



**P6 Analytics and Star Database Installation and Configuration Guide
R3.2**

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Overview of P6 Analytics

This guide provides information for installing P6 Analytics and the Star database. If you do not use P6 Analytics, you can use this guide to install only the Star database.

Note: If you want to install the ODS database instead, use *P6 Reporting Database for ODS Installation and Configuration Guide*.

This section provides a general overview of P6 Analytics and P6 Reporting Database.

- ▶ P6 Analytics provides customers with an in-depth and comprehensive method for analyzing and evaluating their project performance, project history, and resource assignments and utilization.
- ▶ P6 Reporting Database, which includes both the Star and ODS databases, works with the P6 EPPM database to provide a robust and powerful reporting solution.

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About P6 Analytics

P6 Analytics provides an in-depth and comprehensive method for analyzing and evaluating project performance, project history, resource assignments, and utilization.

Built upon the Oracle Business Intelligence (OBI) suite, it delivers a catalog of analyses that provide an interactive way of viewing, analyzing, and evaluating P6 EPPM data. In addition, it provides a Repository Definition (.rpd) file that contains the data mappings between the physical data and the presentation layer of OBI.

The dashboards provide detailed insight into your P6 EPPM data through analytical charts, tables, maps, and graphics. Dashboards allow you to navigate to other analyses to provide precise root-cause analysis. OBI allows you to configure individual analyses with the P6 EPPM Action Link, enabling you to navigate directly to your P6 site for true "Insight to Action" capabilities. You can save analyses created with OBI Answers in the OBI Presentation Catalog and integrate the analyses into any OBI home page or dashboard. You can enhance results through options such as charting, result layout, calculation, and drill-down features.

Use P6 Analytics to:

- ▶ Perform root-cause analysis and employ management-by-exception.
- ▶ Gather critical insights into current and historical performance of all projects, programs, and portfolios.
- ▶ Make better decisions to eliminate project failure.
- ▶ Quickly visualize critical project performance in early stages.
- ▶ Predict and identify cost trends early in the project life cycle to rescue troubled projects.
- ▶ Gain visibility into resource performance through s-curves. With interactive dashboards, you can drill down to examine the root-cause of a problem.
- ▶ Show staffing needs by portfolio with early warning indicators for upcoming under-staffed project work.
- ▶ Use geospatial visualization to view project, activity, and resource data metrics by geographic location with full drill-down capabilities.

Performance Data

P6 Analytics provides an .rpd file to use with the OBI suite. The .rpd file contains:

- ▶ A physical representation of the Star schema.
- ▶ A business layer to perform customized calculations.
- ▶ A presentation layer that groups all the calculated business layer fields into logical subject areas.

The .rpd delivers an extensive amount of Earned Value, Costs, Units, Percent Completes, and other key performance indicators. It enables data to be sliced by dimensions such as time, EPSs, portfolios, projects, activities, and resources.

P6 Analytics delivers a sample dataset, consisting of Star data, where the dashboards and analyses in the catalog were built. You can use this sample data to view the power of dashboard and analyses delivered in the catalog, and see how you can integrate the catalog with your data.

About P6 Reporting Database

P6 Reporting Database works with the P6 EPPM database to provide a robust and powerful reporting solution. P6 Reporting Database consists of the Star and ODS databases.

The Star Database

The Star database enables an organization to perform advanced business analysis on project and portfolio data. It supplies a dimensional schema that organizes P6 EPPM hierarchical relationships. The Star schema allows organizations to store data for History Levels (Project, WBS, Activity, or Assignment) for a specific History Interval (Year, Quarter, Financial Period, Month, Week, or Day). This data allows for tracking trends for advanced business intelligence. The Star database captures data for activities, resource assignments and utilization, and user defined fields. P6 Analytics requires the Star database.

The Operational Data Store (ODS)

The ODS portion of P6 Reporting Database is an optional relational database that supplies day-to-day, easy to understand operational views of the P6 EPPM database data. You can also use the P6 Extended Schema to provide this information.

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About the Star Database

The Star database enables an organization to perform advanced business analysis on project and portfolio data. It supplies a dimensional schema that organizes P6 EPPM hierarchical relationships. The Star schema contains measures and time data such as cost, units, time, and dimensions that contain dimensional attributes, such as project and resource information.

P6 Analytics enables the highest level of query efficiency and flexibility in data analysis. The Star database accumulates Project, WBS, and Activity data over time. This provides organizations with historical data for tracking trends and for advanced business intelligence.

About the STARETL Process

The STARETL process provides data movement between the P6 EPPM Extended Schema and Star schema.

Use one of the following to run the STARETL process:

- ▶ staretl.bat (in a Microsoft Windows environment)

- ▶ `staretl.sh` (in a Unix or Linux environment)

You can run the STARETL process manually or schedule it to run as you require. See **About Scheduling for Star** (on page 10) for more information about scheduling the processes to run.

About Scheduling for Star

Decide when and how often to update the databases from the P6 EPPM Extended Schema. The database will undergo a full update, but the historical trend data from previous periods will not update.

You can update the Star database in the following ways:

- ▶ Manually when required.
- ▶ Scheduled to occur one time in the future.
- ▶ Scheduled to recur during regular intervals.


The files that launch the database refresh process are:

- ▶ `staretl.bat` on a Windows platform.
- ▶ `staretl.sh` on a non-Windows platform. For information on supported non-Windows platforms, see the *Tested Configurations* document.

They reside in your P6 Reporting Database installation folder: *installation folder\star*.

To ensure that your P6 Reporting Database system has the latest data from the P6 EPPM Extended Schema, Oracle recommends that you run the update daily during non-peak hours.

Note: Allow sufficient time to complete the scheduled run of the database update; this applies to multiple data source environments as well. Do not overlap the ETL processes; run only one ETL process at a time.

You can use any mechanism to launch or schedule the launch of the STARETL process. The Windows AT command, Task Scheduler, or Unix CRON are all viable options.  The user who initiates the STARETL process needs read/write access to the P6 Reporting Database installation folder.

About Data Sources

P6 Reporting Database 3.2 can collect and store data from multiple P6 database sources. P6 Reporting Database 3.2 supports P6 EPPM as a data source (see the *Tested Configurations* for supported versions). When you use P6 EPPM as the data source, use the Px Reporting user (e.g., `PxRptUser`) as the account where the data source will extract data from P6 EPPM.

See **Multiple Data Sources in the Star Database** (on page 37) for more information.

About Dimensions

A dimension is a structure that categorizes data to enable users to answer business questions. For example, actual project cost results might be analyzed (or grouped and sorted) by the time dimension (when they were planned or when they were actually incurred), and by the project dimension.

The time dimension can also provide comparison (for example, the previous year results versus the current year results).

About Facts

Facts are data, usually numeric and additive, that you can examine and analyze. Common facts include units and costs. For example, actual project cost is an individual fact.

Facts can be manipulated using a mathematical operation or a data transformation (examples include averages, totals, percentages, and differences).

About History Fact Trending

Each time you run the STARETL process, it updates the Star database with the latest data from the P6 EPPM Extended Schema.

Star can retain Project, WBS, Activity, and Resource Assignment level data from any previous run of STARETL, so it can accumulate multiple sets of Project, WBS, Activity, and Resource Assignment level data.

Backing up history data is an important step for ensuring the Star data warehouse is successful. Ensure your organization has a backup and restore policy for the Star schema history tables.

About the P6 EPPM Extended Schema

The P6 EPPM Extended Schema and related Publication Services, provide near real-time reporting directly in P6 via BI Publisher. These files enable users to control what data to calculate and store, and the frequency at which this is done.

P6 Reporting Database is populated directly from logical views that are part of the P6 EPPM Extended Schema. The P6 EPPM Extended Views can also be used as a data source to create operational reports using BI Publisher.

For a more detailed overview of the P6 EPPM Extended Schema, see the P6 EPPM documentation.

About Star Field Mappings

The Star schema consists of data pulled from the P6 EPPM Extended view schema. Other data is calculated as part of the Transformation process. Calculated data includes: historical captures, hierarchies, and burndown and work planning calculations.

If you would like to see how the Extended schema fields are mapped, look in the ETL_MAPPING table. Choose what your source schema version is (for example: P6 EPPM 8.3 = 83).

```
select * from etl_mapping where source_version = 83;
```

From here you can view how these fields are directly mapped to the staging tables (for example: W_PROJECT_DS). These fields would map similarly to the corresponding dimension or fact tables. You can find this information in the P6 Reporting Database installation directory \res folder in the **mapping.tcsv** file.

Prerequisites

This section describes the prerequisites for installing and using P6 Analytics. It includes required database instances, supported databases, and disk storage space requirements.

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P6 EPPM and JRE Requirements

You must install P6 EPPM 8.2 SP1 or greater and create a P6 EPPM database before you begin the procedures in this guide.

See the *Tested Configurations* document for information on supported versions.

You must install the appropriate version of JRE on the machine where the ETL process will run. For information on the specific JRE versions and supported operating system configurations, see the *Tested Configurations* document on the release media or download.

The P6 Reporting Database database must be in an Oracle instance. If the P6 EPPM database is on a Microsoft SQL Server database, you must use the Oracle Database Gateway application to connect the P6 EPPM database to the Oracle server. Using Microsoft SQL Server for the P6 Reporting Database database is not supported. See *Configuring the Oracle Database Gateway to Link to a P6 EPPM Database on a Microsoft SQL Server System* for more information.

Securing Project Superuser

Note: Running the **ProjectSuperUserUpdate.sql** file is only needed for new installs.

You must run the **ProjectSuperUserUpdate.sql** file before you run the ETL process for the Star Schema. Run the following script to populate project superuser security data:

- 1) Go to <installation directory>\<operating system>\P6_R32_RDB\STAR\Scripts.
- 2) On the P6 EPPM database, run the **ProjectSuperUserUpdate.sql** file as the administrative user (e.g., admuser).
- 3) Run the P6 security service before running the startetl.

Configuring and Running P6 EPPM Publication Services

The ETL process relies on data from the P6 EPPM Extended schema and related Publication Services. You must run this process prior to running the ETL process. The Publication Services enable users to control what data to calculate and store, and how often the data is updated.

The logical views that are part of the P6 EPPM Extended Schema are used to populate the P6 Reporting Database via the ETL process.

For the ETL process to access P6 EPPM data, you must configure and run the P6 EPPM publication services before running the ETL process.

To configure the P6 EPPM publication services:

- 1) Login to P6.
- 2) Click the **Administer** ▼ menu and select **Application Settings**.
- 3) On the **Application Settings** pane, click **Services**.
- 4) On the **Services** page, in the **Publication** section, set how much and how often data updates in the P6 EPPM Extended Schema. The reporting databases use the:
 - ▶ **Start Date** to determine the start date for all time distributed data published.
 - ▶ **Finish date is current date plus** to determine the rolling end date for all time distributed data published.
 - ▶ **Time distributed interval** (Day or Week) for the spread data bucket types.
- 5) Select the **Enable Publish Projects** option and adjust the remaining options in this section as necessary for your data.

Once you've enabled publication, projects that qualify for publication based on your settings will begin to publish to the P6 EPPM Extended Schema.

- 6) Once all necessary projects publish, run the P6 EPPM Global Scheduled Services:
 - a. Click the **Administer** ▼ menu and select **Global Scheduled Services**.
 - b. Set each service to run immediately.

See the *P6 Help* for more information on the P6 Publication Services.

Notes:

- You must run the publication services before you set up the P6 Reporting Database.
- After you complete the above steps, you should configure the Global Scheduled Services to run at regular intervals to work in conjunction with any changes to the P6 EPPM data.

Required Files, Database Instances, Collation Requirements, and Database Locations

Oracle tnsnames.ora File Requirements

Ensure that the **tnsnames.ora** file contains references to the P6 EPPM database and the P6 Reporting Database. The **tnsnames.ora** file must be on the machine where you installed your P6 Reporting Database application.

Required Database Instances

The P6 Reporting Database instance for ODS or Star must already exist based on which database you're using. ODS and Star schemas can be in the same instance or separate instances.

Database Collation Requirements

The database collation must match the database collation you set for the P6 EPPM database when you created it.

Recommended Database Instance Locations

Oracle recommends that the database instance reside on different physical machines from the P6 EPPM database. This minimizes the impact that the P6 Reporting Database has on the performance of the P6 EPPM database server.

Operating System User Permissions



To install P6 Reporting Database and run the ETL process, the users for Windows or non-Windows platforms must have full read/write access to the P6 Reporting Database installation directory. They also need access to the Oracle Client Files (such as tnsnames.ora and sqlloader) and Java.

Burn Down and Work Planning Subject Area Requirements

If you're using a project(s) with the Burn Down and Work Planning subject areas, it is important that the publication period finish date setting you specify in the P6 Publication settings is greater than the latest finish date for all these project(s). For example, in P6 Publication Services settings, if you specify a start date of January 1, 2013, and the finish date is current date plus setting is 2 years, this means that the finish date for all of the Burn Down/Work Planning project(s) has to have a finish date before December 31, 2015. If a project extends past the finish date setting in the publication services settings, the Burn Down/Work Planning portion of the ETL will generate an error near step 47 in the staretl.bat.

Note: Setting a finish date range that is too long will affect the ETL run time. Each day the publication services are run, the finish date range also extends by 1 day.

Oracle Client Requirements

You must install an Oracle database client on the server where the ETL process will run.

Note: The staretl process requires the Oracle component SQLLDR. SQLLDR is automatically installed with a full Oracle Client install. If you cannot install the full Oracle Client, you must install SQLLDR manually before you begin installing P6 Reporting Database.

In a Linux or Unix environment, you must manually set both the ORACLE_HOME and PATH on the server where the ETL will run. PATH should be the ORACLE_HOME\bin folder.

Disk Storage Space Requirements

For detailed information, refer to the *P6 Analytics and P6 Reporting Database Planning and Sizing Guide*.

Creating the Oracle Tablespaces

Before installing P6 Reporting Database, log onto SQL Plus as System\<system password> to create the Oracle tablespaces.

Before creating the tablespace definitions, make sure that the database is in its proper location. See **Required Files, Database Instances, Collation Requirements, and Database Locations** (on page 15) for more information.

Oracle Database Partitioning

If you are connecting multiple P6 data sources to your Star schema, Oracle Database Enterprise Edition, you must use partitioning.

Note: Oracle Standard Edition does not have partitioning.

If your Star schema is installed using Oracle Enterprise Edition without partitioning, the P6 EPPM database should be a small-sized database as defined in the *P6 Analytics and P6 Reporting Database Planning and Sizing*. Partitioning helps keep performance consistent over time for each ETL run. This is particularly important when enabling activity or WBS-level history. If you choose not to use partitioning, Oracle recommends that you **not** use activity and WBS-level history gathering. If the P6 EPPM database is larger than the defined criteria of a small-sized database, Oracle recommends you use Oracle Database Enterprise Edition with Partitioning.

Notes:

- While Oracle recommends that you use a partitioned environment, P6 Reporting Database also supports non-partitioned environments with Oracle Database Standard Edition or the Enterprise Edition. If you choose not to use partitioning, Oracle recommends that you **not** use activity and WBS-level history gathering. Multiple P6 instances for Star are not supported without partitioning. The following features are not available if you are not using Activity History: Activity History, Assignment History, the Burn Down subject area and functionality, the Work Planning subject area and functionality, and slowly changing dimensions.
- If you implement partitioning, you must license the Oracle Database partitioning option. Your Oracle account representative is always your best source for licensing details.

Without partitioning, the amount of time it takes to run the ETL process will increase over time. Track the row counts in the w_project_history_f, w_wbs_history_f, w_activity_history_f. It can also track tables ending in _HF and _HD for Type II history dimensions. As the size of these tables increases the need for partitioning will also increase. You can monitor these run times in the staretl.html and staretlprocess.log located in the <installation directory>\log folder. Oracle Database Enterprise Edition with Partitioning is the solution for growth over time within the history tables.

Creating the Star Tablespace

See **Creating the Oracle Tablespaces** (on page 16) before creating the Star tablespace for important information about the code shown in the following procedure. After logging onto SQL Plus as System\<system password>, do the following to create the Star tablespace:

- 1) Connect to the P6 Reporting Database Star instance with a user that has "create tablespace" privileges.
- 2) Create tablespace star_dat1 with uniform extent size 1M and with blocksize 32K. For example:

```
CREATE SMALLFILE TABLESPACE STAR_DAT1 DATAFILE  
'path\oracle\oradata\database name\star_dat1.dbf' SIZE 100M AUTOEXTEND  
ON NEXT 100M MAXSIZE UNLIMITED LOGGING EXTENT MANAGEMENT LOCAL UNIFORM  
SIZE 1M SEGMENT SPACE MANAGEMENT AUTO;
```

Where *path* is the actual path to the location of the Oracle tablespaces and *database name* is the name of your database instance name.

- 3) Create tablespace star_hst1. For example:

```
CREATE SMALLFILE TABLESPACE STAR_HST1 DATAFILE  
'path\oracle\oradata\database name\star_hst1.dbf' SIZE 100M AUTOEXTEND  
ON NEXT 100M MAXSIZE UNLIMITED LOGGING EXTENT MANAGEMENT LOCAL UNIFORM  
SIZE 1M SEGMENT SPACE MANAGEMENT AUTO;
```

Where *path* is the actual path to the location of the Oracle tablespaces and *database name* is the name of your database instance name.

Configuring the Oracle Database Gateway to Link to a P6 EPPM Database on a Microsoft SQL Server System

Note: If your P6 EPPM database is not located on a Microsoft SQL server, skip this section.

This section describes how to configure the Oracle Database Gateway to link a P6 EPPM database on Microsoft SQL Server to a P6 Reporting Database on Oracle. If your P6 EPPM database is a Microsoft SQL Server database, you must first install and configure the Oracle Database Gateway. See the Tested Configurations document for supported versions.

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Configuring the Oracle Database Gateway for a Microsoft SQL Server Database

If your P6 EPPM database is a Microsoft SQL Server database, perform the following steps to configure the Oracle Database Gateway:

- 1) Go to the *Oracle Database Gateway install directory\dg4msql\admin* folder.
- 2) Edit the **initdg4msql.ora** file:
 - a. Edit the **HS_FDS_CONNECT_INFO=** parameter to be in the format:
`HS_FDS_CONNECT_INFO=servername/instancename/pmdbdatabase`
Where *servername* refers to the server name, *instancename* refers to the instance, and *pmdbdatabase* refers to the database.
For example:
`HS_FDS_CONNECT_INFO=win2k2/sqlserver/pmdb`
The following example shows the parameter when an *instancename* is not specified:
`HS_FDS_CONNECT_INFO=serverSQL//proj_pmdb`
 - b. Save and close the file.
- 3) Edit the **tnsnames.ora** file and add a new TNSnames entry for each new SQLServer Gateway. For example:

```
dg4msql =
  (DESCRIPTION=
    (ADDRESS= (PROTOCOL=tcp) (HOST=server name) (PORT=1521) )
    (CONNECT_DATA= (SID=dg4msql) )
    (HS=OK)
```


-)
- 4) Edit the **Listener.Ora** file and add information for each necessary gateway. For example:


```
(SID_LIST=
(SID_DESC=
(SID_NAME=dg4msql)
(ORACLE_HOME=C:\product\11.1.0\tg_1)
(PROGRAM=dg4msql)
)
)
```
 - 5) Stop any existing Listeners on the Oracle Gateway server.
 - 6) If you need to connect to other Oracle instances, you must configure the TNS Names in the directory where you installed the Gateway.
 - 7) Start the Gateway Listener. The following Initialization parameters were set for the Gateway:
 - ▶ HS_RPC_FETCH_SIZE=1000000
 - ▶ HS_ROWID_CACHE_SIZE=10000
 - ▶ HS_FDS_ROW_SIZE=50000
 For a dataset with similar statistics:
 - ▶ TASK - 6 million rows
 - ▶ TASKACTV - 15 million rows
 - ▶ TASKRSRC - 9 million rows
 - ▶ UDFVALUE - 3 million rows
 - ▶ RSRCHOUR - 50 million rows
 - ▶ PROJWBS - 2 million rows
 - 8) When configuring the Gateway, set HS_LANGUAGE for the Oracle character set of your instance:
 - a. On the gateway machine, go to the gateway install directory (for example, C:\product\11.1.0\tg_2\dg4msql\admin)
 - b. Edit the **initdg4msql.ora** file and add the following parameter specific to your Oracle dataset. Depending on your character set, either add the following or adjust for UTF8:


```
HS_LANGUAGE=american_america.WE8ISO8859P15
```

 Or, add all of the following:


```
HS_NLS_LENGTH_SEMANTICS=CHAR
HS_FDS_CHARACTER_SEMANTICS = TRUE
HS_KEEP_REMOTE_COLUMN_SIZE=ALL
```
 - c. Save the **initdg4msql.ora** file.
 - d. Restart the Gateway listener.

Installing and Configuring the Star Database

This section describes how to install and configure the Star database.

Before installing the P6 Reporting Database software:

- ▶ Be sure you have met the installation prerequisites. See **Prerequisites** (on page 13).
- ▶ The Oracle database instances must already exist before running the installation. See **Required Files, Database Instances, Collation Requirements, and Database Locations** (on page 15).

If you are upgrading from a previous version of P6 Reporting Database, see **Upgrading to the Latest Version** (on page 49).

When installing P6 Reporting Database, you can:

- ▶ Install the ODS database only.
- ▶ Install the Star database only.
- ▶ Install both the ODS and Star databases.

Note: If you are installing both the ODS and Star databases, it does not matter which order you install them. See the *P6 Reporting Database for ODS Installation and Configuration Guide* for information on installing ODS.

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Installing the Star Database

Caution: The Star database portion of P6 Reporting Database **must** be installed in a **new** directory. Do **not** install the Star database in the same directory where you installed a previous version of P6 Reporting Database.

Use the following procedure to install the Star database portion of P6 Reporting Database:

- 1) Download the **Primavera P6 Reporting Database 3.2 for <platform>** folder and extract the contents.
- 2) Go to the location where you extracted the contents and run one of the following depending on your system type:
 - ▶ If you are installing on a Microsoft Windows system, navigate to the **P6_R32_ANALYTICS\P6_R32_RDB** directory, and then double-click on the **setup.exe** file.
 - ▶ If you are installing on a non-Microsoft Windows system:
 1. Navigate to the **P6_R32_ANALYTICS\STAR\<Operating System>\Disk1\install** directory.
where **<Operating System>** is a supported non-Windows platform. For information on supported non-Windows platforms, see the *Tested Configurations* document on the release media or download.
 2. Run the **setup.exe** file.
- 3) On the **Welcome** screen, click **Next**.

Note: Click **Next** on each wizard dialog box to advance to the next step.

- 4) On the **Specify Home Details** screen:
 - a. In the **Name** field, enter or verify the name for the this installation.
 - b. In the **Path** field, verify or browse to the installation location for this installation.
- 5) On the **Java Runtime** screen, type or browse to the location of the JRE version (for example, **C:\Program Files\Java\jre1.7.0_XX**, where XX is the supported version for this release).

This must be a JRE location, not a JDK location.

Note: The appropriate version of JRE must be installed on the machine where STARETL process will run. For information on the specific JRE versions and supported operating system configurations, see the *Tested Configurations* document on the release media or download.

If the location is a JDK location, select the JRE subfolder (for example, **C:\Program Files\Java\jdk1.7.0_XX\jre**).

- 6) On the **Summary** screen:
 - a. Read the summary information that explains where the Star database will be installed, the product languages, the space requirements, and what is being installed.
 - b. Click **Install** to install the P6 Reporting Database.

- 7) Prior to installation completion, the **P6 Reporting Database Configuration Utility** will launch in a separate window.
 - a. On the **Welcome** screen, click **Next** to begin.
 - b. See **Configuring the Star Database** (on page 25).
- 8) After completing the P6 Reporting Database configuration utility, the **End of Installation** window displays. Click **Exit** to finish the installation.

Configuring the Star Database

This section describes how to configure the Star database portion of P6 Reporting Database. The Configuration Utility launches after the installation of the P6 Reporting Database completes.

Note: During the configuration phase, some fields might already contain data. Check the data and change it as necessary.

Start with one of the following sections:

- ▶ If the P6 EPPM database is on an Oracle instance, see **Configuring the P6 EPPM Database Connection on an Oracle Instance** (on page 25).
- ▶ If the P6 EPPM database is on a Microsoft SQL Server, see **Configuring the P6 EPPM Database Connection on a Microsoft SQL Server Database** (on page 26).

Configuring the P6 EPPM Database Connection on an Oracle Instance

Use the fields on the **Reporting Database Configuration Utility - [STAR]** configuration wizard to configure the Star database.

- 1) On the **Welcome** screen, click **Next** to begin.
- 2) On the **EPPM Reporting Database Connection** screen:
 - a. For the **Database Type** option, choose **Oracle**.
 - b. In the **Oracle Database Connection** section:
 1. In the **Host Name** field, enter the server machine name or IP address where you installed the P6 EPPM database.
 2. In the **Port Number** field, enter or verify the port number for this database.
The default for Oracle is 1521.
 3. Choose the Service Name or SID option. Enter the Service Name or SID.
 - c. In the **Reporting User** section:
 1. In the **Username** field, enter or verify your P6 EPPM reporting database name (for example, PxRptUser).
 2. In the **Password** field, enter the password for the reporting database user.
- 3) Click **Next**.

When you click next, the wizard will test that the connection is valid. If the test fails, ensure you have entered all the information correctly and try again.

Follow the steps in the **Configuring the Star Database Connection** (on page 26) section.

Configuring the P6 EPPM Database Connection on a Microsoft SQL Server Database

Use the instructions in this section only if your P6 EPPM database is on a Microsoft SQL server. You must have already installed the Oracle Gateway software before installing the Primavera P6 Reporting Database software. See *Configuring the Oracle Database Gateway to Link to a P6 EPPM Database on a Microsoft SQL Server System* for information about installing the gateway.

- 1) On the **Welcome** screen, click **Next** to begin.
- 2) On the **EPPM Reporting Database Connection** screen:
 - a. For the **Database Type** option, choose **SQL Server**.
 - b. In the **SQL Server Connection** section:
 1. In the **Host Name** field, enter the server machine name or IP address where you installed the P6 EPPM database.
 2. This is the SQL Server instance name of the Microsoft SQL Server where the P6 EPPM database resides. For example, `SQLServerName\databaseInstanceName`.
 3. In the **Port Number** field, enter or verify the port number for this database.
The default for Microsoft SQL Server is 1433.
 4. In the **Database Name** field, enter the name of the P6 EPPM database. This database must already exist.
 - c. In the **Oracle Gateway Connection** section:
 1. In the **Host Name** field, enter the machine name or IP address where you installed the Oracle Gateway.
 2. In the **Port Number** field, enter the port number where you installed the Oracle Gateway.
 3. Choose the Service Name or SID option. Enter the Service Name or SID.
 - d. In the **Reporting User** section:
 1. In the **Username** field, enter or verify your P6 EPPM reporting database name (for example, `PxRptUser`).
 2. In the **Password** field, enter the password for the reporting database user.
- 3) Click **Next**.

When you click next, the wizard will test that the connection is valid. If the test fails, ensure you have entered all the information correctly and try again.

Configuring the Star Database Connection

On the **Star Database Connection** screen, configure the Star database connection:

- 1) In the **Oracle Database Connection** section:

- a. In the **Host Name** field, enter the server machine name or IP address where you installed the Star database.
- b. In the **Port Number** field, enter or verify the port number for this database.
The default for Oracle is 1521.
- c. Choose the Service Name or SID option. Enter the Service Name or SID.
- 2) In the **Database Administrator Account (DBA)** section:
 - a. In the **Username** field, enter or verify the user name that has DBA privileges for the Star database. The default name is **SYSTEM**.
 - b. In the **Password** field, enter the password for the DBA user.
- 3) In the **Create STAR user account** section:
 - a. In the **Username** field, enter or verify your Star user name. This user will own the Star tables.
 - b. In the **Password** and **Confirm Password** fields, enter a password for the STAR user.
- 4) Click **Next**.

Configuring ETL Settings for Star

On the **ETL Settings** screen:

- 1) In the **JVM Location** field, enter or verify the path to the Java Virtual Machine (JRE path).
 - ▶ You must have the appropriate version of JRE installed on the machine where the ETL process will run. For information on the specific JRE versions and supported operating system configurations, refer to the *Tested Configurations* document on the release media or download.
 - ▶ The path must refer to a location on the local machine where you installed the P6 Reporting Database configuration utility.
- 2) In the **Log Detail Level** field, choose the level of logging detail that you want to use. The following are the logging detail levels you can choose:
 - ▶ **Errors and Warnings** Logs errors and warnings.
 - ▶ **General Information** This is the default value. This logs errors, warnings, and informational messages on the progress of each step.
 - ▶ **Debug and Trace Information** Provides all general information, errors and warnings, and detailed output of each executed script, query, and connection.
 - ▶ **Errors Only** Logs only errors and no other information.
 - ▶ **Extra Debug Information** Provides all general information, errors and warnings. It provides more fine grained information on each executed step and script.
- 3) In the **Max Java Heap Size (MB)** field, enter parameter for the Java Heap Size. This value maps to the JVM -Xmx setting in the Java Runtime Environment settings. The default value (and recommended value) is 1,024 MB.
 - ▶ The minimum value is 512 MB.

- ▶ When changing the Maximum Java Heap Size setting, the values must be in increments of 512 MB.
- 4) In the **General Thread Count** field, choose the number of threads the ETL process will run. Extraction and Load processes are multi-threaded.
Oracle recommends keeping the default (5) for this setting.
- 5) In the **Index Building Thread Count** field, choose the number of threads that will build the index. It specifies how many threads to run for building indexes for the ODS or Star database.
Oracle recommends keeping the default (5) for this setting.
- 6) In the **Partitioning** section:
 - a. Select the **Enable Partitioning** option to use partitioning.

Notes:

- While Oracle recommends that you use a partitioned environment, P6 Reporting Database also supports non-partitioned environments with Oracle Database Standard Edition or the Enterprise Edition. If you choose not to use partitioning, Oracle recommends that you **not** use activity and WBS-level history gathering. Multiple P6 instances for Star are not supported without partitioning. For more information on database requirements, see the *P6 Analytics and P6 Reporting Database Planning and Sizing Guide*.
 - If you implement partitioning, you must license the Oracle Database partitioning option. Your Oracle account representative is always your best source for licensing details.
-
- b. In the **Datasource ID** field, enter the number of data sources that you will use in the Star environment.
 - c. In the **Months per Partition** field, enter the number of months between partition ranges. If you have a smaller range of partitions, the data between partitions will move faster.
- 7) Click **Next**.

Configuring Codes for Star

Use the **Codes** screen to choose the Project, Activity, and Resource level P6 EPPM codes that will migrate to the Star database.

There are two ways to view codes in P6 Analytics: as code hierarchies and as dynamic codes. Perform the steps below to configure the list of codes on the Code screen. Further configuration is not required for code hierarchies.

Notes:

- If you using dynamic codes and P6 Analytics, and you exceed 20 codes for a given object (Project, Activity, or Resource), you must edit the RPD file. See **Updating the RPD file** (on page 33). This note does not apply if you use only code hierarchies.
- P6 Analytics has a limit of approximately 240 codes for each supported type (Project, Activity, and Resource).

On the **Codes** screen:

- 1) Move the **Activity**, **Project**, and **Resource** codes that you want to use from the available column to the selected column.

Note: Project, Activity, and Resource codes must exist in P6 EPPM for them to appear in the available codes list.

- 2) Click **Next**.

Dynamic Codes Description

During the set up process, you can define Dynamic Codes for the following:

- ▶ Activity Codes (EPS, Global, Project)
- ▶ Resource Codes
- ▶ Project Codes

Defining dynamic codes enables these codes to be available in OBI. When defined, you can use these codes for grouping and analyzing data. These codes will also be available in the code hierarchies used in P6 Analytics.

You must edit the RPD file when you want to add more than 20 dynamic codes (see **Updating the RPD file** (on page 33)). When the ETL process runs, updates are automatically made to the schema.

Code Hierarchies Description

All global codes configured in the P6 Analytics Reporting Database Configuration Utility are now available as hierarchies in P6 Analytics. Full path values or specific node level values are available for each code. If you add codes in the Configuration Utility and then change the hierarchy for those codes in P6, you will see those changes in P6 Analytics.

Note: Code hierarchies are applicable to global codes. Hierarchies do not apply to project or EPS level codes.

There are no additional configuration steps required to use code hierarchies.

Activity Code Descriptions

The **Activity** list has the following fields:

Field	Description
Name	This field corresponds to the code's display name in the P6 EPPM database. If you leave this field blank, it automatically populates with an initial value. You can edit this field.
Scope	<p>Note: This section only applies to dynamic codes. Code hierarchies are always global.</p> <p>Because you can define activity codes for different areas of your P6 EPPM database (Global, EPS, and Project), P6 Reporting Database enables you to define the Scope where you will use these activity codes.</p> <p>The scope order is important because it determines a tie-breaker if two codes have the same name at different levels. For example, if you have a global code called MyCode, and a project has a code called MyCode, the scope setting would determine which code value to use. If you select Global, Project, it will use the global MyCode value. If you select Project, Global, it will use the project level MyCode value.</p> <p>Use the scope list to choose one of the following:</p> <ul style="list-style-type: none"> ▶ Global ▶ Global, EPS ▶ Global, Project ▶ Global, EPS, Project ▶ Global, Project, EPS ▶ EPS ▶ EPS, Global ▶ EPS, Project ▶ EPS, Global, Project ▶ EPS, Project, Global ▶ Project ▶ Project, EPS ▶ Project, Global ▶ Project, EPS, Global ▶ Project, Global, EPS

Field	Description
ID	Contains the Activity code's ID number. When you choose an Activity ID, this is assigned sequentially starting with '1'.

Project and Resource Code Descriptions

Project and Resource codes are not global and have no scope. The **Project** and **Resource** list has the following fields:

Field	Description
Name	This field corresponds to the code's display name in the P6 EPPM database. If you leave this field blank, it automatically populates with an initial value. You can edit this field.
ID	Contains the code's ID number. When you choose a code, this is assigned sequentially starting with '1.'

Configuring User Defined Fields for Star

Use the **User Defined Fields** screen to choose the Project, WBS, Resource, Resource Assignment, and Activity level UDF fields from P6 EPPM that will migrate to the Star database. P6 Reporting Database supports Cost, Non-Cost, Date, and Text UDF types.

Notes:

- P6 Reporting Database has a limit of approximately 240 UDFs for each supported type (Cost, Non-Cost, Date, and Text).
- If you add more than 20 UDFs, you must edit the RPD file. See **Updating the RPD file** (on page 33).
- Number and Integer UDF types are displayed in the 'Non-Cost' folders in the configuration wizard.

Users can select the UDFs that will display in OBI to organize data based on those UDF values.

On the **User Defined Fields** screen:

- 1) Move the **Project**, **WBS**, **Resource**, **Resource Assignment**, and **Activity** UDFs that you want to use from the available column to the selected column.
- 2) Click **Next**.

Finishing the Configuration Wizard

To complete the configuration:

- 1) Choose whether you want to run the **Reporting Database Diagnostic Utility**. It will help you troubleshoot your configuration if you choose to run it.

Note: If you run the diagnostic utility now, you will get a fail message for the JDBC Star connection because the STARUSER has not been created yet. You can ignore the message. The STARUSER will be created when you run the staretl process.

- 2) Click **Finish**.

All the settings configured with the Star database configuration utility will be stored in the following location:

installation path\star\res\staretl.properties

This file is a Java properties file, which is a simple key = value storage file. For example:

`db.star.application.username=STARUSER`

Tips

Oracle recommends you schedule backups of the Star database at the lowest level of History interval (day, week, month) for all projects to ensure the integrity of the Star historical data. For example, if one project in P6 EPPM is set to capture history daily in Star, set up daily backups of your Star database.

Running the STARETL Process

After you complete the installation and all configuration tasks, execute the staretl.bat (or staretl.sh on a non-Windows system) file by doing the following:

- 1) Go to the location where you installed P6 Reporting Database.
- 2) Click **staretl.bat** (or **staretl.sh**) to execute the file.

Running User-defined ETL Scripts

P6 Analytics supports adding user defined steps to the ETL process, which can be used to extract, transform, and load additional data into the Star schema. When using this option, user defined scripts will be automatically executed as part of the standard ETL process.

To run user-defined scripts during Star etl, do the following:

- 1) Create scripts and keep a copy in a safe place.

Note: Each script should have an "EXIT" at the end.

- 2) Make sure each script runs successfully with good performance in sqlplus.
- 3) Copy the scripts to the **<install_directory>/scripts/user_scripts**. Scripts will be picked up by the Star etl process.
- 4) If some of the scripts have to be run in certain order, add the script name to the file **<install_directory>/res/priority/user_scripts.txt**, one line for each script file name (no folder info needed), and they'll be scheduled to run in that order. For the scripts not in **user_scripts.txt**, they'll be scheduled to run after those in the file list, and in no specific order.
- 5) Run **staretl.bat** or **staretl.sh**. The user-defined scripts are the last step of the Star etl process.

Note: Running configStar.cmd/configStar.sh will not override these scripts.

User-defined ETL Script Samples

Oracle Primavera provides sample scripts to demonstrate how to extract, transform, and load (ETL) additional User Defined Fields from P6 EPPM to the Project, WBS, and Activity dimensions in the STAR schema.

The sample scripts are available in the <install_directory>\<operating_system>\sample\user_scripts folder on your release media or download.

To execute the sample scripts:

- 1) Copy the 3 *.sql files to **<install_directory>\scripts\user_scripts** directory.
- 2) Copy **user_scripts.txt** to **<install_directory>\res\priority** directory. Listing the scripts in this file specifies the order in which the scripts will run.
- 3) Run **staretl.bat** or **staretl.sh**. The scripts will run at the end of the ETL process.

The samples add UDF field values to Project, WBS, and Activity dimensions.

Updating the RPD file

You must update the RPD file when you add new columns. This also applies to Dynamic codes and UDFs when they've exceeded the default limit. The configuration utility provides the Dynamic codes' definition, scope (activity codes only), regular expression (usually, this is the name of the code), name (the display name for the code name label in OBI), and description (the display name for the code value label in OBI). See **Configuring Codes for Star** (on page 28) and **Configuring User Defined Fields for Star** (on page 31) for more information.

You have to edit the .rpd file to ensure your dynamic codes are configured correctly.

To edit the **OraclePrimaveraAnalytics.rpd** to include any new columns:

- 1) Edit the **OraclePrimaveraAnalytics.rpd** using the OBI Administration Tool.

- 2) Add the columns to each layer of the RPD file (Physical, Business Model and Mapping and Presentation).

See the *Oracle Fusion Middleware Metadata Repository Builder's Guide for Oracle Business Intelligence Enterprise Edition* for information on adding to the physical, logical, and presentation layer.

Note: Be sure to follow the entry values naming convention (adjusting only the bucket number) used for the pre-existing code (1-20) bucket columns in each layer.

Tips

See the OBI documentation for additional information on editing the RPD file.

Configuring an Oracle Standard Edition Database

If you are using Oracle Standard Edition as your database, you must use a non-default setup option with P6 Reporting Database. P6 Reporting Database uses row-level security as its default security, and Oracle Standard Edition does not support row-level security. You must disable the security policies script to use Oracle Standard Edition.

To enforce security when using P6 Analytics, you must use a different RPD. This RPD will contain security built into the RPD and can be found in the **rpd\StandardEdition** folder for P6 Analytics. Deploy this RPD in your OBI environment or build the RPD using the UDML file also in the **rpd\StandardEdition** folder. Partitioning is on by default when running through the configuration utility. There is an option to choose a non-partitioned installation in the configuration utility. If you ran the configuration utility and didn't enable partitioning, follow the steps in **Creating Non-partitioned Deployments** (on page 34).

Creating Non-partitioned Deployments

While Oracle recommends that you use a partitioned environment, P6 Reporting Database also supports non-partitioned environments with Oracle Database Standard Edition and Enterprise Edition. During the installation, you can choose to use a partition or non-partitioned environment in the Configuration Utility. The configuration utility will handle the steps below for creating a non-partitioned deployment. If you do not want to rerun configuration utility and chose a partitioned environment, please follow these steps to change to a non-partitioned deployment.

Note: You can rerun the Configuration Utility at any time.

If you deploy without partitioning, the following features are **not** supported:

- ▶ WBS-level or activity-level history transfer to the Star schema
- ▶ WBS-level or assignment-level history transfer to the Star schema
- ▶ Multiple PMDB data sources

- ▶ Burn Down subject area and functionality
- ▶ Work Planning subject area and functionality
- ▶ Slowly changing dimensions

If you use an Oracle Standard Edition database, partitioning is not available. To setup a non-partitioned P6 Reporting Database and P6 Analytics environment, do the following before running **staretl**:

- 1) Rerun the **configStar** file from the <installation directory> and go back through the configuration and setup screens, making the same choices you made before.

Note: Ensure the partitioning option is not selected on the ETL Settings page when deploying a non-partitioned database.

- 2) Go to the <install_directory>\scripts folder.
 - a. Move the following files to a different directory:
 - **Create_star_indexes_part.sql**
 - **Create_star_tables_part.sql**
 - b. Rename the following scripts:
 1. Change **Create_star_indexes.sql** to **Create_star_indexes_part.sql**.
 2. Change **Create_star_tables.sql** to **Create_star_tables_part.sql**.

These changes cause the ETL process to use these scripts, which do not include partitioning, instead of the partitioned scripts.

Creating a New RPD for SE Security

To create a new RPD file:

- 1) Go to the <install_directory>\star\etl\oracle\templates:
 - a. Make a copy of the **startetl.tbat** file.
 - b. Move the copied file to <install_directory>\star\etl\oracle.
 - c. Go to <install_directory>\star\etl\oracle\templates and edit the copied **staretl.tbat** file in a text editor (such as Notepad).
 - d. Go to **Step 32** and remove the entire **Step 32**. Removing Step 32 will take away Row Level Security.
- 2) In the <install_directory>\star\etl\common folder, execute **runSubstitution**, which will generate new versions of files in the \scripts folder.
- 3) In the <install_directory>\star\scripts folder, open the **staretl.bat/.sh** file and ensure **Step 32** is gone.
- 4) Run **staretl**.
- 5) Replace the current RPD with this new RPD with security. If there were any changes to variables or values in the RPD, you will need to re-add them.

Multiple Data Sources in the Star Database

If you want to pull data into the STAR database from multiple P6 EPPM sources, you can do so by following the steps in this section. Pulling data from additional data sources will make the data available through OBI. Multiple data sources allow you to group matching data (such as resources, codes, and other common attributes) from different data sources because they are part of the same Star schema. The tables have a "datasource_id" field that you can use to distinguish where the data came from.

See the *Tested Configurations* for supported data sources.

Note: See the Planning and Sizing guide for information on ETL and data source management. You must ensure that ETL runs do not overlap.

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Adding Up to Three Additional Data Sources to the Star Database

If you need additional data sources, the Star database allows you to add up to three data sources by default. If you add three data sources and want to add more, see **Adding More than Three Data Sources to the Star Database** (on page 39).

Note: Before adding any of these data sources, ensure that all of the P6 Publication services have been run on each data source.

To add data sources:

- 1) Validate that Oracle Partitioning is running for your instance. Run this command:
`select * from V$OPTION`
- 2) Verify this line in the **staretl.properties** shows "true":
`db.star.partitioned=true`

Note: Run the following steps as the Star user.

- 3) Create a DB link for the new data source:

Caution: Do not use the global domain name (i.e., us.oracle.com) if you are using Microsoft SQL server. Using the global domain name will break the ETL process.

```
CREATE DATABASE LINK DSLINK#
CONNECT TO "pxrptuser" IDENTIFIED BY "pxrptuser"
USING
' (DESCRIPTION= (ADDRESS= (PROTOCOL=TCP) (HOST=hostname) (PORT=portnumber
)) (CONNECT_DATA= (SERVICE_NAME=servicename)) ) '
```

where *hostname*, *portnumber*, and *servicename* are specific to your environment and # corresponds to number for the data source (for example, DSLINK02). The connection should be to the P6 EPPM database where you will pull data.

Notes:

- The link name must be DSLINK#. Where # is the number that corresponds to the data source. For example, DSLINK02.
 - Each DSLINK# must be unique so they do not interfere with each other.
-

- 4) Verify DB link is working by running the following command:

```
select * from project@dslink#
```

where # is the number that corresponds to the data source. For example, DSLINK02.

- 5) Run the ETL process for the new data source:

```
staretl.bat "-s#" 
```

where # is the number that corresponds to the data source. For example, "-s2".

- 6) Verify the row counts by running the following command:

```
select count(*) from w_project_ds
```

- 7) Repeat these steps for each additional data source you want to add. (You can add up to three).

- 8) Continue to **Updating the Data Source** (on page 38).
-

Updating the Data Source

After you have run the data source for the first time, run the staretl to update each partition of Star.

- 1) Run the **startetl.bat** file to update data source 1.
- 2) Run the **startetl.bat "-s2"** file to update data source 2.
- 3) Run **startetl.bat "-s3"** to update data source 3.

Adding More than Three Data Sources to the Star Database

Determine how many data sources to use before running the `staretl`. You must edit scripts and rerun the ETL processes for each data source.

Caution: Before editing the scripts, manually backup the history data. When you add more data sources, the `staretl.bat "-r"` file will rebuild all tables and remove all existing activity level history. If you don't backup your history data, it will be lost.

If you want to manually add more than three data sources, follow the steps below.

Notes:

- The instructions assume that you have installed P6 Reporting Database.
- Before adding extra data sources, you must run the P6 EPPM Extended Schema services and update these data sources.

1) Back up your history data.

Note: You can use the Configuration Utility to add data sources.

2) Run the `staretl.bat "-r."`

3) Run all your other data sources. For example:

- ▶ `startetl.bat "-s2"`
- ▶ `startetl.bat "-s3"`

4) Run the additional data sources you just created. For example:

- ▶ `startetl.bat "-s4"`
- ▶ `startetl.bat "-s5"`

5) Locate the **W_PROJECT_D** table and verify that there is a **datasource_id =4** (as well as additional data sources if you created them) and that the other `datasource_id`'s exist for 1, 2, and 3.

Adding Codes from Multiple Data Sources into a Star Database

To add activity, project and resource codes from multiple data sources into one Star database:

1) Install the Star database for Data Source 1.

Note: You may have already added the Data Sources when you installed P6 Reporting Database.

a. In the **Configuration Utility**:

1. Enter the `Pxrptuser` for Data Source 1.

2. Select project, activity, and resource codes to add to the Star database.
 - b. Go to **star_home\star\scripts** and run **staretl.bat** (or **staretl.sh**).
 - 2) Add a database link for Staruser to Data Source 2.
 - a. Rename the Star home folder for data source 1.
 - b. Install the Star database for Data Source 2.
 - c. In the **Configuration Utility**.
 1. Enter the Pxrptuser for Data Source 2.
 2. Select project, activity, and resource codes to add to the Star database.
 - d. Go to **star_home>\star\res** and open the **staretl.properties** file in a text editor.
 - e. Organize the codes in the **staretl.properties** file for Data Source 2 to include codes from both data sources:
 1. Add the codes from **Data Source 1 staretl.properties** file to **Data Source 2 staretl.properties** file.
 2. Add the codes specific to Data Source 2 to the list of codes just added.
- The staretl.properties should include the codes from Data Source 1 (which is comprised of codes with the same name in each data source and codes unique to Data Source 1) followed by the codes unique to Data Source 2.
- Below is an example from the staretl.properties file showing the format for the codes:
- ```
code.actv.1.descr=ActGlobal1 Description
code.actv.1.name=ActGlobal1
code.actv.1.regx=ActGlobal1
code.actv.1.scope=Global,Project,EPS

code.proj.1.descr=ProjCode1 Description
code.proj.1.name=ProjCode1
code.proj.1.regx=ProjCode1

code.rsrc.1.descr=ResCode1 Description
code.rsrc.1.name=ResCode1
code.rsrc.1.regx=ResCode1
```
- 3) Go to **star\_home>\star\etl\common** and run **runSubstitution.cmd** (or **runSubstitution.sh**). RunSubstitution will rebuild the script that extracts and populates codes, so the codes stated in the above example will be used when you run staretl.
  - 4) Run **Staretl.bat "-s2"**.

---

**Note:** Running the configuration utility after manually editing the staretl.properties file will overwrite the existing staretl.properties file. See the Tips section below.

---



### Tips

If you return to an individual data source and run the Configuration Utility, you will lose the changes made in this section.

If you need to run the Configuration Utility after making changes to the codes list:

- 1) Create a backup of the **staretl.properties** file before running the Configuration Utility again.
- 2) After running the Configuration Utility, copy the codes list from the **staretl.properties** backup file and paste it in the current **staretl.properties** file. This will overwrite the codes list that was created after re-running the Configuration Utility.
- 3) Run **runSubstitution** file again.

### Combining Data Sources if Using Both Oracle and Microsoft SQL Server Data Sources

If you installed P6 EPPM on both an Oracle and Microsoft SQL Server database, you will need to edit the properties file to get the data to combine correctly in your data source.

#### Combining Data Sources if the Primary Data Source is on an Oracle Database

If your primary data source is on an Oracle database:

- 1) Run the **staretl** for your additional data sources that are also on the Oracle database.
- 2) Make a backup copy of the **star.properties** file.
- 3) Run the **configStar** file.
- 4) When prompted, change the database for the PxRptUser so it points to the Microsoft SQL Server database and finish the configuration.
- 5) Open the re-created **star.properties** file and verify that the PxRptUser now points to the Microsoft SQL Server database.

---

**Note:** Keep both copies of the **star.properties** file, so you can switch between the databases.

---

- 6) Run the **staretl "s#"** file for your Microsoft SQL Server data source (for example, **staretl "s2"**).
- 7) Switch back to the **star.properties** file for the Oracle database.
- 8) Run the **staretl "s#"** file for your Oracle data sources (for example, **staretl "s2"**).

#### Combining Data Sources if the Primary Data Source is on a Microsoft SQL Server Database

If your primary data source is on a Microsoft SQL Server database:

- 1) Run the **staretl** for your additional data sources that are also on the Microsoft SQL Server database.
- 2) Make a backup copy of the **star.properties** file.
- 3) Run the **configStar** file.



- 4) When prompted, change the database for the PxRptUser so it points to the Oracle database and finish the configuration.
- 5) Open the re-created **star.properties** file and verify that the PxRptUser now points to the Oracle database.

---

**Note:** Keep both copies of the star.properties file, so you can switch between the databases.

---

- 6) Run the **staretl "s#"** file for your Oracle data source (for example, staretl "s2").
- 7) Switch back to the **star.properties** file for the Microsoft SQL Server database.
- 8) Run the **staretl "s#"** file for your Microsoft SQL Server data sources (for example, staretl "s2").



## Star Security Configuration

This section describes the Star security configuration. The steps include adding a new Star user, setting up security, and filtering out inactive resources.

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### Adding a New User for P6 Analytics

For a user to access data in Star through OBI, you must set up security in both P6 EPPM and OBI.

To add a new user:

- 1) In P6, do the following:
  - a. Add a new user and give the user module access to the **P6 Analytics** module. Grant the user the necessary Operational Breakdown Structure (OBS), cost, module, and resource access.

---

**Note:** Since the username must match in P6 and Weblogic, this username **must** adhere to the requirements in Weblogic and OBI to work. For example, P6 may allow characters for the username that WebLogic or OBI do not allow. You must ensure the username will work in all applications.

---

- b. Click the **Administer** ▼ menu and select **Global Scheduled Services**.
    - c. Run the **Publish Security** service.

---

**Note:** You can schedule this service to run immediately or later, but it must finish running before you run the staretl file.

---

- d. Run staretl.bat (or staretl.sh on a non-Windows system).

---

**Notes:**

- If you are going to use LDAP, you are done with this section and can move to the next section.
-



- If OBI and P6 EPPM are both configured to use LDAP authentication, users do not need to be created manually. Only the LDAP server needs to be added to OraclePrimaveraAnalytics.rpd by accessing Manage, Security. See the OBI documentation information about configuring LDAP for OBI.

2) If you are not going to use LDAP, do the following in OBI:

- a. Log into the WebLogic console on the OBI domain with your WebLogic administrator username and password.
- b. Under **Domain Structure** pane, click **Security Realms**.
- c. In the **Summary of Security Realms** page, click **myrealm**.
- d. In the **Settings for myrealm** page, click the **Users and Groups** tab.
- e. In the **Users** tab, click **New** to add the new user.
- f. In the **Create a New User** page:
  1. Enter the **Name** and **Password** for the new user.

**Note:** The user needs to match the user in P6. You can verify the correct usernames in P6 by running the following command against the P6 EPPM schema with the P6 privileged user account:

```
select user_name from USERS;
```

2. Click **OK**.
- g. In the **Setting for myrealm** page, click the user's name.
- h. In the **Settings for <user name>** page:
  1. Click the **Groups** tab.
  2. In the **Parent Groups Available** column, select group(s) and move them to the **Chosen** column.

**Note:** You can find the default OBI Application Roles here:  
[http://docs.oracle.com/cd/E14571\\_01/bi.1111/e10543/install.htm#CIHJBBGH](http://docs.oracle.com/cd/E14571_01/bi.1111/e10543/install.htm#CIHJBBGH)

3. Click **Save**.
- i. Repeat these steps if you need more users.

## P6 EPPM Privileges

For users to have access to the Star database, they must have module access rights configured in the P6 EPPM database. OBI Users must already be configured in OBI.

The following table describes the Star security:

| Type | Description |
|------|-------------|
|------|-------------|



|                           |                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OBS Access                | Users who have OBS access in the P6 EPPM module will have OBS access in OBI.                                                                                                                                                                                                                                                                        |
| Edit EPS Costs/Financials | Users who have access to projects in the P6 EPPM database, and who have this privilege set, will have the same privilege in the Star database.                                                                                                                                                                                                      |
| Resource Access           | Resource access can be set to one of the following: <ul style="list-style-type: none"> <li>▶ <b>All resource access</b> - The user will have unrestricted access to resources.</li> <li>▶ <b>None</b> - The user cannot access any resources.</li> <li>▶ <b>Specific resource access</b> - The user can only access a specific resource.</li> </ul> |

**Note:** After adjusting any P6 Security privilege, you must run the global security service, prior to running the ETL to ensure the correct privilege has been applied to the user account.

### Including Inactive Resources in the Star Tables

By default, Star tables filter out inactive resources. If you include inactive resources, the spread data and other dimension tables will also include them. You may not need to process this extra resource assignment information.

If you want to include inactive resources in the Star tables:

- 1) Edit the **staretl.properties** file.
- 2) Locate this statement:  

```
star.utilization.include.inactive.rsrc=false
```
- 3) Change the **=false** parameter to **=true**.







## Installing and Configuring Financial Periods

This section describes how to install and configure multiple Financial Periods.

### In This Section

|                                                          |    |
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| Configuring the OBI RPD File for Financial Periods ..... | 47 |

### Installing Financial Periods

P6 Reporting Database can use two additional financial periods. Use the following procedure to add the additional Financial Periods to your P6 Reporting Database:

**Note:** You must have previously run the `staretl` process.

- 1) Connect to your Star database instance with the STARUSER account.
- 2) Run a query to set the values for `fin_period_2` and `fin_period_3`. For example:  

```
update w_day_d set fin_period_2 = CHR(64 + cal_month) || '-' || cal_year;
update w_day_d set fin_period_3 = CHR(64 + cal_month) || '-' || cal_year;
```

Enter these queries as all one line.
- 3) Commit these changes.
- 4) Run the **staretl** process.

### Configuring the OBI RPD File for Financial Periods

Once you complete the above steps, you will need to configure your OBI RPD file to include the newly added Financial Periods.

To configure your OBI RPD file:

- 1) Open **OraclePrimaveraAnalytics.rpd** in the OBI Administration Tool.

**Note:** The default password for the OraclePrimaveraAnalytics.rpd is **Admin123**.

- 2) In the far right section (Physical), navigate to the **W\_DAY\_D** table.
- 3) Highlight the **FIN\_PERIOD\_2** and **FIN\_PERIOD\_3** fields, drag them into the middle section (Business Model and Mapping), and release them in the **Dim – Date** dimension.
- 4) After `FIN_PERIOD_2` and `FIN_PERIOD_3` appear in the Business Model and Mapping section under the Dim – Date dimension, you can drag them to the left section (Presentation) where you want them to appear in OBI. You can also rename them there, so they display as you require.



- 5) Save the **OraclePrimaveraAnalytics.rpd** file.



# Upgrading to the Latest Version

---

Upgrading P6 Analytics can involve multiple scenarios. These scenarios include upgrading the P6 Analytics ETL process files and the Star schema, upgrading a P6 Analytics repository definition file (.rpd), upgrading a catalog file, and/or upgrading Oracle Business Intelligence (OBI). This section will cover the recommended steps for upgrading P6 Analytics to the latest version. It will not cover the steps involved with upgrading OBI.

If you need to upgrade OBI, you should do that before upgrading P6 Analytics. For detailed steps for upgrading OBI, see one of the following:

- ▶ If upgrading from 10g,  
[http://docs.oracle.com/cd/E28280\\_01/upgrade.1111/e16452/upgrade\\_bi.htm](http://docs.oracle.com/cd/E28280_01/upgrade.1111/e16452/upgrade_bi.htm).
- ▶ If upgrading from 11g,  
[http://docs.oracle.com/cd/E28280\\_01/upgrade.1111/e16452/bi\\_plan.htm#BABECJH](http://docs.oracle.com/cd/E28280_01/upgrade.1111/e16452/bi_plan.htm#BABECJH)

You should always backup files that will be impacted by the upgrade. This includes database schemas, repository definition files (.rpd), OBI catalog files, and the entire P6 Analytics installation folder, including the staretl.properties file.

Once all backups are complete, the first step for upgrading is to install P6 Analytics 3.2. See **Installing and Configuring the Star Database** (on page 23).

After you install P6 Analytics, you must upgrade the Star schema. You can upgrade the Star schema from P6 Analytics 2.1 and above. You must run and verify the P6 Analytics 3.2 Star configuration prior to running the upgrade procedure because the upgrade procedure will run the full ETL.

## In This Section

---

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| Upgrading the Repository Definition File (.rpd) ..... | 53 |

### Upgrading the Star Database

Use the following procedure to upgrade to the latest version if the previous version of P6 Reporting Database included Star.



---

**Note:** The upgrade file only works if you are upgrading from R3.0 and above. If you are upgrading from any other previous release, you need to follow the instructions for upgrading to P6 Reporting Database R3.0 (see the "Upgrading the Star Database" section) before proceeding with these instructions. For instructions, go to [http://docs.oracle.com/cd/E27225\\_01/English/Install\\_and\\_Config/Admin\\_PDF\\_Library/p6\\_reporting\\_database\\_install\\_and\\_config\\_guide.pdf](http://docs.oracle.com/cd/E27225_01/English/Install_and_Config/Admin_PDF_Library/p6_reporting_database_install_and_config_guide.pdf).

---

- 1) Upgrade your P6 EPPM database to a supported version (see the *P6 EPPM Tested Configurations*).

---

**Note:** Before proceeding, Oracle recommends you backup your existing Star schema fully.

---

- 2) Follow the instructions in **Installing the Star Database** (on page 23). Refer to **Configuring the Star Database** (on page 25) for detailed instructions.

---

**Notes:**

- The P6 Reporting Database **must** be installed in a **new** directory. Do **not** install it in the same directory where you installed a previous version of P6 Reporting Database.
  - You will refer to your existing Star schema when you use the Configuration Utility to upgrade.
  - Run and verify the P6 Analytics 3.2 Star Configuration prior to running the upgrade procedure because the upgrade procedure will run the full ETL process.
- 

- 3) Run the following command:

```
ALTER USER STARUSER QUOTA unlimited ON STAR_HST1;
```

where *STARUSER* is the user name and *STAR\_HST1* is a tablespace. If you changed the *STARUSER* name, change it in the command; it should match the user name for the database you are upgrading.

- 4) Go to the **<star\_install\_folder>\star\scripts** and run **upgradeStar.bat** (or **upgradeStar.sh** when upgrading from a non-Windows system).

Once this finishes, your Star Schema will be P6 Reporting Database 3.2.

### Upgrading the P6 Analytics Catalog

Upgrading the P6 Analytics catalog, typically involves opening the new catalog in the new version of OBI, provided that the version of OBI is the same major release version (e.g., 11.1.1.x). However, once you open a catalog file in a later version, you can't open it in earlier versions of OBI.



---

**Note:** If you upgraded from OBI 10g to 11g, you need to run the upgrade assistant utility to upgrade the catalog.

---

The latest P6 Analytics catalog contains most of the Analyses and Dashboards that existed in previous releases of P6 Analytics. As new features and functionality are introduced in OBI, the P6 Analytics catalog attempts to demonstrate these new features. Once a catalog is deployed to a production environment, it will change, and therefore, this makes upgrading more of a merge process than an upgrade.

You can upgrade/merge your existing P6 Analytics analysis and dashboards without affecting the production deployment of your existing Oracle Business Intelligence catalog. One option is to deploy the latest P6 Analytics catalog in a test or sandbox environment. Having a test/sandbox environment gives business users the ability to examine the new catalog without affecting the production server. See the section "Configuring OBI 11.1.1.x to Use the P6 Analytics Repository Definition (.rpd) and Catalog" in the *Post Installation Guide* for details on how to deploy the P6 Analytics Repository Definition File (.rpd) and catalog to Oracle Business Intelligence. The business user could identify or mark the analysis and dashboards that they need to have transferred to the production environment. To avoid any compatibility issues in transferring analysis/dashboards between versions, it is highly recommended that the test/sandbox Oracle Business Intelligence environment be the exact same version as the production OBI version.

You have a few options for upgrading to the new catalog.

- ▶ **Archive the new catalog.** See **Method 1: Archiving the P6 Analytics Catalog** (on page 51). BI Publisher documentation says to use this if you need to download or upload a small number of objects, the download feature of the BI Publisher catalog enables you to bundle and download multicomponent objects (such as reports) in an archive file. You can then use the upload feature to unarchive the data to another location in the catalog.
- ▶ **Use the Catalog Manager.** See **Method 2: Using the Catalog Manager** (on page 52). BI Publisher documentation says to use this tool to manage BI Publisher reports using a third-party tool as a source control or when you need to move a specific set of reports from a development environment to a quality assurance or production environment. The catalog utility can also be used to help manage translations of reporting objects.

### Method 1: Archiving the P6 Analytics Catalog

One option for upgrading your catalog is to use the archiving option in OBI. OBI (11.1.1.7 and later releases) has the ability to archive and unarchive individual objects, including folders, dashboards, and analysis. This process can be used to move objects within the same OBI catalog, to backup individual objects, or to move objects from one catalog to another. If using OBI 11.1.1.6 or earlier, the archiving option is not available and the Catalog Manager will need to be used to upgrade your catalog.

To archive an object in OBI, perform the following steps:



---

**Note:** Don't perform these steps if you plan to use the Catalog Manager instead. See **Method 2: Using the Catalog Manager** (on page 52).

---

- 1) Login to OBI with a user account that has the privilege to use the archive/unarchive function.
- 2) Select **Catalog**.
- 3) Navigate to any object (folder, dashboard, and/or analysis).
- 4) Highlight the object and select the Archive option in the Tasks section of the catalog window.
- 5) Select **Yes** when the archive menu asks if you want to keep permissions and timestamps.
- 6) Save the file with the extension **.catalog**. The archive of this object is complete.

---

### Unarchiving the P6 Analytics Catalog

You need to unarchive the archive you created.

To unarchive an existing OBI archive:

- 1) Login to OBI with a user account that has the privilege to use the archive/unarchive function.
- 2) Click **Catalog**.
- 3) Navigate to the parent folder location in the new catalog where you would like to unarchive the archive file.
- 4) Highlight the folder where you would like to unarchive the archive file and click the unarchive option in the **Tasks** section.
- 5) In the unarchive window, select the location of the archive folder that was created in the steps above.

This window will also allow you to replace or update any object in the folder that is the same as the archive file that is being unarchived.

You will also be able to Inherit, Preserve, or Create the Access Control List (ACL) for the object being brought into the catalog.

### Method 2: Using the Catalog Manager

Another option for upgrading the catalog is to use the OBI Catalog Manager. Catalog Manager lets you perform online and offline management of OBI Presentation Catalogs. You should install it on a secure computer that is accessible only to Oracle BI Administrators.



Using this method involves a copy and paste procedure for copying an object (folder, dashboard, or analysis) from the source catalog (test/sandbox) to the target catalog (production).

To copy and paste objects between catalogs using menus:

---

**Note:** Don't perform these steps if you plan to archive the catalog instead. See **Method 1: Archiving the P6 Analytics Catalog** (on page 51).

---

- 1) In **Catalog Manager**, open the catalog that will be used as the target catalog.
- 2) Open another instance of **Catalog Manager** and open the catalog that contains the objects to copy (source catalog).

---

**Note:** If necessary, reposition both instances of Catalog Manager on your screen so you can display the title bars of both Catalog Manager instances.

---

- 3) In the source catalog, right-click the source object(s) and select **Copy**.
- 4) In the target catalog, right-click at the point where you want to paste the source object and select **Paste**.

---

**Note:** See the following link for details about Oracle Catalog Manager:  
[http://docs.oracle.com/cd/E23943\\_01/bi.11111/e10541/prescatadmin.htm](http://docs.oracle.com/cd/E23943_01/bi.11111/e10541/prescatadmin.htm)

---

## Upgrading the Repository Definition File (.rpd)

Upgrading an OBI repository definition file (.rpd) can be as easy as deploying the latest rpd file into your test/sandbox and production instance. However, this upgrade will overwrite and replace any modifications made to the existing .rpd file.

Another upgrade method will preserve changes made to previous versions of the repository definition and incorporate the latest changes. This method is more complex and requires the Oracle BI Administrator Tool.

Both methods are detailed in the following sections.

Make a backup of your existing rpd file before proceeding with any of the steps in this section.

## Deploying the New Repository Definition (.rpd) to OBI

If you didn't make changes to your existing rpd file and want to deploy the latest rpd file:



- 1) Go to **<download>\obi\rpd** folder.  
where **download** is the location where you downloaded the P6 Analytics install file  
Examples:
  - ▶ For OBI 11.1.1.6: **\P6\_R32\_Analytics\obi6\rpd**
  - ▶ For OBI 11.1.1.7: **\P6\_R32\_Analytics\obi7\rpd**
- 2) Copy the **OraclePrimaveraAnalytics** file to the **repository** folder on the server where you installed OBI.
  - ▶ For Oracle Enterprise Edition, copy the **OraclePrimaveraAnalytics.rpd** file.
  - ▶ For Oracle Standard Edition, copy the **OraclePrimaveraAnalyticsSe.rpd** file.

Example:  
\$ORACLE\_INSTANCE/instances/instance1/bifoundation/OracleBIServerComponent/coreapplication\_obips1/repository
- 3) Login to Oracle Enterprise Manager for your installation of OBI.  
`http://ipaddress:port/em`  
where *ipaddress* is the IP address of your installation and *port* is the port number of your installation of OBI
- 4) Expand the Business Intelligence folder by clicking **+**.
- 5) Double-click on the name of your deployment.
- 6) Click **Lock and Edit Configuration**.
- 7) In the **Deployments** tab, select the **Repository** sub tab.
- 8) In the **Upload BI Server Repository** section, click **Browse** next to your repository in the list.
- 9) In the **Select File** box, navigate to the location of the .rpd file.
- 10) Enter the password into the **Repository** password and **Confirm** password fields.

---

**Note:** The default password for the Oracle Primavera repository is **Admin123**.

---

- 11) Click **Apply**.
- 12) Click **Activate Changes**.
- 13) Click **Restart** to apply the changes.
- 14) Under the **Manage System** section, in the **Overview** page, click **Restart**.
- 15) Logout of Oracle Enterprise Manager.

### Updating the Existing P6 Analytics Repository Definition (.rpd)

Use this section if you made custom updates to your existing definition file (.rpd) and want to retain them. Updating a modified repository definition file (.rpd) requires the Oracle BI Administration tool. There are two methods to updating a Repository Definition (.rpd) file.



- ▶ The first method involves comparing the original repository definition file with the new repository definition file to generate an XML file with the differences between the two files. You can then use the XML file to determine which updates get applied to the repository definition file. Use this option if you want to manually choose what updates are applied.
- ▶ The second method allows the Oracle Business Intelligence Administration tool to create a merged repository definition file based on the differences between two repositories (original .rpd and new .rpd). This method is commonly referred to as a three merge because there are three files involved: the original .rpd file, the new .rpd file, and the merged .rpd file, which will be created as a result of this method being used. Use this option if you want to use a tool to determine what changes are applied.

For details about the Oracle BI Administration Tool, see the following link  
[http://docs.oracle.com/cd/E21764\\_01/bi.1111/e10540/planning.htm](http://docs.oracle.com/cd/E21764_01/bi.1111/e10540/planning.htm).

---

**Note:** Regardless of the method you choose, backup of the original repository definition file (.rpd) before you change the rpd.

---

---

### Creating and Applying an XML Difference file to the .rpd File

To generate an XML file that contains the differences between two repository definition (.rpd) files:

---

**Note:** Don't perform these steps if you plan to merge the two files instead. See **Merging Two Repository Definition (.rpd) Files** (on page 57).

---

- 1) Copy the original Repository Definition file and the new .rpd file into a new folder.
- 2) Launch the Oracle BI Administration tool.
- 3) Select **File, Open, Offline...**
- 4) From the open submenu, choose the new.rpd file (the file that contains the updates that you want to apply to the original .rpd file).
- 5) After the new file opens, in the BI Administration tool, select **File, Compare**.
- 6) In the **Compare repositories** window, click the **select, repository...** button to select the original .rpd file (the copy of the rpd file that is currently deployed in the Oracle Business Intelligence environment).
- 7) Choose **No** when asked if you want to mark differences in the repository immediately.

---

**Note:** The process will compare the two repositories. The Compare repositories window will contain a list of all the differences between the two repositories.

---

- 8) Click **Create Patch** to create an XML file that contains these identified differences.



- 9) In the **Create Patch** window:
  - a. Choose a location to save the XML file.
  - b. Create a name for the differences XML file.
  - c. Leave the **Save as type** option as **XML files**.
- 10) Merge the differences XML file into an .rpd file:
  - a. Launch the Oracle BI Administration tool.
  - b. Select **File, Open, Offline....**
  - c. From the open sub menu, choose the original .rpd file (the copy of the rpd file that is currently deployed in the OBI environment).
  - d. After the original file is open in the BI Administration tool, select **File, Merge....**
- 11) In the **Merge Repository** wizard:
  - ▶ **Merge Type:** Patch Repository Merge
  - ▶ **Original Master Repository:** The copy of the original .rpd file.
  - ▶ **Repository Password:** The password for the original .rpd file.

---

**Note:** The default password is **Admin123**.

---

- ▶ **Patch File:** The file saved above.
- ▶ **Save Merged Repository as:** A new file name and location which represents the repository definition file that contains the merged repository.
- ▶ **Repository Password:** The password for the newly created merged .rpd file.

---

**Note:** The default password is **Admin123**.

---

Click **Next**.

---

**Note:** This process may take a few minutes while the wizard processes the XML file and creates the new merged .rpd file.

---

- 12) On the **Define Merge Strategy** window, decide how to apply the differences in the XML file to the original .rpd file. See the following link for more details about this process: [http://docs.oracle.com/cd/E28271\\_01/fusionapps.11111/e20836/merge.htm](http://docs.oracle.com/cd/E28271_01/fusionapps.11111/e20836/merge.htm).
- 13) Click **Finish** to create the merged .rpd file.
- 14) If you moved the .rpd to a new OBI installation, do the following:

---

**Note:** If you did not move the .rpd to a new OBI installation, skip these steps.

---

- a. Copy the **OraclePrimaveraAnalytics** file to the **repository** folder on the server where you installed OBI.

Example:

```
$ORACLE_INSTANCE/instances/instance1/bifoundation/OracleBIServerComponent/coreapplication_obips1/repository
```



- b. Login to Oracle Enterprise Manager for your installation of OBI.  
`http://ipaddress:port/em`  
where *ipaddress* is the IP address of your installation and *port* is the port number of your installation of OBI
- c. Expand the Business Intelligence folder by clicking **+**.
- d. Double-click on the name of your deployment.
- e. Click **Lock and Edit Configuration**.
- f. In the **Deployments** tab, select the **Repository** sub tab.
- g. In the **Upload BI Server Repository** section, click **Browse** next to your repository in the list.
- h. In the **Select File** box, navigate to the location of the .rpd file.
- i. Enter the password into the **Repository** password and **Confirm** password fields.

---

**Note:** The default password for the Oracle Primavera repository is **Admin123**.

---

- j. Click **Apply**.
- k. Click **Activate Changes**.
- l. Click **Restart** to apply the changes.
- m. Under the **Manage System** section, in the **Overview** page, click **Restart**.
- n. Logout of Oracle Enterprise Manager.

---

### Merging Two Repository Definition (.rpd) Files

To merge the original repository definition with the new repository definition file:

---

**Note:** Don't perform these steps if you plan to update the definition (.rpd) file by creating and applying an XML Difference file. See **Creating and Applying an XML Difference file to the .rpd File** (on page 55).

---

- 1) Copy the original Repository Definition file and the new .rpd file into a new folder.
- 2) Launch the Oracle BI Administration tool.
- 3) Select **File, Open, Offline...**
- 4) From the open sub menu, choose the original .rpd file (the copy of the rpd file that is currently deployed in the OBI environment).
- 5) After the original file is open in the BI Administration tool, select **File, Merge...**
- 6) In the **Merge Repository** wizard:
  - ▶ **Merge Type:** Full Repository Merge
  - ▶ **Original Master Repository:** The copy of the original .rpd file.
  - ▶ **Repository Password:** The password for the original .rpd file.



---

**Note:** The default password is **Admin123**.

---

- ▶ **Modified Repository:** The copy of the new .rpd file that will be merged with the original .rpd file.
  - ▶ **Repository Password:** The password for the new .rpd file.
- 

**Note:** The default password is **Admin123**.

---

- ▶ **Save Merged Repository as:** A new file name and location which represents the repository definition file that contains the merged repository.
  - ▶ **Repository Password:** The password for the newly created merged .rpd file.
- 

**Note:** The default password is **Admin123**.

---

- 7) Click **Next**. This will perform the merge process and open up the newly merged file with the name given above.
  - 8) If you moved the .rpd to a new OBI installation, do the following:
- 

**Note:** If you did not move the .rpd to a new OBI installation, skip these steps.

---

- a. Copy the **OraclePrimaveraAnalytics** file to the **repository** folder on the server where you installed OBI.

Example:

```
$ORACLE_INSTANCE/instances/instance1/bifoundation/OracleBIServerComponent/coreapplication_obips1/repository
```

- b. Login to Oracle Enterprise Manager for your installation of OBI.

`http://ipaddress:port/em`

where *ipaddress* is the IP address of your installation and *port* is the port number of your installation of OBI

- c. Expand the Business Intelligence folder by clicking **+**.
  - d. Double-click on the name of your deployment.
  - e. Click **Lock and Edit Configuration**.
  - f. In the **Deployments** tab, select the **Repository** sub tab.
  - g. In the **Upload BI Server Repository** section, click **Browse** next to your repository in the list.
  - h. In the **Select File** box, navigate to the location of the .rpd file.
  - i. Enter the password into the **Repository** password and **Confirm** password fields.
- 

**Note:** The default password for the Oracle Primavera repository is **Admin123**.

---

- j. Click **Apply**.



- k. Click **Activate Changes**.
- l. Click **Restart** to apply the changes.
- m. Under the **Manage System** section, in the **Overview** page, click **Restart**.
- n. Logout of Oracle Enterprise Manager.

### Upgrading Custom P6 Analytics Reports

Before you complete these steps, ensure you have upgraded the catalog and .rpd. To upgrade your P6 Analytics 2.x and earlier reports:

**Note:** You can skip this section if you upgraded from R3.0 or later.

- 1) Login to OBI 11g Analytics (<http://server:port/analytics>) with an BIAdministrator account.
- 2) Navigate the catalog tree to the Analysis you want to upgrade.
- 3) Click **Edit** under the Analysis you want to upgrade.
- 4) If you get one of the following errors:
  - ▶ Under Subject Areas: "Either you do not have permission to use the subject area <SubjectArea> within answers, or the subject area does not exist".
  - ▶ Under Compound Layout: "Error: 'View Display Error. ODBC Driver Returned an Error (SQLExecDriverW)".
  - a. Click the **+** symbol next to the **Error details** link to see the specific elements that need correcting.
  - b. Click the **Advanced Tab** and modify the **Analysis XML** section.
  - c. Use the browser find feature (CTRL + f) to find all references to unresolved Subject Areas. Replace all instances with the new subject area.
  - d. After replacing all values, click the **Apply XML** button.
  - e. Click the Save option on the toolbar to save the analysis.
- 5) Click the **Results** tab to display the results of the analysis.
  - ▶ If no errors display, then you have completed the upgrade for this report.
  - ▶ If there are still errors, repeat the above steps for the elements that have been changed/moved from the previous version of P6 Analytics.

### Updating the OraclePrimaveraAnalytics.rpd for P6

If you are using P6, and want to launch it from P6 Analytics, you must update the OraclePrimaveraAnalytics.rpd file with the correct URL and context root for P6 Analytics.

The following steps are only necessary in that case.

- 1) Open **OraclePrimaveraAnalytics.rpd** with the BI Administrator Tool.



---

**Note:** The default password for the OraclePrimaveraAnalytics.rpd is **Admin123**.

---

- 2) Access **Manage, Variables**.
- 3) Under the **Repository Node**, select **Variables**.
- 4) Locate the variable **DW\_P6\_LINK\_BASE\_URL**, double-click that variable.
- 5) When the edit dialog opens, modify the Default\_Initializer with the correct P6 URL. For example:

`http://localhost:port/p6/login`

where *localhost* is your P6 server's host name and *port* is the port number for P6 (this could be 7001 or 8203 depending on how you configured and deployed P6)



# Running the Configuration Utility

---

This section describes how to run the Configuration Utility to reconfigure Settings, Options, and Codes after you install and configure P6 Reporting Database.

## In This Section

---

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### Overview of the Configuration Utility for Star

This section describes where to find the information you need to change settings and options after you install and configure the Star database.

For the Star database, you can change:

- ▶ Java Runtime Environment Location
- ▶ Logging Detail Level
- ▶ Thread Settings
- ▶ Activity, Project, and Resource codes
- ▶ Activity, Project, and WBS UDFs



Ensure the configuration utility is access-control protected and under administrative control.

### Running the Configuration Utility for the Star Database

Do the following to run the Configuration Utility for the Star database:

---

**Note:** To change passwords, you must manually change them with a user that has database administrative privileges. If the administrative user changes the staruser password, they must re-run the Configuration Utility and enter the new user password.

---

- 1) Locate the folder where you installed P6 Reporting Database.
- 2) Run **configStar.cmd**.  
See **Configuring ETL Settings for Star** (on page 27) for information on configuring these settings.
- 3) Click **Finish**.







# Configuring the Secure Sockets Layer

---



This section describes how to configure the Secure Sockets Layer (SSL). SSL ensures a secure connection between servers over the network.

## In This Section

---

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### Configuring the SSL Connection

Use My Oracle Support's Knowledge article: 762286.1: *End to End Examples of using SSL with Oracle's JDBC THIN Driver*. This article will provide examples of:

- ▶ Creating a self-signed Oracle wallet for the server and client.
- ▶ Configuring the database to use TCPS with the server key.
- ▶ Configuring a SQL client to connect through the TCPS protocol.
- ▶ Creating simple java clients that show how to connect through TCPS in several different examples.

Use these examples to guide you in creating your SSL connection.

---

**Note:** Oracle assumes that you understand the concept of wallets and the Secure Socket Layer (SSL) functionality.

---

### Configuring Star to Use SSL to Run the ETL Process



Currently, the P6 Reporting Database Configuration Utility does not allow the staretl.properties file to be directly configured for TCPS. After it is initially configured for TCP, and after the SSL connection is configured, you must manually configure the P6 Reporting Database so that SSL is used to run the ETL process.

- 1) Using the wallet manager or OraclePKI:
  - a. Export the trusted certificate that is on the server.
  - b. Copy it to the client where you installed P6 Reporting Database.
- 2) On the client machine, import the certificate using the keytool. For example:

```
C:\Program Files\Java\jre1.7.0_XX\bin>keytool -importcert -file
C:\wallets\server_wallet\cert.txt -keystore "C:\Program
Files\Java\jre1.7.0_XX\lib\security\cacerts"
```



---

**Note:** The default password for the Java default keystore file JAVA\_HOME/lib/security/cacerts is **changeit**.

---

- 3) Edit the staretl properties file as follows:
  - a. Replace all occurrences of the default port number with the number of the SSL port.
  - b. Replace all occurrences of **PROTOCOL = TCP** with **PROTOCOL = TCPS**.
- 4) Go to the installation directory **etl\common\** folder and run the **runSubstitution.cmd** file to update all files with the new port number and TCPS setting.
- 5) Go to the **ERDB\_HOME\scripts** directory.
- 6) Edit the **staretl.bat** (or **staretl.sh**)
- 7) Add the following variable to the first line of the file:

**For Windows:**

```
SET PRM_SSL_CONNECTION=Y
```

**For Linux:**

```
EXPORT PRM_SSL_CONNECTION=Y
```



# Utility Tables, Log Files, and Troubleshooting

This section describes the log files that can provide information about the installation and daily operation of P6 Reporting Database.

In case a problem occurs, this section tells where to get help if the log files do not provide sufficient information.

## In This Section

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### Star Log Files

P6 Reporting Database creates extensive log files for each step of the staretl processes. The log files are stored in a 'log' folder in the root of the P6 Reporting Database installation location.

The log files contain detailed information that you should inspect after running each file in the installation process and after running the database refresh process.

#### Log files

The following lists the log files, identifies when they are created, and gives a brief description of their contents:

| File                | Description                                                                                                                                                                                                                                                                                   |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| staretlprocess.log  | Created when staretlprocess.bat (or staretlprocess.sh) is run. Contains the details of the SQL commands run to perform the database refresh updates.                                                                                                                                          |
| staretlprocess.html | Created when staretlprocess.bat (or staretlprocess.sh) is run. Contains results of the processes run to create the users, tables, and transfer of data. Provides the time it took for each step to run. Derived from the ETL_PROCESSMASTER, ETL_PROCESSINFO, and ETL_PROCESSEXCEPTION tables. |



## Troubleshooting for Star

P6 Reporting Database writes detailed process information to the “log” directory under the P6 Reporting Database home folder. The log directory contains information about the installation, as well as about each run of the staretl process. If an error occurs, depending on the nature of the error, the files of the log directory may include diagnostic information. Analyzing these files can help lead you to the resolution or to the file or process that caused the error.

### Oracle Database Gateway 11.2 Reporting Incorrect Column Size

If the Oracle Database Gateway 11.2 reports incorrect column size, and the extract fails, ensure that the following are set in the **initdg4msql.ora** file:

- ▶ HS\_NLS\_LENGTH\_SEMANTICS=CHAR
- ▶ HS\_FDS\_CHARACTER\_SEMANTICS = TRUE
- ▶ HS\_KEEP\_REMOTE\_COLUMN\_SIZE=ALL

### The configuration utility does not launch during the P6 Reporting Database installation process

If you are installing P6 Reporting Database and the Configuration utility never launches, the location of the JRE may be incorrect. To correct this issue, run the following:

- ▶ For Star on a Microsoft Windows system:  
    **\Disk1\install\setup.exe**
- ▶ For Star on a non-Microsoft Windows system:  
    **\Disk1\install\runInstaller**

Ensure that you specify the correct location for your systems Java Runtime Environment (JRE). The installer will show you an example of the correct path.

### ETL and OBI query performance

P6 Reporting Database has default hints that are added based on data samples. The hints aim to improve performance across all data sets. To further improve performance, you can add non-default hints to P6 Reporting Database. You should investigate adding non-default hints if you see bottlenecks in the OBI query performance or when you run the ETL process on your data set.

### Contacting Customer Support

See **Where to Get Support** (on page 71) for detailed information about contacting Customer Support.

If you have a question about using P6 Reporting Database that you or your network administrator cannot resolve with information in the documentation, please contact Customer Support.



# Uninstalling P6 Reporting Database

---

This section describes how to uninstall the P6 Reporting Database for Windows and non-Windows systems. For information on supported Windows and non-Windows platforms, see the *Tested Configurations* document on the release media or download.

## In This Section

---

Uninstalling the Software..... 67

### Uninstalling the Software

To uninstall P6 Reporting Database, perform the following steps:

- 1) From the P6 Reporting Database physical media or download location, run one of the following depending on your system type:
  - ▶ If you are uninstalling P6 Reporting Database on a Microsoft Windows system:  
**Windows\Disk1\install\setup.exe**
  - ▶ If you are uninstalling P6 Reporting Database on a non-Microsoft Windows system:  
**<Operating System>\Disk1\install\runInstaller**
- 2) Click **Deinstall Products**.
- 3) Select the name that represents the P6 Reporting Database installation and click **Remove**.

You determined the name that represents the P6 Reporting Database installation when you installed the product. You can remove multiple installations at this time.
- 4) If the name of the item to remove is correct, click **Yes** to confirm.
- 5) Click **Close**.
- 6) Click **Cancel** and then **Yes** to confirm.
- 7) If you are uninstalling on a Microsoft Windows system, delete the *installation folder/p6rdb* folder, where *installation folder* is the folder in which you installed P6 Reporting Database.







# For More Information

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## Where to Get Documentation

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

[http://download.oracle.com/docs/cd/E49048\\_01/index.htm](http://download.oracle.com/docs/cd/E49048_01/index.htm)

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

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

The following table describes the core documents available for P6 Analytics and lists the recommended readers by role.

| Title                                                                   | Description                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>What's New in P6 Analytics</i>                                       | <p>This guide highlights the new and enhanced features included in this release.</p> <p>You can also use the <i>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>P6 Analytics and P6 Reporting Database Planning and Sizing Guide</i> | <p>This guide details how to plan your installation and ensures you have the necessary technical specifications to successfully install P6 Analytics and P6 Reporting Database. It also includes checklists for P6 Analytics and P6 Reporting Database to help guide you through the installation.</p> <p>All administrators should read this guide.</p> |



| Title                                                                      | Description                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>P6 Analytics and Star Database Installation and Configuration Guide</i> | <p>This guide gives step-by-step instructions for installing and configuring P6 Analytics and the Star database portion of P6 Reporting Database.</p> <p>All administrators should read this guide.</p>                                                                                                                                                                                                              |
| <i>P6 Reporting Database for ODS Installation and Configuration Guide</i>  | <p>This guide explains how to install and configure the ODS portion of P6 Reporting Database. It describes how to install and configure the Oracle Gateway if the P6 Reporting Database is installed on a Microsoft SQL Server. It also provides information about how to run the Configuration Utility and configure P6 Reporting Database with BI Publisher.</p> <p>All administrators should read this guide.</p> |
| <i>P6 Analytics Post Installation Administrator's Guide</i>                | <p>This guide provides information about P6 Analytics administrative tasks. It also includes information for Star security configuration, OBI installation and configuration, Financial Periods installation and configuration, and for configuring the Secure Sockets layer.</p> <p>All administrators should read this guide.</p>                                                                                  |
| <i>P6 Analytics Reference Manual</i>                                       | <p>This manual has examples of sample dashboards and Burn Down activity use cases. It also tells users how to get started with P6 Analytics.</p> <p>All non-administrator users should read this guide.</p>                                                                                                                                                                                                          |
| <i>P6 EPPM and P6 Analytics 3.2 System Architecture Data Sheet</i>         | <p>The data sheet provides information on P6 EPPM, P6 Analytics, and P6 Reporting Database. It also provides a diagram to show how all products work together.</p> <p>All administrators should read this guide.</p>                                                                                                                                                                                                 |
| <i>Security Guidance for P6 Analytics and P6 Reporting Database</i>        | <p>This guide enables you to plan your security strategy for P6 Analytics and P6 Reporting Database. It includes information on safe deployments, authentication options, and specific security settings for the Star and ODS database.</p> <p>All administrators should read this guide.</p>                                                                                                                        |
| <i>Tested Configurations</i>                                               | <p>Lists the configurations that have been tested and verified to work with P6 Analytics.</p> <p>The network administrator/database administrator and P6 Analytics administrator should read this document.</p>                                                                                                                                                                                                      |



### Distributing Information to the Team

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

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

## Where to Get Training

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

<http://education.oracle.com>

### Oracle Learning Library

The Oracle Learning Library (OLL) provides online learning content covering Primavera products. Content includes 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/goto/oll>

## Where to Get Support

### 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.
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## Legal Notices

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