path field in the Specify Home Details dialog box, earlier in this guide. For the sample text shown here, it is C:\Program Files\Oracle\Primavera P6\Compression Server_1.*

So the whole string should be as follows:

```
set JAVA_OPTS=%JAVA_OPTS% -Dsun.rmi.dgc.client.gcInterval=3600000 -Dsun.rmi.dgc.server.gcInterval=3600000 "-Dprimavera.bootstrap.home=C:\ProgramFiles\Oracle\Primavera P6\Compression Server_1" -Dadmin.type=COMPSVR
```

3. Locate the following text:

```
set JAVA_OPTS=%JAVA_OPTS% -Xms128m -Xmx512m -
XX:MaxPermSize=256m
```

Change the above string to set the Java memory as follows:

```
set JAVA_OPTS=%JAVA_OPTS% -Xms1200m -Xmx1200m -
XX:MaxPermSize=256m
```

4. Proceed as follows from Windows Explorer to set the JAVA_HOME parameter in the system environmental variable:
 - a. Right-click My Computer, and then click Properties, Advanced tab.
 - b. Click Environment Variables.
 - c. Under System variables, click New.
 - d. In the New System Variables dialog box, type the appropriate data in the Variable name and Variable value fields. For example, type JAVA_HOME in the Variable name field, and type C:\Program Files\Java\jdk1.6.0_14 in the Variable value field.
 - e. Click OK as necessary to close the dialog boxes.

Starting and Stopping the Compression Server

Starting the Compression Server:

1. From the command line, execute the run.bat file from the bin folder by typing
run.bat -b 0.0.0.0 -c web
2. Proceed as follows to verify the Compression Server is running:
 - a. From the command line, type netstat -a
 - b. Observe the resulting display. If you see the Compression Server port that was set during its configuration, then the Compression Server is running.

Stopping the Compression Server:

From the command line, press Ctrl+C to stop the JBoss server.

Changing Compression Server Database Connection Settings

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

Network Settings for Compression Server

You can configure the network settings for the compression server and database server to function more efficiently in a multi-user setting. The compression server needs to communicate with the Project Management (PM) clients and the database server concurrently, with as little network impediments as possible. For example, if the 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, we suggest using at least two NICs for the compression server. One NIC should be used for the data transfer with PM clients and another NIC for the communication with the database server.

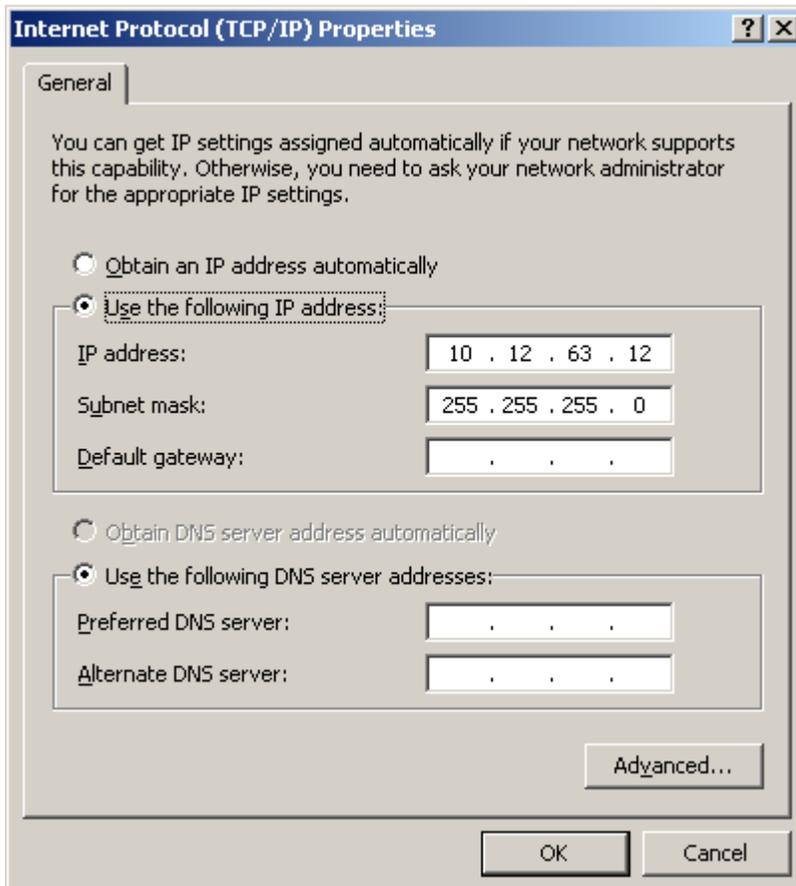
 *One NIC may be sufficient for smaller deployments or databases.*

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 example below shows one possible way to configure the network for the compression server. All configurations must meet the following two requirements:

1. One NIC should serve data transferred between the Compression Server and PM clients. For example, you can use an IP address that is accessible to every one in the corporate network of the organization.
2. The second NIC should serve data transferred between the 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 the Compression Server and the Database server. To achieve this, we recommend using an IP address with a subnet not visible in the corporate network. In the example below, changing the IP address to 10.12.63.XX would make the second NIC visible only for the subnet 63.



We also recommend that the DB Server machine uses a dedicated NIC for the 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.

 *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 the 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 the compression server and the database.*

If the DB Server machine uses a dedicated NIC for the compression server connection, the applications that need to connect directly to the database may have to use another NIC. In order to inform these applications about the fact that the parameters of the compression server connection to Oracle can not be used for direct connection, you have to add a new entry in the ADMIN_CONFIG table of the configuration database.

 *The following steps are required only if your database server is configured to support more than one network interface card (NIC) and uses an IP address that is not public.*

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;
```

Note that the 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. Next, run the following SQL command to delete the existing INTERNAL_PLUGINS configuration from the ADMIN_CONFIG TABLE. This step is necessary only if the INTERNAL_PLUGINS configuration currently exists in the ADMIN_CONFIG TABLE:

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

Troubleshooting

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. Compression Server uses this `setSoLinger` method. The value is controlled via the Compression Server Administrator application, under the `\Configurations\Custom\Primavera P6 Configuration\ Compression Server\SocketLingerTime` setting.

 *For more information on the Administrator application, see page 25.*

By default, the `SocketLingerTime` value is 2s (2000ms). For noisy networks, 2s may 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, we recommend that you adjust the `SocketLingerTime` setting to a higher value and restart the 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.

 *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>.

Compression server does not start:

You may 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 `run.bat` file located in the `jboss-5.0.1.GA bin` folder. For details how to do this, see “Configuring JBoss Server Connections,” earlier in this guide.

 *We recommend a value 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

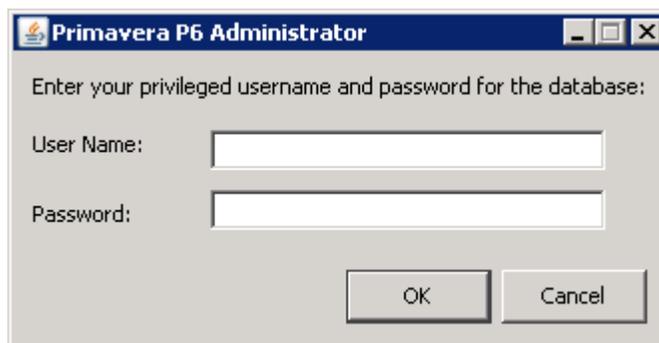
http://java.sun.com/docs/hotspot/gc5.0/gc_tuning_5.html

Tuning Garbage Collection with the 1.4.2 JavaTM Virtual Machine

<http://java.sun.com/docs/hotspot/gc1.4.2/>

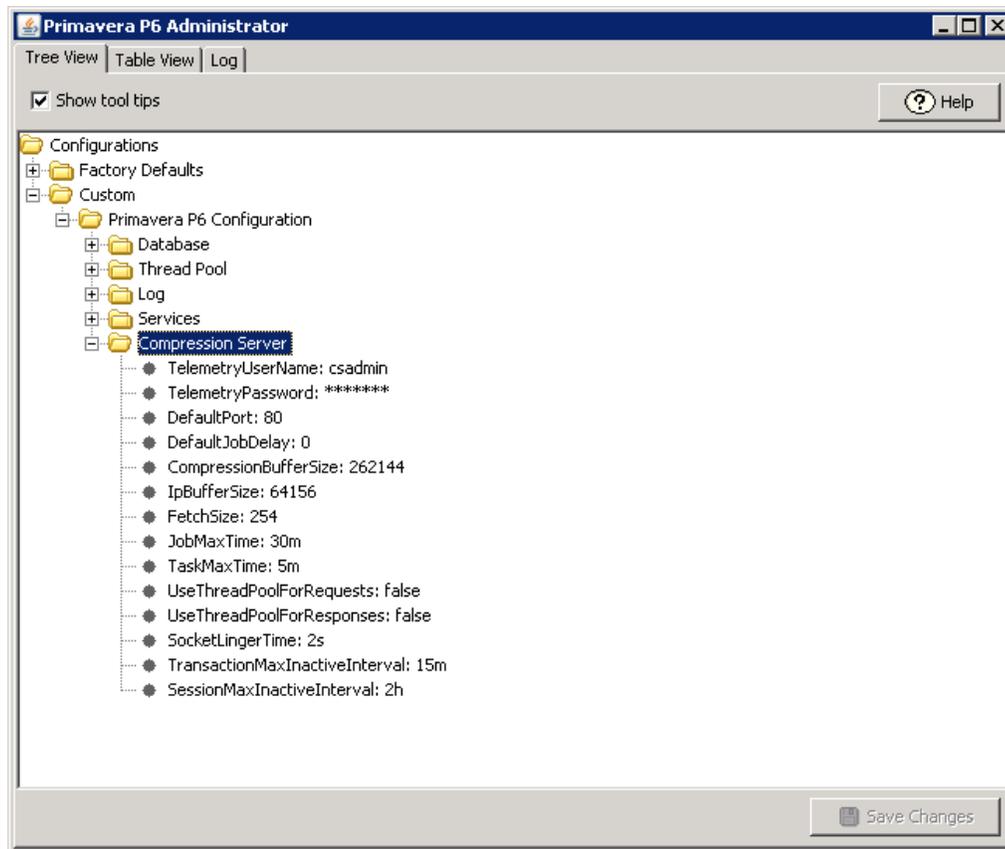
Using the Compression Server Administration Application

- As the system administrator, you can use the Compression Server Administrator application to review, modify, add, and delete Compression Server configurations. Primavera P6 configurations are stored in the Compression Server database specified during installation. These configurations contain all of the settings used to run the Compression Server.
- Only administrators should use the Compression Server Administrator application to modify configuration settings.
- Click Start, All Programs, Oracle - Primavera P6, Compression Server, Administrator to run the Compression Server Administrator application.
- Type the database User Name and Password (privuser by default) and click OK.



- Select the correct configuration that was chosen while installing the Compression Server, for example, .\Configurations\Custom\Primavera CompSvr Config.
- To upgrade the selected configuration to the latest version, right-click and choose Update to latest version.

Note: We strongly recommend that you create a new configuration when you install the Primavera P6 Compression Server. However, if you choose to upgrade an existing 5.0 SP1 or earlier configuration, refer to “Updating the Version of the Compression Server Configuration” later in this guide for additional required steps.

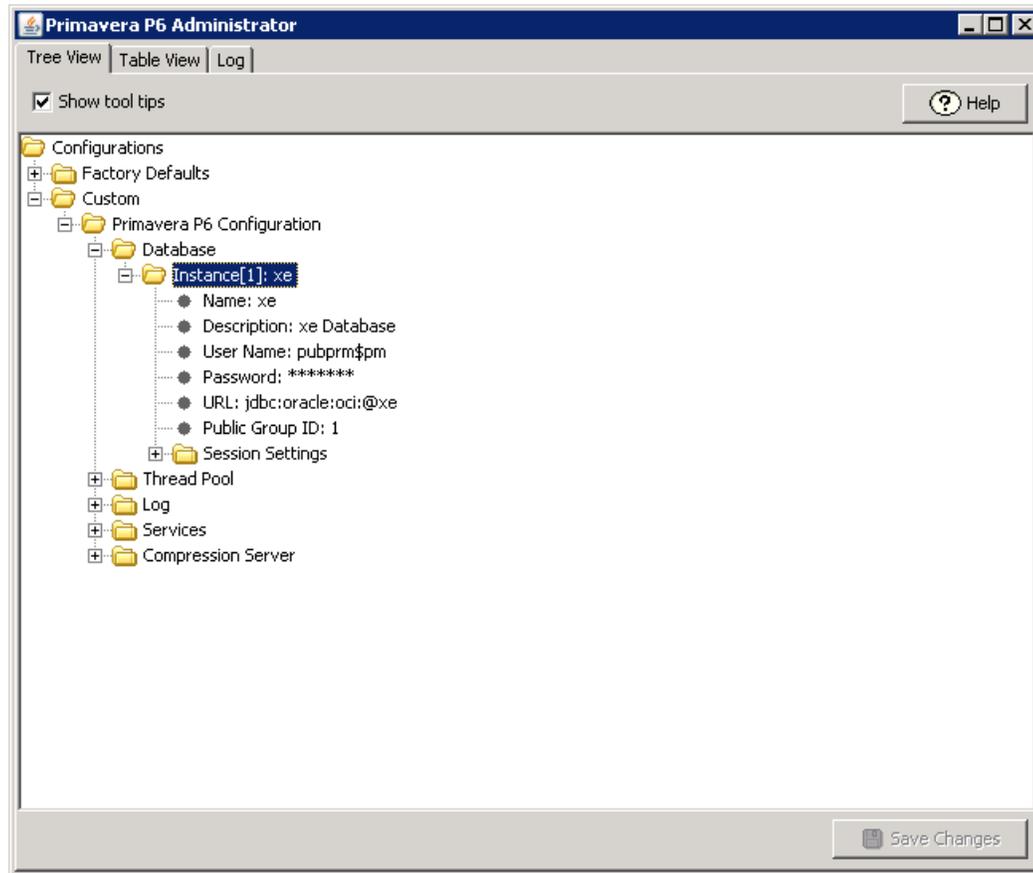


- Next, create one or more databases that the compression server can load data against on behalf of the Primavera P6 Project Management clients. Expand the database folder. Right-click on the Instance folder and choose Duplicate. In our example, this creates a Duplicate instance of XE, the configuration database. You can modify this copy to be any database you may need for the compression server.
- For connecting the compression server to any DB server, edit the URL parameter under Database\Instance. To edit this field, triple-click it or press the F2 key.

Then start editing the following fields to have appropriate values of New DB.

- Name
- Description
- URL (Remember that a Database is always referred to by its SID name and IP address).
- UserName
- Password
- Public Group ID

- In order to create and configure multiple database connections, you can duplicate a database instance as many times as you need.



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

For either short or long format, you must ensure that the URL contains **no spaces**.

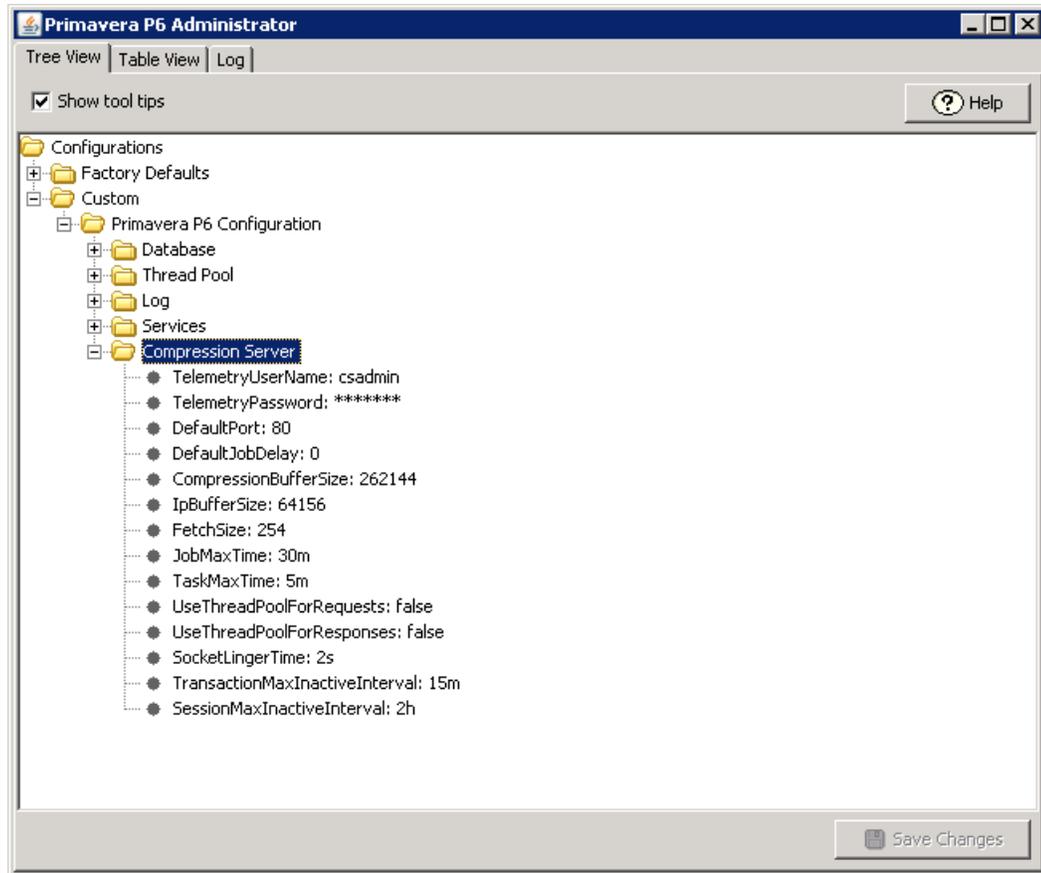
For example:

This is the short format URL:
`jdbc:oracle:oci:@xe`

This is the long format URL:
`jdbc:oracle:oci:@(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=10.12.62.78)(PORT=1521)))(CONNECT_DATA=(SID=xe)))`

Reviewing and Modifying Compression Server Configurations

- Another set of important parameters available through the Compression Server Administrator application is the set of parameters controlling the Compression Server performance. In most situations the default settings are enough.
- These settings are found under the Compression Server node.



- The following table summarizes these settings

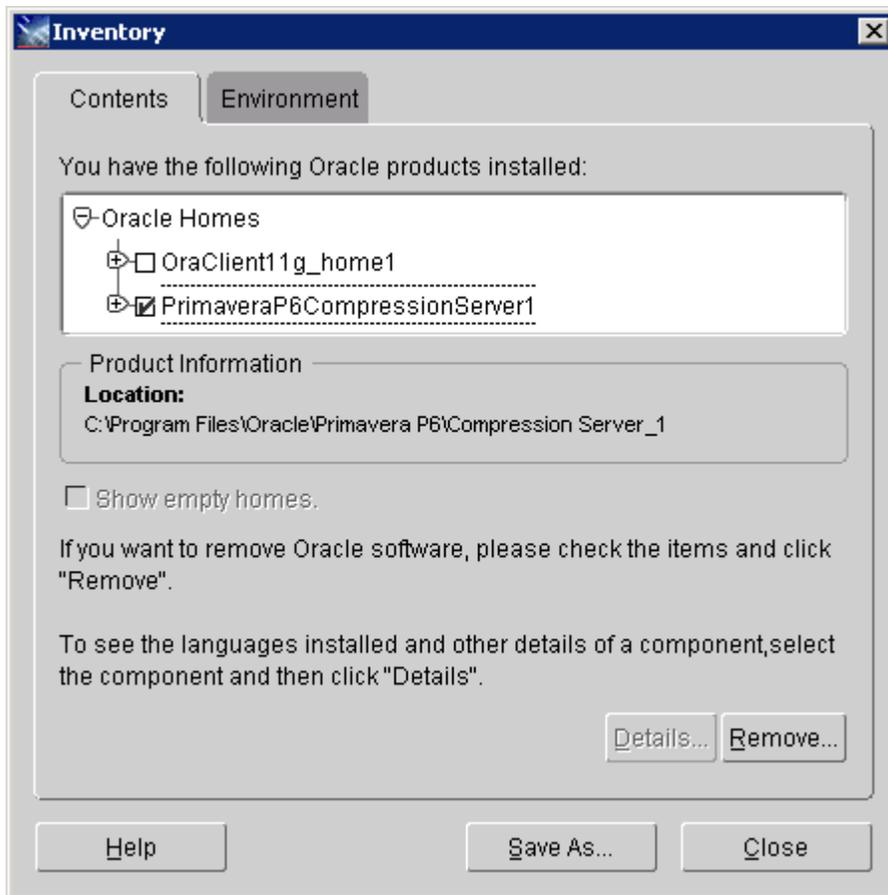
Variable Name	Value	Min	Max	Tool tip
TelemetryUserName	csadmin			Telemetry user name
TelemetryPasswordName	csadmin			Telemetry password
DefaultPort	80	0	65535	Port value for the Project Management module.
DefaultJobDelay [ms]	0	0	125	Scheduling delay of a compression job. For networks with high latency (>250ms) if using huge compression buffers (>512KB) a job delay may 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. Larger the buffer, 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 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 may respond with 25ms to 600ms latency. This may have negative impact on performance. Creating

UseThreadPoolForResponses	false	false	true	and garbage-collecting threads may provide better performance on Windows machines in this case.
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 the performance tuning standpoint other sections of interest would be
 - Threadpool
 - FetchSize
- For debugging the following sections are of interest
 - Log\HtmlLogger\Severity\SeverityLevel (the default is **error**. Setting SeverityLevel to **debug** makes the log very verbose)

Uninstalling the Current Version of Primavera P6 Compression Server

1. Display the Welcome screen either by again running setup.exe (\P6_70_Tools\Compression Server\disk1\install directory on the P6 physical disk or download site) or by clicking Start, All Programs, Oracle - OraClient 11g_home1, Oracle Installation Products, Universal Installer.
2. From the Welcome screen, click Deinstall Products. A dialog box similar to the following appears:



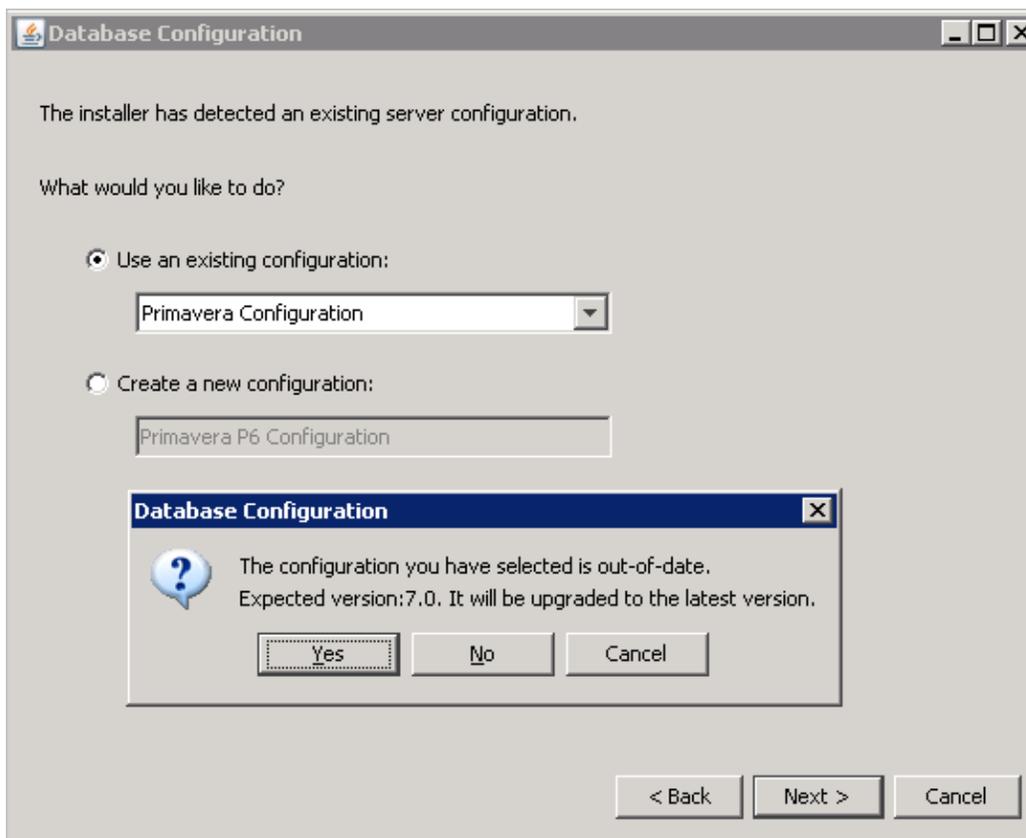
3. Mark the checkbox for PrimaveraP6CompressionServer1, and then click Remove.
4. Proceed as follows to delete the compressionserver deployed files when the current version is uninstalled:
 - a. Delete all files at server\web\tmp (for example, at C:\jboss-5.0.1.GA\server\web\tmp).
 - b. Delete the compressionserver folder at server\web\work\jboss.web\localhost (for example, at C:\jboss-5.0.1.GA\server\web\work\jboss.web\localhost).

Updating the Version of the Compression Server Configuration

During Compression Server installation, if you choose an existing configuration (for example, Primavera Configuration), you will see a message similar to the sample message displayed below. Click Yes to upgrade the configuration.

You can also upgrade the configuration using the Administration application. Refer to “Using the Compression Server Administration Application” earlier in this guide.

Note: We strongly recommend that you create a new configuration when you install the Primavera P6 Compression Server. However, if you choose to update an existing 5.0 SP1 or earlier configuration, complete the steps below.



If you choose to update an existing 5.0 SP1 or earlier configuration:

1. From the Start menu, click All Programs, Oracle - Primavera P6, Compression Server, Administrator.
2. Enter a valid username and password (e.g., privuser).
3. In the Administration application, expand the updated configuration.
4. Expand the CompressionServer folder.

5. Right-click on SocketLingerTime and choose Revert to default value.
6. Click Save Changes.
7. Close the dialog.
8. Restart the Primavera P6 Compression Server from the command line using the procedure in “Starting and Stopping the Compression Server,” earlier in this guide.

Compression Server Telemetrics

Primavera P6 customers requested to have the following new features for compression server.

1. To monitor overall health of compression server.
2. To monitor the health of each user’s session within the server.
3. To delete the selected user sessions in a Compression server by an administrator.
4. To set the compression server in a standby state for administration maintenance purpose.

In order to meet these requests, the compression server is now deployed as a WAR file under JBoss web server. By going to the following site, you can view basic telemetrics of the compression server: <http://host:port/compressionserver/telemetry/summary>

where **host** is the machine name of compression server

port is JBoss port by default 8080

You can login to an advanced control page with configurable username and password. Default username and password are csadmin/csadmin. Password is case sensitive.

A load balancer (specific for the user environment) gets 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 compression server host name.

Standby

The value is a Boolean Yes/No representing the standby state of the 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 compression server.

Total Memory

The value represents the total amount of memory in the Java Virtual Machine that runs 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 the 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 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 compression server.

[Advanced Control page](#)**Application Name**

The value represents the name of the client application that uses a 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 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 Compression Server in standby mode/Start Compression Server

A toggle link that changes the status of Standby mode of compression server on summary page.

Note: The compression server can only be started from the Windows Services dialog.

Delete

Click to delete the selected compression server client sessions.

Logout

Click to logout of the advanced control page.

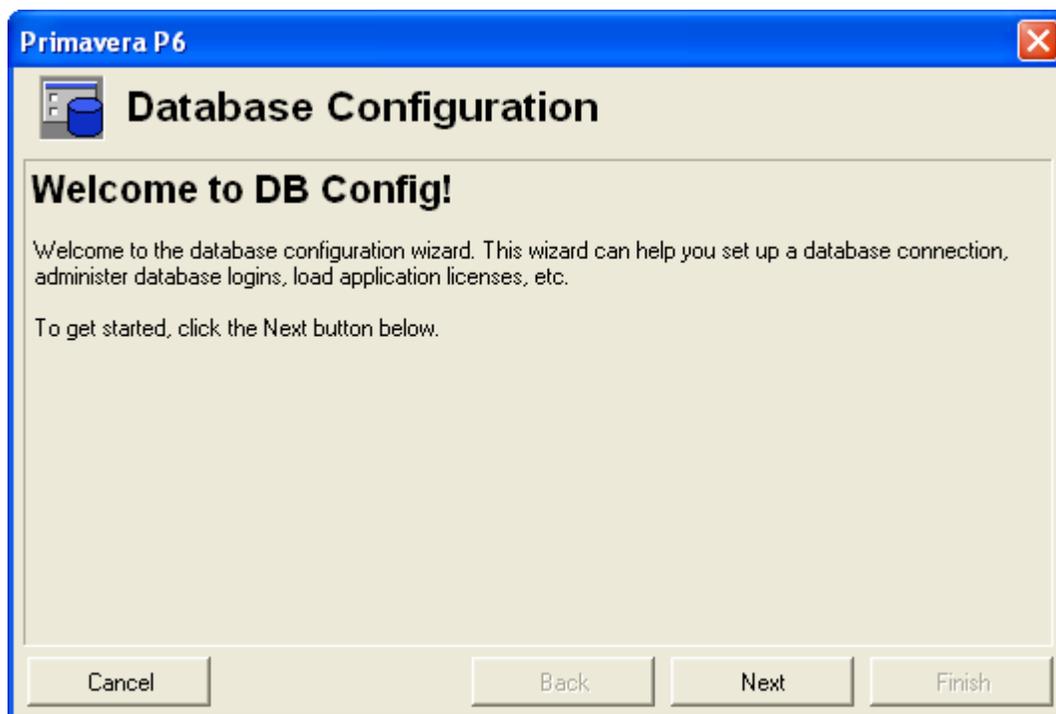
Client Installation and Configuration

Installing Client Applications

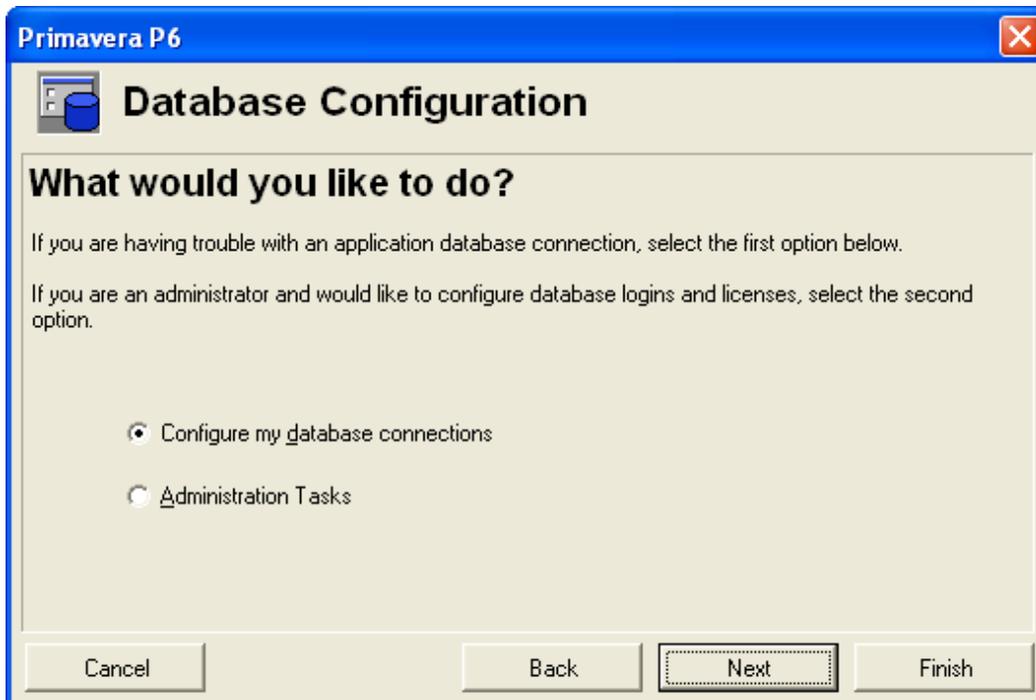
Run the Primavera P6 setup on your client machine and accept the default prompts to install the Project Management module.

Changing Compression Server Connection Settings

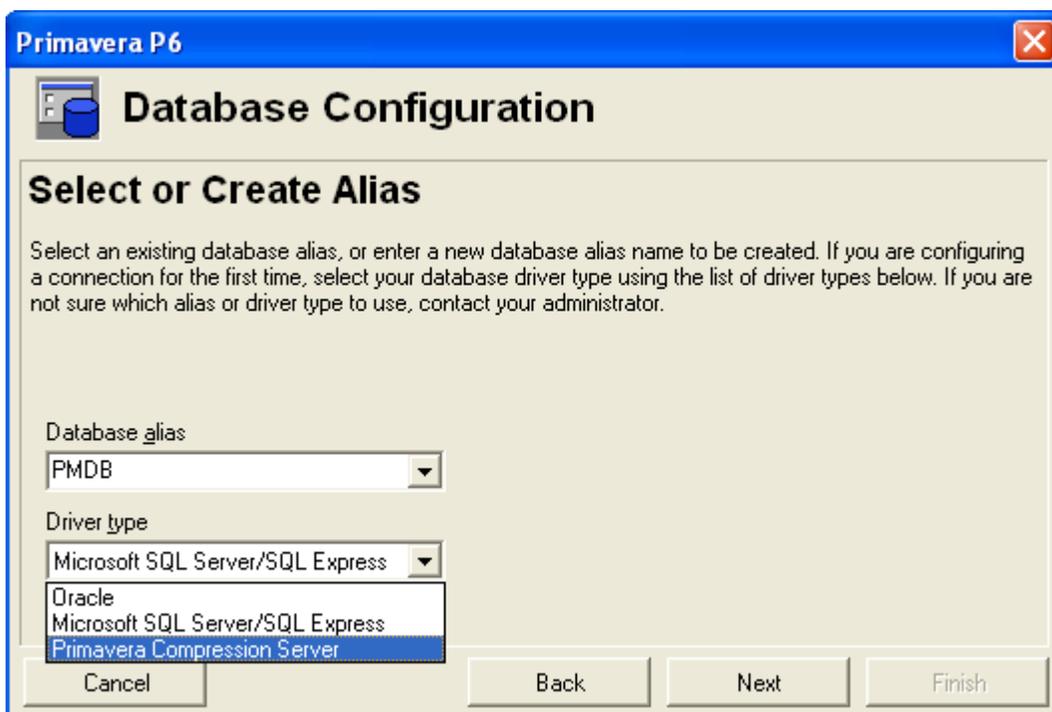
- Instead of directly connecting to the PM database, the Project Management module will be connected to a compression server, with the database specified along with it. To configure the settings, you can run the DBConfig utility.
- The DBConfig utility for the Client is run during the Client installation. Click Start, All Programs, Oracle - Primavera P6, Help and Utilities, Database Configuration to run this utility.



- Choose Configure My Database Connections.

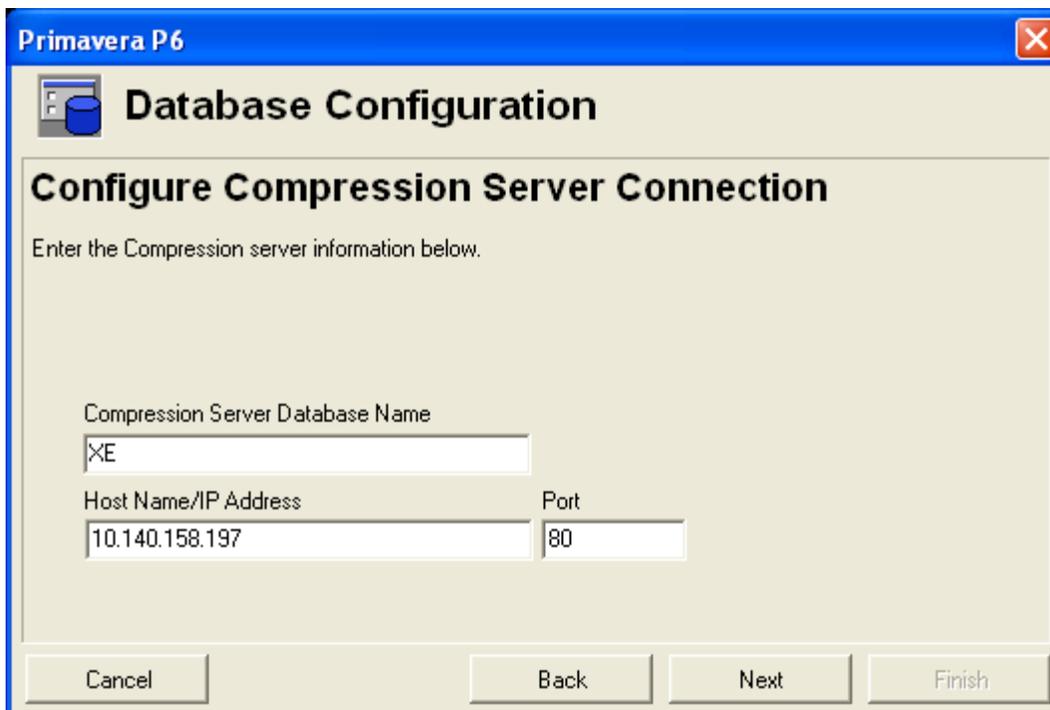


- Select the database alias you want to use for the Project Management database (PMDb). Click Next.
- Select an alias name or type a new one in the Database Alias field. For example, type PMDB _PE and select Primavera Compression Server from the Driver Type list. (For a direct database connection, choose Either Oracle, Microsoft SQL Server/SQL Express.). Click Next.



- Type the **Database Instance Name** of the database you want to access in the Compression Server Database Name field, and the IP address of the Compression Server machine in the Host Name/IP Address field. *Note that we pick an instance that has the oci connection string specified in the configuration.*
- Make sure that the Database you choose here is configured as a Database Instance by the Compression Server Administration application.
- You may type a different Port number, except 1521 which is used by an Oracle database. Make sure the port you specified in the Compression Server Administration Application is the same port you enter here. Compression server listens by default on Port 80. You can change the port using the Compression Server Administration Application.

 In general, if you only use one Primavera P6 Database and this was configured during the Compression Server installation, you should not have any need to run the Compression Server Administration Application to configure additional databases.



Primavera P6

Database Configuration

Configure Compression Server Connection

Enter the Compression server information below.

Compression Server Database Name

Host Name/IP Address Port

Cancel Back Next Finish

Primavera P6

Database Configuration

Enter Public Login Information

Enter the public username and password to use for connecting to this database. The public login is used to establish the initial connection to the application's database. It should be given to you by your administrator.

Also, specify which public group id you have been assigned. If you are not sure which public login or group id to use, please contact your administrator.

Database Alias

Username: Password: Public group ID:

Buttons: Cancel, Back, Next, Finish

- Next, you must validate your settings.

Primavera P6

Database Configuration

Validate Database Connection

Now you are ready to validate the settings for this alias. If any settings are incorrect, you can go back to change them.

Database alias:
 Username:
 Public group id:

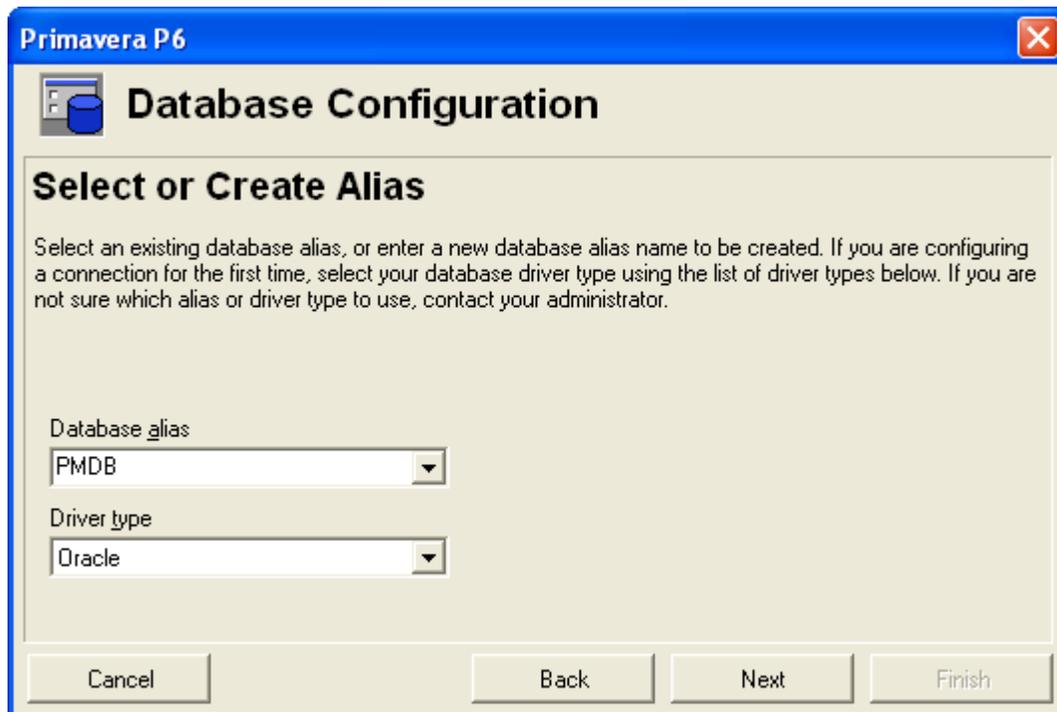
Click Next to test the database connection.

Buttons: Cancel, Back, Next, Finish

- Click Next to test the database connection. If the connection isn't successful, click Back to modify your settings.
- If prompted to configure Methodology Manager, click Cancel.

Configuring Database Connections Directly Against Oracle

- To configure new database connections either directly to Oracle or to the Compression server, click Start, All Programs, Oracle - Primavera P6, Help and Utilities, Database Configuration, to run the database configuration utility.
- To configure the client against Oracle directly, run Database Configuration utility until you reach the dialog box that specifies the database alias:



- Choose the Oracle Driver type. Next, enter the Oracle connection parameters as you would have done in earlier Primavera P6 versions.