

ORACLE®

PRIMAVERA

**P6 Analytics Post Installation Administrator's Guide
R3.2**

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About the P6 Analytics Post Installation Administrator's Guide

Once you have installed and configured the Star Database and P6 Analytics, this guide will tell you how to begin using them. You should complete most of the tasks in this guide before you let your users work with these applications.

Configuring P6 Analytics

Before you configure P6 Analytics, you must:

- ▶ Install P6 EPPM and create a P6 EPPM database.
- ▶ Run the P6 EPPM Extended Schema Publication Services to populate the P6 EPPM Extended Schema data.

You should also install and configure the Star database portion of P6 Reporting Database. For detailed installation and configuration information, see the installation guide for the Star Database.

Note: If you are using the Star database for 3rd-party reporting tools (non-OBI), you can skip this section.

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Configuring P6 Analytics with OBI

This section describes how to configure P6 Analytics with OBI.

Note: See the *Tested Configurations* document for the supported version of OBI.

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Overview of OBI

OBI is a comprehensive suite of Business Intelligence foundation and applications designed to enable the insight-driven enterprise. It integrates data from multiple enterprise sources, and transforms it into key insights that enable strategic decision-making, drive continual business process improvements, and promote alignment across the enterprise.

The OBI infrastructure consists of servers, programs, and tools used to build OBI applications. The OBI product includes an installer program that can install the complete OBI suite, or one or more OBI product components.

Once OBI is installed, apply and configure P6 Analytics to your OBI deployment. P6 Analytics provides the following default dashboards:

- ▶ Main
- ▶ Portfolio Analysis
- ▶ Project Earned Value
- ▶ Project Health
- ▶ Resource Analysis
- ▶ Industry Samples

Note: Any customization done to the existing RPD or Catalog must be reapplied after the installation. It may be necessary to merge the RPD and Catalog with the new RPD and Catalog delivered with this version of P6 Analytics.

For information about the Business Intelligence & Data Warehousing Technology Center, go to the following website:

<http://www.oracle.com/technology/tech/bi/index.html>

For information about the Business Intelligence & Data Warehousing documentation, go to the following website:

http://www.oracle.com/technology/documentation/bi_ee.html

For information about configuring an Impersonator User to be used with Single Sign-On for OBI, go to the following website:

http://download.oracle.com/docs/cd/E12096_01/books/AnyDeploy/AnyDeploySSO5.html

Installing OBI

For information on installing OBI, go to the following website:

http://docs.oracle.com/cd/E23943_01/index.htm

Prerequisites for Upgrading P6 Analytics

Before you upgrade from R2.0 or later to R3.2, ensure you:

- 1) Install OBI (see the *Tested Configurations* document for supported versions).
- 2) Deploy the R3.2 .rpd file into Analytics.
 - ▶ For OBI 11.1.1.6: **\P6_R32_Analytics\obi6\rpd**
 - ▶ For OBI 11.1.1.7: **\P6_R32_Analytics\obi7\rpd**
- 3) Copy your existing P6 Analytics catalog to the OBI location. The default location is:
\$ORACLE_INSTANCE/instances/instance1/bifoundation/OracleBIPresentationServices Component/coreapplication_obips1/catalog
- 4) Run the OBI 11g Upgrade Assistant (UA) on your existing OBI catalog:
 - a. Go to \Oracle_BI1\bin\ and run the ua.bat or ua.sh (if non-Windows).
 - b. On the first screen, select **Upgrade Oracle BI RPD and Presentation Catalog**.
 - c. On the second screen, select **Upgrade Catalog**.
 - d. Enter the locations for the required fields:
 - Web Catalog Directory:** Browse to the Web Catalog Directory for P6 Analytics.
 - e. Continue with rest of screens.

Once UA is completed, you can use this catalog entirely or take certain reports and put them into the new sample catalog provided with P6 Analytics 3.2 (All Analysis that shipped with 2.0 or later have been upgraded and are included in the catalog that ships with Primavera Analytics R3.2.)

- 5) Configure P6 Analytics with the catalog provided with P6 Analytics 3.2 (with certain reports copied into the new catalog). For instructions to configure a catalog with P6 Analytics, refer to the **Configuring P6 Analytics** (on page 7).

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.

Verifying a TNSNAMES.ora File Exists

You will need a TNSNAMES.ora file for the Star Schema to function properly:

- 1) Browse to <OBI_Home>\Oracle_BI1\network\admin (the default OBI_Home is \Oracle\Middleware).
- 2) Locate the TNSNAMES.ora file.

If it exists, you can continue to the next section.

If it does not exist, you will need to create it.

- 3) To create a TNSNAMES file:
 - a. Copy it from any existing Oracle Home.
 - b. Place it in the <OBI_Home>\Oracle_BI1\network\admin location mentioned above.
 - c. Edit the file you copied with a text editor.
 - d. Add the following reference to the TNSNAMES.ora file:

```
STARDW =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP) (HOST = <hostname>) (PORT =
<portnumber>))
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = <ServiceName>)
    )
  )
```

where *hostname* is the IP address or name where the Star database is installed, *portnumber* is the port number where the Star database is installed, and *ServiceName* is the service name you used when you installed the Star database

Resolving Multiple Oracle Homes to Work with OBI

If you have multiple Oracle homes on the OBI server:

- 1) Browse to:
<OBI_HOME>\instances\<your_instance>\bifoundation\OracleBIApplication\coreapplication\setup
- 2) Edit the **bi-init.cmd** or **bi-init.sh** (depending on your operating system) file in Wordpad.

Note: The information in bi-init file will not resolve correctly in Notepad.

- 3) Check for the following reference:

If using Windows:

```
call
<OBI_HOME>\instances\<your_instance>\bifoundation\OracleBIApplication\
coreapplication\setup\user.cmd
```

If using non-Windows:

```
<OBI_HOME>/instances/<your_instance>/bifoundation/OracleBIApplication/
coreapplication/setup/user.sh
```

4) Based on what is in the bi-init file:

a. If the reference exists:

1. Close the **bi-init** file.
2. Edit the **user.cmd** or **user.sh** file from the path referenced above.
3. In the **user** file, add the following reference:

If using Windows:

```
set TNS_ADMIN=<OBI_Home>\Oracle_BI1\network\admin
where <OBI_Home> is the location of OBIEE Home (the default is
\Oracle\Middleware\)
```

If using non-Windows:

```
TNS_ADMIN=<OBI_Home>/Oracle_BI1/network/admin
where <OBI_Home> is the location of OBIEE Home (the default is /Oracle/Middleware/)
```

b. If the reference does not exist, add the following reference in the **bi-init** file:

If using Windows:

```
set TNS_ADMIN=<OBI_Home>\Oracle_BI1\network\admin
where <OBI_Home> is the location of OBIEE Home (the default is
\Oracle\Middleware\)
```

If using non-Windows:

```
TNS_ADMIN=<OBI_Home>/Oracle_BI1/network/admin
where <OBI_Home> is the location of OBIEE Home (the default is
/Oracle/Middleware/)
```

5) Restart the OBI processes for the changes to take effect.

Verifying the STARDW Alias

If you are not using an alias of STARDW, you can update the alias that exists for the Star database:

1) Open the **OraclePrimaveraP6Analytics.rpd** file in the BI Administration Tool.

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

- 2) Select **Manage, Variables**.
- 3) Double-click the **DW_DSN** variable.
- 4) In the **Default Initializer** field, modify the 'STARDW' value with the correct alias for the Star instance.
- 5) Select **OK** and close the **Variable Manager**.
- 6) Select **File, Save** to save the changes.
- 7) Select **File, Exit** to close out of the BI Administrator.

Updating the OraclePrimaveraAnalytics.rpd with the Correct Staruser Name and Password

If you are not using the default staruser name and password, you must change them in the **OraclePrimaveraP6Analytics.rpd** file:

- 1) Change the username:
 - a. Open the **OraclePrimaveraP6Analytics.rpd** file in the BI Administration Tool.

Note: The default password for the Oracle Primavera repository is **Admin123**.
 - b. Select **Manage, Variables**.
 - c. Under the **Repository Node**, select **Variables**.
 - d. Double-click the **DW_USERNAME** variable.
 - e. In the **Default Initializer** field, modify the value 'STARUSER' with the correct staruser name in your environment.
 - f. Select **OK** and close the **Variable Manager**.
- 2) Change the password:
 - a. Right-click the Physical connection source (the default is **Oracle Primavera P6 Data Warehouse**) and select **Properties**.
 - b. Select the **Connection Pools** tab.
 - c. Double-click the **Oracle Primavera P6 Data Warehouse Connection Pool**.
 - d. On the **General** tab, change the password to the staruser password in your environment.
 - e. Click **OK** and re-enter the password to confirm the change.
 - f. Select **OK** to close the properties screen.
 - g. Select **File, Save** to save the changes.
- 3) Select **File, Exit** to close out of the BI Administrator.

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)

Configuring OBI 11.1.1.6 to Use the P6 Analytics Repository Definition (.rpd) and Catalog

To copy the P6 Analytics definition file:

- 1) Go to **<download>\obi\rpd** folder.
where **download** is the location where you downloaded the P6 Analytics install file for OBI 11.1.1.6. For example: **\P6_R32_Analytics\obi6\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) Go to the **download\obi\catalog** folder.
where **download** is the location where you downloaded the P6 Analytics install file.
- 4) Change the name of the **PrimaveraAnalytics** folder to **P6** then copy it to your **catalog** folder on the server where you installed OBI.

Example:

```
$ORACLE_INSTANCE/instances/Instance1/bifoundation/OracleBIPresentationServicesComponent/coreapplication_obips1/catalog
```

Note: If you get an error that the Windows path is too long, you can put the folder in a different location with a shorter path. Changing the name of the **PrimaveraAnalytics** folder to **P6** should ensure you avoid this error.

- 5) Open a web browser and launch Oracle Enterprise Manager for your installation of OBI.
- 6) Open the following URL:

```
http://ipaddress:port/em
```


where *ipaddress* is the IP address of your installation and *port* is the port number of your installation of OBI
- 7) Log into **Oracle Enterprise Manager**.
- 8) Expand the **Business Intelligence** folder by clicking **+**.
- 9) Double-click on the name for your deployment.
- 10) Click **Lock and Edit Configuration**.

- 11) In the **Deployments** tab, select the **Repository** sub tab.
- 12) In the **Upload BI Server Repository** section, click **Browse** next to your repository in the list.
- 13) In the **Select File** box, navigate to the location of the .rpd file.
- 14) Enter the password into the **Repository password** and **Confirm password** fields.

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

- 15) In the **BI Presentation Catalog** section, enter the Catalog Location for the P6 Analytics catalog.
- 16) Click **Apply**.
- 17) Click **Activate Changes**.
- 18) Click **Restart** to apply the changes.
- 19) In the **Overview** page, under the **Manage System** section, click **Restart**.
- 20) Log out of **Oracle Enterprise Manager**.

Configuring OBI 11.1.1.7 to Use the P6 Analytics Repository Definition (.rpd) and Catalog

To copy the P6 Analytics definition file:

- 1) Go to **<download>\obi\rpd** folder.
where **download** is the location where you downloaded the P6 Analytics install file for OBI 11.1.1.7. For example: **\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) Go to the **download\obi\catalog** folder.
where **download** is the location where you downloaded the P6 Analytics install file.
- 4) Login to OBI 11g Analytics (<http://server:port/analytics>) with an BIAdministrator account.
- 5) Select **Catalog**.
- 6) Select **Shared Folders**.
- 7) In the **Task** section, select **Unarchive**.
- 8) In the **Unarchive** dialog box, select **Browse**:
 - a. Find and select the **Primavera.catalog** file.
For example: **\P6_R32_Analytics\obi7\rpd**
 - b. Select **OK**.

- 9) Expand **Shared Folders** and verify that the **Primavera** catalog is there.
- 10) Open a web browser and launch Oracle Enterprise Manager for your installation of OBI.
- 11) Open the following URL:
`http://ipaddress:port/em`
where *ipaddress* is the IP address of your installation and *port* is the port number of your installation of OBI
- 12) Log into **Oracle Enterprise Manager**.
- 13) Expand the **Business Intelligence** folder by clicking **+**.
- 14) Double-click on the name for your deployment.
- 15) Click **Lock and Edit Configuration**.
- 16) In the **Deployments** tab, select the **Repository** sub tab.
- 17) In the **Upload BI Server Repository** section, click **Browse** next to your repository in the list.
- 18) In the **Select File** box, navigate to the location of the .rpd file.
- 19) Enter the password into the **Repository password** and **Confirm password** fields.

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

- 20) Click **Apply**.
- 21) Click **Activate Changes**.
- 22) Click **Restart** to apply the changes.
- 23) In the **Overview** page, under the **Manage System** section, click **Restart**.
- 24) Log out of **Oracle Enterprise Manager**.

Advanced Configurations in P6

This section describes how to configure P6 to use the Activity History, Resource Assignment History, Burn Down, and Work Planning Subject Areas.

Note: See the *Tested Configurations* document for the supported version of P6.

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About Slowly Changing Dimensions and Daily Snapshot Fact Tables

Slowly changing dimensions, or Type 2 dimensions, preserve an attribute's history of values by capturing non-fact, or dimensional, data and associating that data with the correct version of the fact row. Captured data includes, but is not limited to project, resource, activity, and resource assignment dimensional data. Slowly changing dimensions are used when it is important to preserve the historic context of facts.

When source data elements change, or when the ETL process is run, a new row is added to the dimension table and the previous row is left unchanged. Previously recorded facts remain associated with the old dimension row and new facts are associated with the new dimension row. These rows show the changes to an attribute over time. For example, if an activity's Planned Start Date has changed between the current capture and the previous capture, the old and new date would both be recorded in the dimension table.

Dimension rows in the dimension table are distinguished by the Effective Start Date, Effective End Date, and Current Flag. The date and time the ETL process starts becomes the Effective Start Date for the new dimension row. The new version of a dimension Effective End Date defaults to 01-Jan-3000 00:00:00. When the ETL process is run again, the Effective End Date for the latest version of the attribute then becomes the Effective Start Date for the current version minus one second. For example, if the Effective Start Date for the current version of the attribute is 17-Nov-2014 08:00:00, then the Effective End Date for the previous version becomes 17-Nov-2014 07:59:59. The most recent dimension row in the dimension table has a value of "1" in the Current Flag column. All other rows have "0" in the Current Flag column.

Daily snapshot fact tables enable the daily capture of metrics at the Resource Assignment and Activity Levels. Daily snapshot fact tables are used in conjunction with slowly changing dimensions. For example, when the Activity History daily snapshot is recorded, new fact rows will be updated with the most current version of each record in the activity dimension. Previously recorded facts remain associated with the old dimension row version.

The daily snapshot makes it easy to determine what metrics such as Remaining Units looked like at any point in time across all projects that have been opted into this level of data capture.

Turning off slowly changing dimensions

If you turn off the slowly changing dimensions for a field, the current dimensional row can be updated with a new value without the addition of a new dimensional row.

Slowly changing dimensions can be controlled on a field-by-field level by making adjustments to the mappings.tcsv file in the \res folder in the Star install path. A Y or N flag for each field in the mappings file controls whether a change to this field would cause a new row to be added to the dimensional table. Y indicates that a change will cause a new row to be added. N indicates that a new row will not be added if a change is made to this field. For example, if the Activity Description field has a Y flag, then changes made to this field will cause a new row to be added to the dimensional table the next time the ETL process is run. If the EPS Name field has an N flag, then the ETL process will not update the dimensional table with a new row. Configuring the Y or N flag for each field can prevent cascading updates to fact tables. For example, if a change is made to the EPS table, that change would cause a new row to be added to the dimension table for all of the activities affected by the change.

Enabling Daily History Snapshots and Slowly Changing Dimensions in a P6 Project

To enable slowly changing dimensions and daily history snapshots for a project:

- 1) Navigate to and log in to P6.
- 2) In P6, click **Projects**.
- 3) On the **Projects** navigation bar, click **EPS**.
- 4) On the **EPS** page:
 - a. Select a project.
 - b. Click the **Actions** ▼ menu and select  **Set Project Preferences...**
- 5) In the **Project Preferences** dialog box:
 - a. Ensure the project is configured for publication services.
 1. Click **Services** in the **Project Preferences** pane.
 2. On the **Services** page, select the **Enable Publication** option in the **Publication** section.
 - b. Configure the project's History Level setting.
 1. Click **Analytics** in the **Project Preferences** pane.

2. On the **Analytics** page, select **Activity** from the **History Level** drop-down list.

Note: You should still configure the History Interval setting, but it will only apply to Project and WBS-level history metrics.

- c. Click **Save and Close**.

Configuring a P6 Project for the Burn Down Subject Area

For Burn Down Subject Areas, you must create project UDFs. To create the project UDFs:

- 1) Navigate to and log in to P6.
- 2) In P6, click the **Administer** ▼ menu and select **Enterprise Data**.
- 3) On the **Enterprise Data** page, expand **Projects** and select **Project UDFs**.
- 4) On the **Project UDFs** page:
 - a. Add a `sys_workdown` UDF with a Data Type of *Text*.
 - b. Add a `sys_workdown_date` UDF with a Data Type of *Start Date*.

Configuring a P6 Project for the Burn Down Subject Area

The Burn Down subject area allows you to track how a project is doing versus what you originally planned at the start of the project.

For a project to be included in the Burn Down subject area, you must configure specific project UDF and History Level settings in P6.

For more detailed information on working with P6, see the P6 documentation.

To configure the Burn Down subject area for a project:

- 1) Navigate to and log in to P6.
- 2) In P6, click **Projects**.
- 3) On the **Projects** navigation bar, click **EPS**.
- 4) On the **EPS** page:
 - a. Select a project.
 - b. Click the **Actions** ▼ menu and select  **Set Project Preferences....**
- 5) In the **Project Preferences** dialog box, click **Analytics** in the **Project Preferences** pane.
- 6) On the **Analytics** page, select **Activity** from the **History Level** drop-down list.
- 7) In the **Project Preferences** dialog box, click **Save and Close**.
- 8) On the **Projects** navigation bar, click **EPS**.
- 9) On the **EPS** page, add the `sys_workdown` and `sys_workdown_date` UDF columns to the page.
- 10) For the projects you want to add to the Burn Down subject area:
 - a. Type *project* in the `sys_workdown` column.

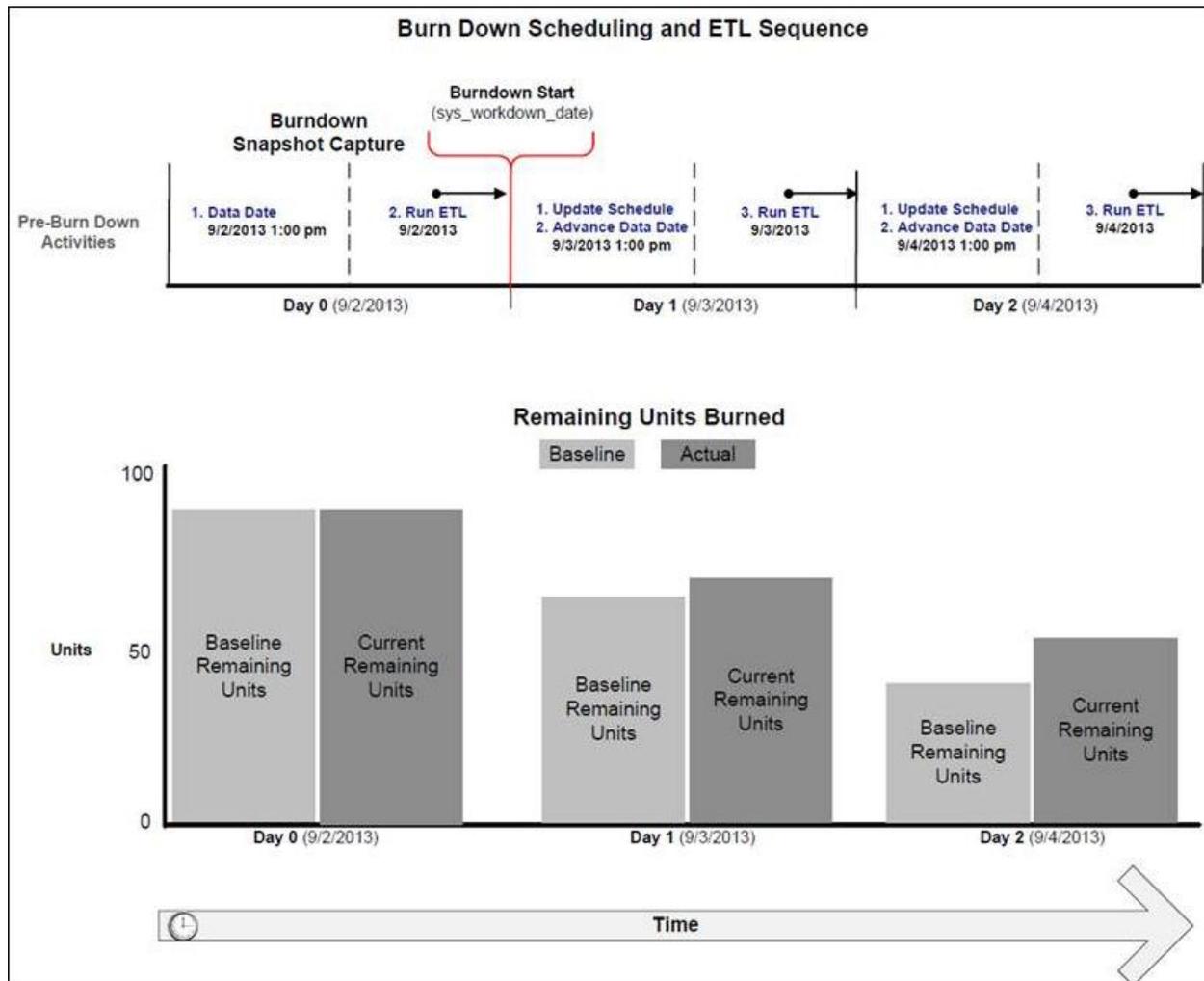
- b. Type a date value (for example, 09/03/2012) in the **sys_workdown_date** column. This value is used as the snapshot date for comparison to actual project values. If no value is entered here, the Project Start Date will be used instead.

Note: The date used for the initial Burn Down data capture is 1 day before the date entered for this UDF. For example, if the `sys_workdown_date` is 09/03/2012, then the ETL process will use 09/02/2012 for the Burn Down comparison.

Scheduling a P6 Burn Down Project

A project can have activities scheduled and completed before a burn down begins. This gives users the flexibility to begin the project burn down on the date specified in the `sys_workdown_date` UDF rather than the Project Start Date.

In a Burn Down project, the initial snapshot of the project's activities and assignments is taken the day before the date entered in the sys_workdown_date UDF. This snapshot is used as a baseline to compare against actual values. For example, the Baseline Remaining Units Burned can be compared to the Remaining Units Burned. The ETL process must be run one day before the sys_workdown_date (or the Project Start Date if this UDF is not used) to capture this initial snapshot.



About ETL and Burn Down Metrics

When using Burn Down Metrics, you must update the schedule and run the ETL process. Each daily ETL Process updates two sets of daily metrics:

- ▶ **Metrics for 'Today':** All work completed today through the latest schedule update and data date change is recorded as work completed for the current date when the ETL process occurs.

- ▶ **Metrics for 'Yesterday'**: Since the data from yesterday is only current through the latest schedule update and data date change, any additional work completed yesterday but AFTER the update is now added to the daily metrics for 'yesterday'.

For example, a project is updated at 6pm daily and the ETL process is then executed. The next day, these become metrics for 'yesterday' and initially reflect work only through 6pm yesterday. When the ETL process is executed today, any additional work completed between 6pm and midnight yesterday is now included under the metrics for 'yesterday'.

Calculating Metrics in the Burn Down Subject Area

To capture daily trending information, do the following steps each day to calculate the metrics in the Burn Down subject area:

- 1) Update the status of activities in the projects you configured in P6 to be included in the Burn Down subject area. For example, update the Actual and Remaining Units and which activities are completed.
- 2) Adjust the data date to correspond to the latest status update.
- 3) Run the ETL process for the day before to midnight.

Note: ETL run must occur within each calendar date to properly capture daily metrics.

Creating Project UDFs for Work Planning Subject Areas

For Work Planning Subject Areas, you must create project UDFs. To create the project UDFs:

- 1) Navigate to and log in to P6.
- 2) Click the **Administer** ▼ menu and select **Enterprise Data**.
- 3) On the **Enterprise Data** page, expand **Projects** and select **Project UDFs**.
- 4) On the **Project UDFs** page:
 - a. Add a `sys_workprocess` UDF with a Data Type of *Text*.
 - b. Add a `sys_scope_freeze` UDF with a Data Type of *Text*.
 - c. Add a `sys_schedule_freeze` UDF with a Data Type of *Text*.

Configuring a P6 Project for the Work Planning Subject Area

The Work Planning subject area is designed for ongoing project work typical of routine and online maintenance projects in which planning metrics are tracked week over week and workweek metrics are tracked daily. There are specific Project UDF and History Level settings required in P6 to include a project in the Work Planning subject area.

To configure a P6 project for the work planning subject area:

- 1) Navigate to and log in to P6.
- 2) In P6, click **Projects**.
- 3) On the **Projects** navigation bar, click **EPS**.
- 4) On the **EPS** page:
 - a. Select a project.
 - b. Click the **Actions** ▼ menu and select  **Set Project Preferences....**
- 5) In the **Project Preferences** dialog box:
 - a. Ensure the project is configured for publication services.
 1. Click **Services** in the **Project Preferences** pane.
 2. On the **Services** page, select the **Enable Publication** option in the **Publication** section.
 - b. Configure the project's History Level setting.
 1. Click **Analytics** in the **Project Preferences** pane.
 2. On the **Analytics** page, select **Activity** from the **History Level** drop-down list.
 - c. Click **Save and Close**.
- 6) On the **Projects** navigation bar, click **EPS**.
- 7) On the **EPS** page, add the **sys_workprocess**, **sys_scope_freeze**, and **sys_schedule_freeze** UDF columns to the page.
- 8) For the projects you want to add to the Work Planning subject area:
 - a. Type *workweek* in the **sys_workprocess** column.

Note: The T-xw format (where 'x' equals the number of weeks prior to scope freeze and schedule freeze) must be followed exactly when entering the **sys_scope_freeze** and **sys_schedule_freeze** UDF values.

- b. Type a value, such as T-2w, in the **sys_scope_freeze** column. This is a relative value for each week in a project's schedule. For example, if you enter T-2w, scope freeze for each week in a project will be calculated as 2 weeks prior to the Planned Start Date of that week. Scope freeze metrics, such as Scope Freeze New or Scope Freeze Lost, will be captured for each week in a project schedule from each week's calculated scope freeze date up to and including its completion.
- c. Type a value, such as T-1w, in the **sys_schedule_freeze** column. This is a relative value for each week in a project's schedule. For example, if you enter T-1w, schedule freeze for each week in a project will be calculated as 1 week prior to the Planned Start Date of that week. Schedule freeze metrics, such as Schedule Freeze New or Schedule Freeze Lost, will be captured for each week in a project schedule from each week's calculated schedule freeze date up to and including its completion.

Scheduling a P6 Work Planning Project

Scope freeze, schedule freeze, and actual metrics are captured for each week of planned work in a project that has been opted into the Work Planning subject area. Each individual week in the schedule will have these metrics captured leading up to that week's execution, allowing users to monitor their planning performance on a weekly basis for an upcoming week of work.

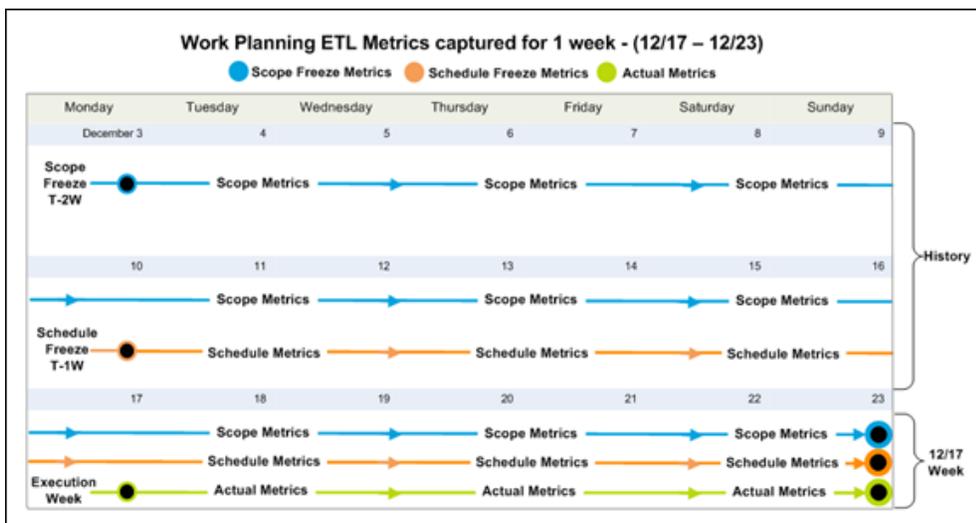
The `sys_scope_freeze` and `sys_schedule_freeze` UDF's control the amount of history, or the number of weeks, these metrics capture for each individual week leading up to the execution week.

The diagram below illustrates how the ETL process would capture Work Planning metrics for the week 12/17/2012 to 12/23/2012 given the following P6 settings:

- ▶ The `sys_scope_freeze` equals T-2w (The T-xw format must be followed exactly)
- ▶ The `sys_schedule_freeze` equals T-1w (The T-xw format must be followed exactly)
- ▶ The Starting Day of Week equals Monday (This is set in P6's Application Settings.)

In this scenario, the Scope Freeze for the week starting on Monday 12/17/2012 occurs 2 weeks prior (T-2w) to that week's planned start date. Schedule Freeze occurs 1 week prior (T-1w) to that week's planned start date. Daily Actual Start and Finish metrics are captured throughout the week.

Once the ETL process has run on these respective freeze dates, any changes in the schedule for an upcoming week, such as adds, deletes, or planned date changes will be recorded the next time the ETL process runs.



Configuring Graded Approach to Schedule Adherence

Graded approach to schedule adherence is a method for tracking adherence using four distinct levels of work scheduling (A, B, C, and D).

The levels of work scheduling are:

- ▶ **A (Hourly)** - Used when you require the most control, adherence, and management oversight. Reasons include risk (probability safety analysis/risk assessment), personnel safety, or other significant concerns. Users must finish Level A activities within one hour of the target planned finish date.
- ▶ **B (Daily)** - Used for work requiring multi-discipline coordination, significant tagouts, or risk significant work. Users must finish Level B activities on the same day as the target planned finish date.
- ▶ **C (Weekly)** - Used for non-risk significant and routine work that does not require support from other work groups. Users must finish Level C activities within the week of the target planned finish date.
- ▶ **D (No Tracking)** - Used for housekeeping, shop work, and other types of work that have no impact to the plant. Level D activities are considered "fill-in" work and are not tracked for schedule adherence.

To configure graded schedule adherence:

- 1) Ensure you've enabled a project for Work Process (see **Configuring a P6 Project for the Burn Down Subject Area** (on page 21)):

`sys_workprocess=WORKWEEK`, `sys_scope_freeze` and `sys_schedule_freeze` UDF's are populated, **History Level** set to **Activity**.

- 2) Ensure history exists for the project as of the scheduled freeze date and T-0 baseline date for the week the ETL will run.
- 3) Code activities using an Activity Code or UDF to identify the adherence grade (A, B, C, D).

For example, in the sample data Activity Code 11 (Schedule Adherence Priority) is used.

Note: Ensure the Activity Code or UDF used is set up correctly both in the STAR Database and RPD.

During T-0 for a given week when you run the ETL, the Baseline Planned Finish Date (as of T-0) and Schedule Freeze Planned Finish Date (as of schedule freeze UDF) for the activities will be captured. You can use these dates along with the assigned adherence grade to calculate the graded schedule adherence in P6 Analytics.

Setting Up the Sample Database, Repository Definition (.rpd), and Dashboards

The P6 Analytics package includes a sample Star database and sample OBI dashboards and analysis. You must setup and configure these components. This section explains the process for deploying P6 Analytics sample database, repository definition (.rpd), and dashboards.

Note: You must install and configure OBI prior to deploying the P6 Analytics repository definition file (.rpd) and Catalog. To install and configure OBI, please consult the following document:
http://docs.oracle.com/cd/E23943_01/index.htm.

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Restoring the P6 Analytics Sample Database

To restore the P6 Analytics sample database:

Note:

- Running the ETL process after you restore the sample database could impact the content in the sample catalog.
- Make sure that the PATH variable includes the path to your ORACLE_HOME/bin directory.

- 1) Open the installation directory:
 - a. Go to the **sample\db** folder.
 - b. Extract the **sample_expdp.zip** file to a local drive.
- 2) Create a new Oracle database instance for P6 Analytics Sample Data.
- 3) Log into the newly created sample data instance as a SYSTEM or other DBA privileged user.
- 4) If these tablespaces do not already exist, create the necessary tablespaces with the following statements:

```
create tablespace STAR_DAT1
datafile 'path/STAR_DAT1.dbf'
Size 32m
Autoextend on
Extent management local;
```

where *STAR_DAT1* is the name of the star tablespace, and *path* is the path to the folder where the database resides

- 5) If these tablespaces do not already exist, create the necessary tablespaces with the following statements:

```
create tablespace STAR_HST1
datafile 'path/STAR_HST1.dbf'
Size 32m
Autoextend on
Extent management local;
```

where *STAR_HST1* is the name of the star history tablespace, and *path* is the path to the folder where the data files reside.

- 6) Create the database users with the following statements:

```
prompt Creating users username
--METADATA TYPE:USER CHANGE:CREATE NAME:username
create user username
identified by password
temporary tablespace temp_table
default tablespace STAR_DAT1
;
```

```
--METADATA TYPE:GRANT CHANGE:CREATE PRIVILEGE:DBA GRANTEE:username
grant dba to username;
```

```
--METADATA TYPE:GRANT CHANGE:CREATE PRIVILEGE:JOB GRANTEE:username
grant create any job to username;
```

where *username* is the name of the user for the Star database, *password* is that user's password, *temp_table* is the name of the tablespace for temporary data, and *STAR_DAT1* is the name of the Star tablespace

- 7) Create a directory object within the instance for the dump file with the following SQL statement:

```
create directory dmpdir as 'path_to_file';
```

where *path_to_file* is the location of the data extracted from the **sample_expdp.zip** file.

- 8) Ensure case sensitivity for the P6 Analytics sample database instance is set to false for database logons with the following statement:

```
alter system set sec_case_sensitive_logon=false;
```

- 9) Log out of the database instance.

- 10) Import the **sample.expdp** file using Oracle's datapump feature with the following command:

```
impdp system/password@SAMPLE directory=dmpdir dumpfile=star32.expdp
schemas=username logfile=sample.log
```

where *dmpdir* is the directory that you created and *username* is the name of the user you created

11) Re-run the **create_context.sql** script as staruser.

Adding OBI Users for P6 Analytics Sample Data

To add OBI users for P6 Analytics sample data:

- 1) Open a web browser and launch Oracle Enterprise Manager for your installation of OBI.
- 2) Open the following URL:
`http://ipaddress:port/console`
where *ipaddress* is the IP address of your installation and *port* is the port number of your installation of OBI.
- 3) Log into **Oracle Enterprise Administration Console**.
- 4) In the **Domain Structure** section, click **Security Realm**.
- 5) Click on the realm name in the table.
- 6) Click the **Users and Groups** tab.
- 7) Click the **Users** sub tab.
- 8) Click **New**.
- 9) In the **Create a New User** form:
 - a. In the **Name** field, enter **demouser**. It must be demouser to use the sample data.
 - b. Fill in the Password and Confirm Password.
 - c. Click **OK**.
- 10) Click on the user you created.
- 11) Click the **Group** tab.
 - a. Move the **BIAdministrators**, **BIAuthors**, and **BIConsumers** groups from the Available column to the Chosen column.
 - b. Click **Save**.
- 12) Log out of the Oracle Enterprise Administration Console.

Integrating P6 Analytics Data with Map Data to Create Spatial Dashboards

P6 EPPM can store location information for projects, activities, and resources. P6 Analytics can create intelligent dashboards to evaluate measures using the geographical location data entered in P6 EPPM. You will need spatial boundary data and maps. P6 Analytics comes with access to Oracle's eLocation services. Oracle's eLocation service is a cloud-based map data service that provides mapping, geocoding and routing capabilities. For more information, see OBIEE's documentation on mapping and spatial information.

NAVTEQ and MVDEMO are map data providers. They provide a sample set of map data that you can configure with Map Viewer, a component that integrates with OBI 11g. NAVTEQ and MVDEMO also provide access to eLocation services (maps.oracle.com). The NAVTEQ sample map data provides detailed Longitude and Latitude map layers for San Francisco, London, and Sydney. The MVDEMO sample map data provides detailed layers for the countries of the world, United States, and major world cities.

Note: The location attributes you enter in P6 EPPM must match the attributes in the NAVTEQ or MVDEMO data to ensure the map layers render correctly. For example, if you configure your map to use the OBIEE_WORK tile, you should query the OBIEE_NAVTEQ database user schema and use the exact code that resides in the schema.

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Preparing P6 EPPM and the Star Database for Mapping

To enter location data in P6 EPPM:

- 1) Login to P6.
- 2) Click the **Administer** ▼ menu and select **Enterprise Data**.
- 3) In the **Enterprise Data** pane, expand **Global** and click **Locations**.
- 4) Assign locations data to projects, activities, and resources as needed.

Note: See the P6 Help for information about entering and assigning location data.

To prepare the Star database:

- 1) Assign locations to your projects, activities, and resources in P6.

- 2) Run all publication services in P6.
- 3) Run the **staretl** process.

Installing and Configuring OBI 11g NAVTEQ Sample Spatial Data

This section tells how to setup and configure the Sample App Mapviewer Content and how to integrate it with P6 Analytics.

To begin the process:

- 1) Go to <http://www.oracle.com/technetwork/middleware/bi-foundation/obiee-samples-167534.html>.
- 2) In the **OBIEE 11.1.1.3 - Sample Application (Build 825)** section, download the following:
 - ▶ Sample Application - Setup Files
 - ▶ NAVTEQ Data Bundle for OBIEE

Notes: NAVTEQ provides longitude and latitude layer data for sample reports.

- ▶ Documentation Downloads
- 3) Extract the zip files to a location on your computer.
- 4) In the **Documentation Downloads** file, use chapter 6 in the *SampleApp_Deploy_Instructions_825.pdf* for instructions on installing and configuring the NAVTEQ sample data bundle.

Sample of Joining P6 Data and NAVTEQ Data

The following provides an example of joining the Project State and Country Code data from the Primavera – Activity subject area to the sample NAVTEQ data:

- 1) Log into **OBI** with an account that has a BI Administrators role.
- 2) Click the **Administration** link at the top of your screen.
- 3) Under **Map Data Management**, click **Manage Map Data**.
- 4) In the **Manage Map Data** page:
 - a. Click the **Layers** tab.
 - b. Click the **Import Layers** icon.
- 5) In the **Import Layers** dialog box:
 - a. In the **Look in** field, select **OBIEE_NAVTEQ_Sample**.
 - b. Select **OBIEE_STATE** and **OBIEE_COUNTRY**.
 - c. Click **OK**.
- 6) Select **OBIEE_STATE** and click the **Edit layers** icon.
- 7) In the **Edit Layer** dialog box:

- a. In the **BI Key Columns** section, click the **+** icon.
- b. In the **Select Subject Areas** pop-up, select the **Primavera – Activity** subject area.
- 8) In the **Select BI Key Columns** dialog box:
 - a. Expand the **Project** folder, then expand the **Location** folder.
 - b. Click the **State/Province Code** and click **Move** to move this element to the **Selected** table.
 - c. Click **OK** to exit all dialog boxes.
- 9) Select **OBIEE_COUNTRY** and click the **Edit layers** icon.
- 10) In the **Edit Layers** dialog box:
 - a. In the **BI Key Columns** section, click the **+** icon.
 - b. In the **Select Subject Areas** pop-up, select the **Primavera – Activity** subject area.
- 11) In the **Select BI Key Columns** dialog box:
 - a. Expand the **Project** folder, then expand the **Location** folder.
 - b. Click the **Country Code** and click **Move** to move this element to the **Selected** table.
 - c. Click **OK**.

Configure Background Maps

After importing the necessary map layers, the background maps have to be associated with map layers created in the previous section.

To configure Background Maps:

- 1) Log into **OBI** with an account that has BI Administrators role.
- 2) Click the **Administration** link at the top of your screen.
- 3) Under **Map Data Management**, click **Manage Map Data**.
- 4) In the **Manage Map Data** page:
 - a. Select the **Background Maps** tab.
 - b. Select one of the named background maps in the table.
 - c. Click the **Edit Background Map** icon.
- 5) In the **Edit Background Map** dialog box:
 - a. In the **Interactive BI Layers** section, click **+**.
 - b. In the **Add Layers** pop-up, select the options you need.
 - c. Click **OK**.
 - d. Adjust the zoom level as needed.
 - e. Click **OK**.
- 6) In the **Add Layers** dialog box:
 - ▶ Select both the **OBIEE_COUNTRY** and **OBIEE_STATE** options.
 - ▶ Click **OK**.
- 7) Adjust the **Zoom** for each map layer according to your requirements.

- 8) Click **OK**.

Adding Maps to Analysis

To add maps to an analysis:

- 1) Log into **OBI** with an account that has BI Administrators role.
- 2) Create a new analysis:
 - a. Click **New**.
 - b. In the **Analysis and Interactive Reporting** section, click **Analysis**.
 - c. In the **Select Subject Area** pop-up, select **Primavera – Activity**.
- 3) In the **Criteria** tab:
 - a. Look in the **Subject Areas** pane.
 - b. Move the **Project Name**, **Country Code**, **State/Province**, and **Actual Total Cost** subject areas to **Selected Columns**.
- 4) Click the **Results** tab.
- 5) In the **Results** tab, click the **New View** icon and select **Map**.
- 6) In the **Map** view, click **Edit**.
- 7) In the **Edit Map View** page:
 - a. In the **Map View** field, select **OBIEE_WORLD_MAP**.
 - b. If needed, modify and add new map formats to include different color schemes, pie charts, and value binding.

Installing and Configuring OBI 11g MVDEMO Sample Spatial Data

This section tells how to setup and configure the Sample App Mapviewer Content and how to integrate it with P6 Analytics.

To begin the process:

- 1) Download MVDEMO Sample Data Set from <http://www.oracle.com/technetwork/middleware/mapviewer/downloads/index.html>.
- 2) Follow the instructions from the **MVDEMO readme** file that came with the MVDEMO dump file to import the MVDEMO sample data set.

Configuring mapViewConfig.xml Configuration File for MVDEMO

Caution: Do Not click **Save and Restart**. That will make the Weblogic console, FMW EM console, and Analytics inaccessible, and you will need to restart the whole instance.

To configure the map viewer configuration file for MVDEMO:

- 1) Access the MapViewer by going to

http://<machine.domain>:9704/mapviewer

- 2) Select the **Admin** link.
- 3) Log into MapViewer using the same administrative user you use to log in to the WebLogic and Enterprise Manager console.
- 4) Select **Configuration**. The mapViewerConfig.xml configuration file will open.
- 5) Make the following changes:
 - a. Under **<security_config>** tag set the following values:


```
<disable_direct_info_request> true </disable_direct_info_request>
<disable_info_request> true </disable_info_request>
<disable_csf>true</disable_csf>
<enforce_security_role> true </enforce_security_role>
```
 - b. Under **<security_config>** tag set the machine name. Replace **machine.domain** with the host name where the MapViewer instance is running:


```
<proxy_enabled_hosts>
http://machine.domain:9704/mapviewer,http://machine.domain:9704/
</proxy_enabled_hosts>
```

- 6) Scroll down to the sample Data Source (commented out):

```
<map_data_source name="mvdemo"
jdbc_host="db1.my_corp.com"
jdbc_sid="orcl"
jdbc_port="1521"
jdbc_user="scott"
jdbc_password="!tiger"
jdbc_mode="thin"
number_of_mappers="3"
allow_jdbc_theme_based_foi="false"
/>
```

- 7) Use this sample Data Source to create your own Data Source to the database where the spatial data and MapViewer metadata resides. Copy and paste the tag just below the existing one. Make sure that you are not copying the opening comment tag **<!--** and closing comment tag **-->**

It should look similar to this (change **machine.domain** to your host name. Also change, Oracle SID, database port with the proper values):

```
<map_data_source name="mvdemo"
jdbc_host="machine.domain"
jdbc_sid="obiee11g"
jdbc_port="1521"
jdbc_user="mvdemo"
jdbc_password="!mvdemo"
jdbc_mode="thin"
```

```
number_of_mappers="3"  
allow_jdbc_theme_based_foi="false"  
</>
```

Note: The exclamation mark (!) preceding the password tells MapViewer that the password should be encrypted next time the MapViewer instance is restarted.

- 8) Click **Save**. **DO NOT** click **Save and Restart**.

Restarting BI Managed Server and BI Components

For these changes to take effect:

- 1) Stop BI Components either using **FMW EM Console** or **opmnctl** utility.
- 2) Stop the **BI Managed Server** using the **WebLogic** console.
- 3) Start the **BI Managed Server** using the **WebLogic** console.
- 4) Start **BI Components** either using **FMW EM Console** or **opmnctl** utility.

Note: Check the following note if you need assistance starting and stopping a BI instance: **1240964.1 How To Start / Stop An OBIEE 11g (11.1.1.x) Unix / Linux Environment Via Command-line**

Verifying the MapViewer Connection

To verify the MapViewer connection:

- 1) Access the MapViewer by going to the following URL:
`http://machine.domain:9704/mapviewer`
- 2) Select the **Admin** link.
- 3) Log into MapViewer using the same administrative user that you use to log in to the WebLogic and Enterprise Manager consoles.
- 4) Select **Data Sources**. You should see the Data Source that you just created. You should also see your machine.domain in your configuration if the changes were successfully committed.

Adding the ELOCATION_MAP for MVDEMO

To add the eLocation map to MVDEMO:

- 1) Access the MapViewer by going to
`http://<machine.domain>:9704/mapviewer`
- 2) Select the **Admin** link.

- 3) Log into MapViewer using the same administrative user you use to log in to the WebLogic and Enterprise Manager console.
- 4) In MapViewer, select **Create Tile Layer**.
- 5) Select **Oracle Maps** and select **Continue**.
- 6) In the **Name** field, verify the name is **elocation_map**.
- 7) In the **Data Source** field, select **mvdemo**.
- 8) Select **Submit**.
- 9) Select **Manage Tile Layers** and verify **ELOCATION_MAP** with Data Source **mvdemo** is there.

Sample of Joining P6 Data and MVDEMO Data

The following provides an example of joining the Project State and Country Code data from the Primavera – Activity subject area to the sample MVDEMO data:

- 1) Log into **OBI** with an account that has a BI Administrators role.
- 2) Click the **Administration** link at the top of your screen.
- 3) Under **Map Data Management**, click **Manage Map Data**.
- 4) In the **Manage Map Data** page:
 - a. Click the **Layers** tab.
 - b. Click the **Import Layers** icon.
- 5) In the **Import Layers** dialog box:
 - a. In the **Look in** field, select **mvdemo**.
 - b. Select **CITIES_ALL**, **COUNTRIES_ALL_LABEL_CLEAR**, and **US_STATES_BI**.
 - c. Click **OK**.
- 6) Select **CITIES_ALL** and click the **Edit layers** icon.
- 7) In the **Edit Layer** dialog box:
 - a. In the **Name** field, change **CITIES_ALL** to **ALL CITIES**.
 - b. Add the **Project-Location-City Name** option:
 1. In the **BI Key Columns** section, click the **+** icon.
 2. In the **Select Subject Areas** pop-up, select the **Primavera – Activity** subject area.
 3. In the **Select BI Key Columns** dialog box, expand the **Project** folder, then expand the **Location** folder.
 4. Click the **City Name** and click **Move** to move this element to the **Selected** table.
 5. Click **OK**.
 - c. Add the **Activity-Location-City Name** option:
 1. In the **BI Key Columns** section, click the **+** icon.
 2. In the **Select Subject Areas** pop-up, select the **Primavera – Activity** subject area.

3. In the **Select BI Key Columns** dialog box, expand the **Activity** folder, then expand the **Location** folder.
4. Click the **City Name** and click **Move** to move this element to the **Selected** table.
5. Click **OK**.
- d. Add the **Resource-Location-City Name** option:
 1. In the **BI Key Columns** section, click the **+** icon.
 2. In the **Select Subject Areas** pop-up, select the **Primavera – Activity** subject area.
 3. In the **Select BI Key Columns** dialog box, expand the **Resource** folder, then expand the **Location** folder.
 4. Click the **City Name** and click **Move** to move this element to the **Selected** table.
 5. Click **OK**.
- e. Add the **Project History-Location-City Name** option:
 1. In the **BI Key Columns** section, click the **+** icon.
 2. In the **Select Subject Areas** pop-up, select the **Primavera – Project History** subject area.
 3. In the **Select BI Key Columns** dialog box, expand the **Project** folder, then expand the **Location** folder.
 4. Click the **City Name** and click **Move** to move this element to the **Selected** table.
 5. Click **OK**.
- 8) Select **COUNTRIES_ALL_LABEL_CLEAR** and click the **Edit layers** icon.
- 9) In the **Edit Layer** dialog box:
 - a. In the **Name** field, change **COUNTRIES_ALL_LABEL_CLEAR** to **ALL COUNTRIES**.
 - b. Use the same steps you used to create ALL CITIES, but choose **Country Name** instead of City Name for each step.
- 10) Select **US_STATES_BI** and click the **Edit layers** icon.
- 11) In the **Edit Layer** dialog box:
 - a. In the **Name** field, change **US_STATES_BI** to **US STATES**.
 - b. Use the same steps you used to create ALL CITIES, but choose **STATE CODE** instead of City Name for each step.

Configuring Background Maps for MVDEMO

After importing the necessary map layers, the background maps have to be associated with map layers created in the previous section.

To configure Background Maps:

- 1) Log into **OBI** with an account that has BI Administrators role.

- 2) Click the **Administration** link at the top of your screen.
- 3) Under **Map Data Management**, click **Manage Map Data**.
- 4) In the **Manage Map Data** page:
 - a. Select the **Background Maps** tab.
 - b. Select the **Import Background Maps** icon.
- 5) In the **Import Background Maps** dialog box:
 - a. In the **Look in** field, choose **mvdemo**.
 - b. In the **Available Maps** field, choose **ELOCATION_MAP**.
 - c. Select **OK**.
- 6) Select the **ELOCATION_MAP** you added and select the **Edit Background Map** icon.
- 7) In the **Edit Background Map** dialog box:
 - a. In the **Name** field, enter **City Map**.
 - b. In the **Interactive BI Layers** section, click **+**.
 - c. In the **Add Layers** pop-up, select **ALL CITIES**.
 - d. Click **OK**.
 - e. Adjust the zoom level as needed.
 - f. Click **OK**.
- 8) Repeat the above steps to add a country and state map.
 - a. When you create the country map, name it **Country Map** and add the **ALL COUNTRIES** BI layer.
 - b. When you create the state map, name it **State Map** and add the **US STATES** BI layer.

Post Installation Administrative Tasks

This section describes the general administrative tasks, including how to secure the properties file, how to clear and refresh data, and how to schedule or manually launch a database update.

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Securing the staretl.properties File



This section contains information you need when securing the staretl.properties file.

Ensure that only the user running the P6 Reporting Database scripts or processes has access to the staretl.properties file, located in the \star\res folder of your installation directory.

Only trusted users should have access to this file or folder.

File system protection can be set on all of the supported operating systems. Based on the settings applied, the \res folder can be password protected or hidden. A new user can be created with the least amount of permissions to this file and folder. Do not give any other user access to this location.

For options for operating system-specific security, either contact your local administrator or search for file system security for your specific operating system.

Clearing the Data for Star

To clear all the data in the Star database including history data:

Note: This procedure assumes that you chose the default username (STARUSER) during the installation. If you chose a different name, use it instead of the default.

- 1) Login to the P6 Reporting Database instance with a user account that has the **Drop User** system privilege (such as System).
- 2) Run the following command:

```
drop user staruser cascade;
```

Caution: Deleting the Star database will also delete the Project, Activity, and WBS history fact data that was accumulated.

Dropping the user listed in step 2 of the preceding procedure will remove all data from the P6 Reporting Database instance. You can rerun the **staretl** file to populate the Star database with the P6 EPPM database information.

Refreshing the Data for Star

You may find it necessary to refresh the Star database but retain all history data. To refresh all data while preserving history:

- 1) Run the **staretl.sh -r** or **staretl.bat "-r"** depending on your operating system.
- 2) This will backup all the your history data, recreate the schema with the out-of-box configuration, and restore the history data back into the schema.

Creating a Filtered Star

You can apply a filter during the staretl process to pull over data based on pre-determined criteria. When you create a view, you can limit the projects you include in Star to a portfolio, an EPS, or another criteria; you can customize Star with only the projects that are important to you.

When creating the Star filter, you must be signed in as the pxrptuser you created with the P6 EPPM database.

Use this example to create a view for a portfolio called **My Top 10 Projects** and a filter called **it_portfolio_view**.

- 1) Use the following to create the **it_portfolio_view** filter:

```
create or replace view it_portfolio_view
as
select PROJECTOBJECTID objectid
from projectportfolio pp, projectprojectportfolio ppp
where pp.objectid = ppp.PROJECTPORTFOLIOOBJECTID
and pp.name = 'My Top 10 Projects'
```

- 2) Edit the **staretl.properties** file and add this entry with the name of the view you created.

```
star.project.filter.ds1=it_portfolio_view
```

where *it_portfolio_view* will be the name of your view.

- 3) Run the following command:

```
run staretl.bat
```

- 4) After process completes, ensure you can connect to the view through the database link and return the list of object ids. For example:

```
select * from it_portfolio_view@dslink01
```

This will return the object id's that will populate the **etl_projectlist**.

Populate Data Sources with Filtered Project Data

Star supports multiple P6 data sources. If you just want to populate multiple data sources with filtered project data, you will need to do the following:

- 1) Run this sql:

```
CREATE OR REPLACE FORCE VIEW STAR_PROJECT_VIEW_1
```

```
AS
```

```
SELECT OBJECTID FROM project WHERE OBJECTID NOT IN (4514,4564,4664);
```

```
commit;
```

- 2) Go to **star_home>\star\res** and add a line to **staretl.properties** specifying the filter to use for each data source:

For example:

- ▶ star.project.filter.ds1=star_project_view_1
- ▶ star.project.filter.ds2=star_project_view_2
- ▶ star.project.filter.ds3=star_project_view_3

- 3) Run the staretl for that data source.

For example:

staretl.bat "-s1" would apply to the filter for **ds1**.

When you run the staretl and multiple data sources are specified in the configuration file, the staretl populates the data sources with "filtered" project data as per the properties above.

Scheduling the Star Database Update

To keep the Star database current, you must run the staretl periodically. Typically, this is done nightly during off hours.

Schedulers exist for both Windows and non-Windows operating systems. For Windows operating systems, use the Windows Task Scheduler. For non-Windows operating systems, use a cron job with the Crontab command. Please refer to your operating system documentation for specifics on how to configure the process to run as a recurring job.

Caution: When configuring the scheduler, Oracle recommends that you select the option to "not start the next job until the previous job has completed."

Manually Launching the Star Database Update Process

To launch the database update for Star, execute one of the following files on the machine where you installed the Star database:

- ▶ **staretl.bat** (on a Windows platform)
- ▶ **staretl.sh** (on a non-Windows platform)

The account used to launch the file must have administrative privileges on the machine.

History Settings for P6 Reporting Database 3.2

For P6 Reporting Database 3.2 you can control history interval and levels settings on the project level in P6. If you installed a new P6 EPPM database, the settings will be turned off for new projects. To start recording new history for projects, you must turn on the settings in P6. If you upgraded from P6 EPPM 8.0 or 8.1, the history values will be on and set to Monthly history. If you upgraded from P6 EPPM 8.2 or later, history settings are preserved per project - no changes occur during the upgrade.

Note: If you select **Activity** as the **History Level**, this will automatically set the **History Interval** for Activity and Resource Assignment history to **Daily**. Use caution when selecting which projects you choose to have daily history captures as this can affect the amount of time and the volume of data processed when running the ETL process. You still need to set the history interval level when selecting Activity level history, which will apply to project and WBS-level history only.

Creating History Data for P6 EPPM

In P6, you can define history level and interval settings on a per project basis. Use P6 to configure the type of data stored in P6 Analytics and in what time interval.

To configure history settings:

- 1) Login into P6.

Note: A user must have the **Edit Project Details Except Cost/Financials** profile to edit the history settings.

- 2) Click **Projects**.
- 3) On the **Projects** navigation bar, click **EPS**.
- 4) On the **EPS** page:
 - a. Select a project.
 - b. Click the **Actions** ▼ menu and select  **Set Project Preferences...**
- 5) In the **Project Preferences** pane, click **Analytics**.
- 6) On the **Analytics** page:
 - a. Select the **History Level** and **History Interval** settings.

You can choose one of the following for History Level:

 - **None** (the default)
 - **Project**
 - **WBS**
 - **Activity**

You can choose one of the following for History Interval:

 - **Month** (the default)
 - **Week**
 - **Quarter**
 - **Year**
 - **Financial Period**
 - b. Click **Save** to continue working or click **Save and Close** if you are finished.

Note: If you select **Activity** as the **History Level**, this will automatically set the **History Interval** for Activity and Resource Assignment history to **Daily**. Use caution when selecting which projects you choose to have daily history captures as this can affect the amount of time and the volume of data processed when running the ETL process. You still need to set the history interval level when selecting Activity level history, which will apply to project and WBS-level history only.

- 7) Run the publication services to publish the changes you made.
- 8) To create history data, go to the installation directory and find the **\Star\Scripts** folder and run the **staretl.bat** or **staretl.sh** to run the ETL process.

Using Metadata

Metadata provides a capability to alter some calculations. Metadata provides information about one or more aspects of data. For example, when using a database table, the metadata corresponds to the fields and their attributes in this table.

Metadata objects allow flexibility for defining calculated fields and customizing how to calculate certain measures.

Metadata includes the following tables:

- ▶ W_ACTIVITY_HISTORY_F
- ▶ W_WBS_HISTORY_F
- ▶ W_PROJECT_HISTORY_F
- ▶ W_ACTIVITY_WORK_DOWN_HF
- ▶ W_ASSIGNMENT_WORK_DOWN_HF

To find the fields that support metadata functionality for each table, query the dictionary table **etl_calculations**.

Updating Metadata Calculations

When updating metadata calculations, the ETL process validates at Step 21. This validation takes the ETL_Calculations values, ensures the set calculation will execute successfully, and that the ETL process will not fail. If for some reason the new calculation causes a failure, all metadata calculations will revert to the default calculations and the ETL process will continue. The log will report any failure of the calculation and give a warning that the calculations will be reverted. You will have an opportunity to correct and rerun the ETL process. Errors will only be reported in the log. Once the calculations are successful, you can continue the ETL process as normal, with a normal StarETL run.

To validate the calculations:

- 1) Run the **staretl steps 18 to step 21**:
In Linux, run **staretl.sh -from 18 -to 21**.
In Windows, run **staretl.bat 18 21**.
- 2) Check the log output for any errors or warnings.
- 3) Run the ETL process:
In Linux, run **staretl.sh**.
In Windows, run **staretl.bat**.

The calculations for each table and column are stored in the ETL_CALCULATIONS table. To change a calculation of one of these fields, you must run an update statement in the Star schema.

For example, you could run the following statement:

```
update etl_calculations
```

```
set calculation = 'CASE WHEN a.actual_start_date >= s.period_start_date
and a.actual_start_date <= s.period_end_date THEN 1 ELSE 0 END'
where column_name = 'EMERGENT_WORK' and
TABLE_NAME='W_ACTIVITY_HISTORY_F';
commit:
/
```

Tips

- ▶ Metadata calculations are defined per data warehouse, not per data source. If you have multiple data sources in the environment, they will share the same calculations.
- ▶ The default calculations are stored in the ETL_CALCULATIONS table. You can revert the calculations back to their defaults from this table if necessary.

Backing up the Star Database Nightly

After you install and configure the Star Database, you must back it up nightly to preserve historic data and ensure you have a steady environment in case a problem occurs.

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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

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>	This guide highlights the new and enhanced features included in this release. You can also use the <i>Cumulative Feature Overview Tool</i> to identify the features that have been added since a specific release level. All users should read this guide.
<i>P6 Analytics and P6 Reporting Database Planning and Sizing Guide</i>	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. All administrators should read this guide.

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

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

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

Where to Get Support

Access to Oracle Support

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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.

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Oracle Primavera P6 Analytics Post Installation Administrator's Guide

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