Oracle
Primavera
P6 EPPM Reporting Guide

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Contents

About the P6 EPPM Reporting Guide

Scope

This guide contains information about reports in P6 EPPM including the sample reports provided, the publication services which provide data for reporting and table auditing.

Audience

Administrators and anyone who creates reports in P6 EPPM should read this guide.

About Personal Information

Personal information (PI) is any piece of data which can be used on its own or with other information to identify, contact or locate an individual or identify an individual in context. This information is not limited to a person's name, address, and contact details, for example a person's IP address, phone IMEI number, gender, and location at a particular time could all be personal information. Organizations are responsible for ensuring the privacy of PI wherever it is stored, including in back-ups, locally stored downloads, and data stored in development environments.

Caution: Personal information (PI) may be at risk of exposure. Depending on local data protection laws organizations may be responsible for mitigating any risk of exposure.

About Reports

Reports are collections of meaningful data saved in a common file format, designed according to a particular template, and delivered to the right recipients. As permitted, you can use the set of sample BI Publisher reports or additional reports created by your administrator.

Notes:

- Project, enterprise, and other types of global data for reports must be automatically or manually published to ensure up-to-date information. *See: Publishing P6 Data (on page 76).*
- The BI Publisher sample reports were designed to be run against the small data set included in the sample database. These reports are provided as an example of the product's capability only. Oracle

provides no guarantee, implied or explicit, that the BI Publisher sample reports will run against your database or will produce meaningful data when they are run against your database. You may modify the BI Publisher sample reports to suit your own data set, including adding filter criteria to limit data output or changing filter criteria to suit your data. You need a full BI license to modify sample reports.

You can elect to run a report in one of two ways:

1) **On-demand**: This type of report generation has many other names, including ASAP, instant, ad-hoc, and "on the fly". As these names imply, the application accepts various input criteria from you in real time and then generates and delivers the selected report to an email address, or prompts you to save or open the file depending on output type.
2) **Scheduled**: This type of report generation requires that you first configure the options and other details necessary to generate the report, but doesn't actually generate the report output until the scheduled day and time. You can also generate previously scheduled reports on-demand.

Notes:

- Your ability to run and schedule reports comes from security settings managed in BI Publisher. P6 user access settings determine what, if anything, you will see. For example, to view overhead codes in a Timesheet Report, you need module access for the Reports section of the application as well as resource access for the resources included in the report. Contact your administrator for more information.
- To see the **Reports** page login as a a user with module access to **Enterprise Reports**.

Reporting in P6 EPPM (Cloud only)

P6 EPPM relies on BI Publisher and the P6 EPPM EPPM Extended Schema to produce reports. To run reports in P6 EPPM, you must complete these tasks:

1) For publication services, configure publication settings for general data, time distributed data, blob data, and log retention. You can also configure publication services settings for project arbiter, projects, enterprise data, enterprise summaries, resource management, and security.
2) Configure and deploy the publication services required to populate the reporting views in the P6 EPPM Extended Schema. See ***Working with Publication Services*** (on page 72)
3) Configure BI Publisher to allow P6 to use parameter keys so users do not have to enter field values for reports.
4) When you begin working in P6, configure your application settings and global scheduled services. See the *P6 EPPM Application Administration Guide*.
5) Provide users with the Edit EPS Costs/Financials project privilege if they need to view project costs in a report generated from the P6 EPPM Extended Schema. See the *P6 EPPM Application Administration Guide*.

To run P6 reports, you must:

- Cloud only: In Primavera Administration assign the user access to P6 and either the BI Consumer or BI Author role. The BI Consumer role allows the user to run reports. The BI Author role allows the user to create reports.
- In BI Publisher ensure the user name matches the P6 user name and assign the P6 reports role.
- In P6 EPPM, assign enterprise reports module access to the user.
- In P6 EPPM, run publication services to ensure the report processes successfully.

> **Note**: Oracle supports the delivery of BI Publisher reports from P6 EPPM in PDF format via email only.

Assigning Permissions for P6 EPPM Reporting (Cloud only)

Complete the following steps to assign permissions for reporting:

1) Log in to Analytics.
2) Click **Catalog**.
3) Under Shared Folders, highlight the **P6Reports** folder.
4) In the Tasks pane, click **Permissions**.
5) Select the following checkboxes:
   - **Apply Permissions to sub-folders**
   - **Apply permissions to items within this folder**
6) Set permissions for the following roles:
   - **BI Consumer**: **Open**
   - **BI Content Author**: **Traverse**
   - **BI Service Administrator**: **Full Control**
7) Click **OK**.

Working with Reports

The reports section of the application hosts an array of reports integrated with BI Publisher. The role assigned to you determines the extent of your permissions when using reports in P6.

Reports Screen Elements

Item	Description
	Reports tab: The Reports tab displays the list of reports you have access to run. Run a report on-demand, or use the Schedule detail window to schedule a report run. The remaining screen element descriptions in this table provide more details on the Reports view. **Schedules** tab: The Schedules tab displays the list of all reports you have scheduled to run, organized by run frequency (Once, Daily, Weekly, Monthly). You can suspend or activate the report run by deseleting or selecting the Enabled option. Click on a report schedule name and view an explanation of the report in the Description detail window.

Item	Description
	Reports tab work area: Reports are listed by name and grouped by folder. The report list, group names, and hierarchical structure are defined in BI Publisher. Your P6 administrator can remove sample reports and create additional reports for your use. From this page, you can view report details including the file formats available for each report. You can also run a report on-demand or print a list of reports in your view.
	Reports tab detail windows: **Schedules** detail window: This detail window lists all the scheduled report runs for the selected report. Use this detail window to add a new scheduled report run, suspend or activate a report run by selecting or clearing the Enabled option, and view the history of report runs. You can also run a scheduled report on-demand from this window. **Description** detail window: This detail window provides an explanation of the report.

Scheduling Reports

Perform these steps to schedule reports and configure report delivery settings.

To schedule a report:

1) Click **Reports**.
2) On the **Reports** page:
   a. Click the **Reports** tab.
   b. Select a report, and then click the **Schedule** detail window.
3) In the **Schedule** detail window, click **Add Schedule...**.

Note: You can also schedule a new report using an existing report

schedule click **Row Actions** and then click **Duplicate**.

4) In the **Add Schedule** dialog box, click the **Options** tab.
5) On the **Options** tab:
   a. In the **Schedule Name** field, enter a name that identifies the report schedule.
   b. In the **Template** list, choose a template to apply to the report.
   c. In the **Output Format** list, choose a file format for the delivery of the report.
   d. Next to the **Delivery Type** field, click **Send Email** and enter or select email addresses for the intended report recipients.
   e. In the **Notification** section, choose to send yourself status notification of the report run.
6) In the **Add Schedule** dialog box, click the **Parameters** tab.
7) On the **Parameters** tab:
   a. Specify values for the parameters in the **Field Name** column. You can enter values directly in the field or double-click in the field and click **Select** to open a selection dialog box.

Notes:

- When selecting project parameters, if you choose to add an EPS to the **Selected Projects** list, only the projects directly under the EPS are added. If additional EPS elements are under the parent EPS, these projects will not automatically be included in the report; however, you can select additional EPS elements and add them to the **Selected Projects** list.
- To avoid system performance issues, be as specific as possible when entering values for reports. Narrow down your choices to include only what is absolutely necessary.

8) In the **Add Schedule** dialog box, click the **Schedule** tab.
9) On the **Schedule tab**:
   a. Select a recurrence pattern from the **Run** list.

Note: If a report is scheduled to run every Monday for 10 weeks and only 2 weeks have passed, the status for the scheduled report run remains *Pending* until all 10 instances of the report have run.

   b. Complete the fields shown. The screen elements in this section are dynamically updated based on your selection in the **Run** list.

   For example, for Daily scheduled jobs, enter the **Start Date**, **Finish Date**, **Run Time**, and select one or more days for the report to run.

10) In the **Add Schedule** dialog box, click **Add**.

Tips

- Report parameters to allow flexibility in reporting. For example, Jay in Accounting would like to run a report showing data derived from three active projects. Janice, VP of Strategic Development, wants the same report but is only concerned with one project. They each independently schedule the same report; however, they specify different values for the Project ID report parameter.

Running Reports On-Demand

Perform these steps to configure report settings and immediately run a report.

To run a report on-demand:

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Select a report.
   c. Click **Run...**.
3) In the **Run Report** dialog box:
   a. In the **Schedule Name** field, enter a name for the report.
   b. In the **Template** list, choose a template to apply to the report.
   c. In the **Output Format** list, choose a file format for the delivery of the report.
   d. In the **Delivery Type** list, choose to have the report sent through email or display the file immediately.
      - If you chose **Email**, click ✉ **Send Email** and enter or select email addresses for the intended report recipients.
      - If you chose **File**, the report will display after you click **Run**.
   e. If you chose **Email**, in the **Notification** section, choose to send yourself a status notification of the report run.
   f. In the **Report Parameters** section, specify values for the parameters in the **Field Name** column. You can enter values directly in the field or double-click in the field and click **…Select** to open a selection dialog box.

      Notes:

      - When selecting project parameters, if you choose to add an EPS to the **Selected Projects** list, only the projects directly under the EPS are added. If additional EPS elements are under the parent EPS, these projects will not automatically be included in the report; however, you can select additional EPS elements and add them to the **Selected Projects** list.
      - To avoid system performance issues, be as specific as possible when entering values for reports. Narrow down your choices to include only what is absolutely necessary.

   g. Click **Run**.

Tips

- When you choose to run a report to be delivered as a file, if the report takes longer than 20 seconds to complete, it will be run as a job service and you will be notified when the report is complete.

Viewing the Report Run History

Perform these steps to view the list of all runs for the selected report schedule since the last history deletion.

> **Note**: The run history is only captured for scheduled reports, or on-demand reports delivered by Email.

To view the report run history:

1) Click **Reports**.
2) On the **Reports** page:
   a. Click the **Reports** tab.
   b. Select a report, and then click the **Schedule** detail window.
3) In the **Schedule** detail window, select a schedule name.
4) Select **Row Actions** and click **View History**.
5) On the **History** dialog box, review the recent report runs.
   - To clear the history, click **Clear History**.
   - Click **Save** or **Cancel** to close the **History** dialog box.

Sample BI Publisher Reports

The following sample BI Publisher reports are available with P6. You can use these reports to display various types of project and portfolio data. Your administrator can modify the list of reports available for your use, including removing the sample reports or adding additional reports to your view.

Note: The BI Publisher sample reports were designed to be run against the small data set included in the sample database. These reports are provided as an example of the product's capability only. Oracle provides no guarantee, implied or explicit, that the BI Publisher sample reports will run against your database or will produce meaningful data when they are run against your database. You may modify the BI Publisher sample reports to suit your own data set, including adding filter criteria to limit data output or changing filter criteria to suit your data. You need a full BI license to modify sample reports.

Activity

Report Name	Description	Parameters
Activities That Can Work (on page 19)	Displays activities whose predecessors are all complete and which are ready to start for the project. Also displays all the predecessor activities for each of the activities listed.	Project ID
Activity Look Ahead (on page 20)	Displays activities, along with their dates and status, occurring within specified weeks for the selected projects.	Project ID, Number of Weeks
Activity Relationships (on page 21)	Lists the activities for the selected projects along with their predecessors and successors. Report includes relationship type and lag along with dates and float of the related activities.	Project ID
Calendar (on page 22)	Produces an Excel file showing activities, days, and times in a format similar to a Gantt Chart.	Project ID, Start Date, Number of Days
Cross Project Relationships (on page 23)	Lists the projects and associated activities that are predecessors or successors to the selected project, providing visibility into cross project impacts.	Project ID
Duration Analysis (on page 24)	Compares planned and actual duration of the activities for the selected projects along with upper and lower thresholds to analyze duration estimates.	Project ID

Schedule Report with Notebooks (on page 25)	Provides a list of activities for the selected projects along with all associated notebook topics.	Project ID

Administrative

Report Name	Description	Parameters
Activity Code Assignments - EPS (on page 26)	Lists the projects with the selected EPS node and shows the EPS Activity Code assignment counts for each project.	EPS ID, EPS Activity Code Specify the EPS Activity Code before selecting the EPS ID.
Activity Code Assignments - Global (on page 27)	Lists projects and shows the Global Activity Code assignment counts for each project.	Global Activity Code
Activity Code Assignments - Project (on page 28)	Lists projects and shows the Project specific Activity Code assignment counts for each project.	Project ID, Project Activity Code Specify the Project Activity Code before selecting the Project ID.
Audit Data - All (on page 29)	Lists the date and time from which and to which audit data is presented and the audit date. Also lists the time the change was made, the application from which the change was initiated, the username which changed the table, and information about the changes made for each change recorded by the auditing feature including the primary key, database column, old and new values, and the operation for each table that was changed.	User, Start Date, End Date Specify the tables to be audited.

Audit Data - Project (on page 30)	Lists the Project Name and Project ID selected for the report the date and time from which and to which audit data is presented and the audit date. Also lists the time the change was made, the application from which the change was initiated, the username which changed the table, and information about the changes made for each change recorded by the auditing feature including the primary key, database column, old and new values, and the operation for each table that was changed.	Start Date, End Date, Project ID Specify the tables to be audited.
Calendar Use (on page 31)	Lists all Global, Project, and Resource calendars, including identification of the projects and resources using each calendar.	NA
Profile Privileges (on page 32)	Lists the privileges that are enabled for each global and project-level security profile.	NA
Project Governance Non-Compliance Report (on page 33)	Lists core project-level settings for each project, highlighting setting values that are not compliant.	Project ID
Project Template Management (on page 34)	Lists all project templates along with status, division, and added by person and date.	NA
User Login Report (on page 35)	Lists all users that have logged into P6 EPPM within the specified period.	NA
User Inactivity Report (on page 36)	Lists users that have not logged into P6 EPPM within the specified period.	NA
Users (on page 38)	Lists all users and their personal name along with their associated resource and global security profile.	NA
Users OBS Assignments (on page 39)	Displays all OBS elements along with the corresponding security profile assigned to selected users.	User Name

Users Project Assignments (on page 37)	Displays OBS elements along with the corresponding security profile, EPSs, and Projects assigned to selected users.	User Name
Timesheets	**Description**	**Parameters**
Timesheets Status with Notes (on page 40)	Lists timesheets for resources along with the status, submitted and reviewed dates, name of the last reviewer, and associated timesheet notes.	Number of Weeks
Timesheets Status without Notes (on page 41)	Lists timesheets for resources along with the status, submitted and reviewed dates, and name of the last reviewer.	NA
Timesheets with Detailed Hours (on page 42)	Lists timesheets for the specified date range. For each timesheet, the activities and detailed hours per day are provided.	Start Date, End Date

Industry Samples - Utilities - Online

Report Name	Description	Parameters
Discrepancy Report (on page 43)	Provides a list of activities which are completed according to the schedule, but where the Work Order is not complete. For each activity, the report lists the ID and Name (as Title), Actual Start, Actual Finish, and the following User Defined Fields: Dpt, Sys, Status, WO, and WO Type.	Project ID
High Risk Look Ahead (on page 44)	Provides a list of high risk activities for a specified number of days from the data date. For each activity, the report lists the ID and Name (as Title), Start, Finish, Remaining Duration, Critical, the following User Defined Fields: Dpt, Sys, Equip ID, WO Type, and WARM.	Project ID, Number of Days

T-Week Hit List (on page 45)	Provides a list of activities that are on hold, listing the Activity ID, Activity Name (as Title), Start, Finish, Remaining Duration, and the following User Defined Fields: Dpt, Sys, Equip ID, Status, WO, and WO Type.	Project ID, T-Week
T-Week Look Ahead (on page 46)	Provides a list of activities for the specified T-week, listing the Activity ID, Activity Name (as Title), Start, Finish, Remaining Duration, and the following User Defined Fields: Dpt, Sys, Equip ID, WO, Status, Pri, WO Type, Crit, WARM, and SAP. See or an example.	Project ID, T-Week
Weekly Resource Loading (on page 47)	Shows the week name, T-Week, Resource name, Scheduled Hours, Available Hours, and Scheduled shown as a percentage of Available.	Project ID, Resource ID

Industry Samples - Utilities - Outage

Report Name	Description	Parameters
Critical Path Report (on page 48)	Provides a list of activities in the selected project which are critical for a given number of days. Enter parameters at runtime to define critical (by supplying a maximum Total Float) and a date range (the number of days from the data date). For each critical activity, the report lists the Activity ID, Activity Name (as Title), Start and Finish dates, Original and Remaining Duration, Total Float, and the following User Defined Fields: Dept, System Equip ID, WO, Stat WOT, Pri, Crit, and Risk.	Project ID, Crit Path+, Number of Days

Outage Look Ahead (on page 49)	Shows a list of activities for the specified number of days from the data date. For each activity, the report shows Activity ID, Activity Name (as Title) Start, Finish, Original Duration, Remaining Duration, Total Float, and the following User Defined Fields: Dept, System Equip ID, WO, Stat WOT, Pri, Crit, and Risk.	Project ID, Number of Days
Variance Report (on page 50)	Shows a list of activities which have a schedule varience for the specified number of days from the data date. For each activity, the report provides Activity ID, Activity Name (as Title), Baseline Start, Baseline Finish, Start, Finish, Variance, Total Float, and the following User Defined Fields: Dept, System Equip ID, and Risk.	Project ID, Number of Days

Portfolio

Report Name	Description	Parameters
Code Assignments (on page 51)	Provides a list of projects for the specified portfolio along with the code values assigned for the selected project code.	Project Code, Portfolio Name
Investment Alignment Chart (on page 52)	Displays a bubble chart that plots selected projects against their strategic and financial rating with the bubble size representing the At Completion Cost.	Project ID
Portfolio Counts (on page 53)	Provides a count of all projects and activities within the selected portfolio. In addition, two pie charts display the number of open and closed issues and risks.	Portfolio Name

Project Portfolio Review (on page 54)	Identifies issues and risks within the selected portfolio and groups them by project. Includes status and priority of the issue or risk along with project-level information.	Portfolio Name

Project

Report Name	Description	Parameters
Baseline Projects Summary (on page 55)	Displays all of a project's baselines including the date the baselines was added, original and current budget, planned labor units, and activity counts.	Project ID
Document Assignments (on page 56)	Provides a list of all documents assigned to activities and WBSs within the specified project, grouped by document category.	Project ID
Issues (on page 57)	Lists all issues identified for the selected projects, grouped by status. The issue details include priority, criticality, and issue description, if provided.	Project ID
Project Earned Value (on page 58)	Displays planned value, actual total cost, earned value, and estimate to complete as periodic and cumulative charts and pivot tables.	Project ID, Start Date, End Date
Project Plan Hierarchy (on page 59)	Displays the project plan which lists all WBSs and activities for the selected project. The activity details include the status, start and finish dates, and the associated activity steps.	Project ID
Project Status Report (on page 60)	Provides a project overview that includes project code values, project costs, issues, risks, status of the milestones, and a list of notebook topics.	Project ID, Project Status

Qualitative Risk Report (on page 61)	Reports on all risks for the select projects. Includes risk information, risk impact assessment, impacted activities, and risk response plans.	Project ID
Risk Scoring (on page 62)	Report of the project risk scoring matrix. Includes threshold definitions grouped by type (Probability, Schedule, Cost, User-defined, and Tolerance) and numeric and alphanumeric probability and impact diagrams (PIDs).	Project ID
S Curve (on page 63)	Displays the originally planned hours, additional work, and work achieved as planned in a bar chart and table.	Project ID, Report Date, Milestone Date
Weekly Schedule Performance (on page 64)	Compares the activity actual finish date to the baseline finish date. Activities are grouped by week and project. The report displays information starting four weeks prior to the date set in the report parameters.	Project ID, 4 Weeks Prior To: <date>

Resource

Report Name	Description	Parameters
Activity Resource Assignments (on page 65)	Lists resources assigned to each activity in the selected projects. Information includes start and finish dates along with duration.	Project ID
Limit Line (on page 66)	Displays actual units, remaining units, over allocated units, and limit for a Resource.	Resource ID, Start Date, End Date
Resource Code Assignments (on page 67)	Displays a list all resource codes and resource code values along with the resources assigned to each code value.	NA
Resource Role Associations (on page 68)	Displays a list of all roles in the system and the resources assigned to each role. The primary role and proficiency level are identified for each resource.	NA

Resource Role Skill Sets (on page 69)	Lists all resources along with their assigned roles. The primary role and proficiency level are identified for each role.	NA
Resource Stacked Histogram (on page 70)	Displays a stacked bar chart showing planned units by month and by project.	Project ID, Resource ID, Start Date, End Date

Activity Reports

Activities That Can Work

Figure 1: Activites That Can Work

Description

Displays a table showing the Name, Relationship Lag, Total and Free Float, Original and Remaining Duration, Start and Finish Dates and Status for every activity which has predecessors or whose predecessors are all complete.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Activity** folder.
   d. Click **Activities That Can Work**.

Activity Look Ahead

Figure 2: Activity Look Ahead

Description

Displays activities, along with dates and status, occurring within specified weeks for the selected projects.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Activity** folder.
   d. Click **Activity Look Ahead**.

Activity Relationships

Figure 3: Activity Relationships

Description

Lists the activities for the selected projects along with their predecessors and successors. Report includes relationship type and lag along with dates and float of the related activities.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Activity** folder.
   d. Click **Activity Relationships**.

Calendar

Figure 4: Calendar

Description

Produces an Excel file which shows activities working on each of the days in the range selected in a format similar to a Gantt Chart.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Activity** folder.
   d. Click **Calendar**.

Cross Project Relationships

Figure 5: Cross Project Relationships

Description

Lists the projects and associated activities that are predecessors or successors to the selected project, providing visibility into cross project impacts.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Activity** folder.
   d. Click **Cross Project Relationships**.

Duration Analysis

Figure 6: Duration Analysis

Description

Compares planned and actual duration of the activities for the selected projects along with upper and lower thresholds to analyze duration estimates.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Activity** folder.
   d. Click **Duration Analysis**.

Schedule Report with Notebooks

Figure 7: Schedule Report with Notebooks

Description

Provides a list of activities for the selected projects along with all associated notebook topics.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Activity** folder.
   d. Click **Schedule Report With Notebooks**.

Administrative Reports

Activity Code Assignments - EPS

Figure 8: Activity Code Assignments - EPS

Description

Provides a list of EPS level Activity Codes showing the number of assignments for each value of each code broken down by project.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Administrative** folder.
   d. Click **Activity Code Assignments - EPS**.

Activity Code Assignments - Global

Figure 9: Global Activity Code Assignments

Description

Provides a list of Global Activity Codes showing the number of assignments for each value of each code broken down by project.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Administrative** folder.
   d. Click **Activity Code Assignments - Global**.

Activity Code Assignments - Project

Figure 10: Project Activity Code Assignments

Description

Provides a list of Project Activity Codes showing the number of assignments for each value of each code.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Administrative** folder.
   d. Click **Activity Code Assignments - Project**.

Audit Data - All

Figure 11: Cross Project Relationships

Description

Lists the date and time from which and to which audit data is presented and the audit date. Also lists the time the change was made, the application from which the change was initiated, the username which changed the table, and information about the changes made for each change recorded by the auditing feature including the primary key, database column, old and new values, and the operation (insert, delete, or update) for each table that was changed.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Administrative** folder.
   d. Expand the **Audit** folder.
   e. Click **Audit Data - All**.

Audit Data - Project

Figure 12: Cross Project Relationships

Description

Lists the Project Name and Project ID selected for the report the date and time from which and to which audit data is presented and the audit date. Also lists the time the change was made, the application from which the change was initiated, the username which changed the table, and information about the changes made for each change recorded by the auditing feature including the primary key, database column, old and new values, and the operation (insert, delete, or update) for each table that was changed.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Administrative** folder.
   d. Expand the **Audit** folder.
   e. Click **Audit Data - Project**.

Calendar Use

Figure 13: Calendar Use

Description

Lists all global, project, and resource calendars, including identification of the projects and resources using each calendar.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Administrative** folder.
   d. Click **Calendar Use**.

Profile Privileges

Figure 14: Profile Privileges

Description

Lists the privileges that are enabled for each global and project-level security profile.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Administrative** folder.
   d. Click **Profile Privileges**.

Project Governance Non-Compliance Report

Figure 15: Project Governance Non-compliance Report

Description

Lists core project-level settings for each project, highlighting setting values that are not compliant.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Administrative** folder.
   d. Click **Project Governance Non-Compliance Report**.

Project Template Management

Figure 16: Project Template Management

Description

Lists all project templates along with status, division, and added by person and date.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Administrative** folder.
   d. Click **Project Template Management**.

User Login Report

Figure 17: Activity Code Assignments - EPS

Description

Provides a list of users logged into P6 EPPM within the period specified in the Time interval to store user login information setting in Application Settings. Shows the user ID, user name, login date and time, logout date and time, the total time the user was logged in, the application the user logged into, and the server for that application.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Administrative** folder.
   d. Click **User Login Report**.

User Inactivity Report

Figure 18: Activity Code Assignments - EPS

Description

Provides a list of users that have not logged into P6 EPPM in the time period specified in the Time interval to store user login information setting in Application Settings. Shows the user ID, user name, and most recent log out date and time.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Administrative** folder.
   d. Click **User Not Logged In Report**.

Users Project Assignments

Figure 19: User Project Assignments

Description

Displays OBS elements along with the corresponding security profile, EPSs, and Projects assigned to selected users.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Administrative** folder.
   d. Click **Users Project Assignments**.

Users

Figure 20: Users

Description

Lists all users and their personal name along with their associated resource and global security profile.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Administrative** folder.
   d. Click **Users**.

Users OBS Assignments

Figure 21: User OBS Assignment

Description

Displays all OBS elements along with the corresponding security profile assigned to selected users.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Administrative** folder.
   d. Click **Users OBS Assignments**.

Timesheets

Timesheets Status with Notes

Figure 22: Timesheets Status with Notes

Description

Lists timesheets for resources along with the status, submitted and reviewed dates, name of the last reviewer, and associated timesheet notes.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Administrative** folder.
   d. Expand the **Timesheets** folder.
   e. Click **Timesheets Status with Notes**.

Timesheets Status without Notes

Figure 23: Timesheets Status without Notes

Description

Lists timesheets for resources along with the status, submitted and reviewed dates, and name of the last reviewer.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Administrative** folder.
   d. Expand the **Timesheets** folder.
   e. Click **Timesheets Status without Notes**.

Timesheets with Detailed Hours

Figure 24: Timesheets with Detailed Hours

Description

Lists timesheets for the specified date range. For each timesheet, the activities and detailed hours per day are provided.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Administrative** folder.
   d. Expand the **Timesheets** folder.
   e. Click **Timesheets with Detailed Hours**.

Industry Samples

Utilities

Online

Discrepancy Report

Figure 25: Discrepancy Report

Description

Provides a list of activities which are completed according to the schedule, but where the Work Order is not complete. For each activity, the report lists the ID and Name (as Title), Actual Start, Actual Finish, and the following User Defined Fields: Dpt, Sys, Status, WO, and WO Type.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Industry Samples** folder.
   d. Expand the **Utilities** folder.
   e. Expand the **Online** folder.
   f. Click **Discrepancy Report**.

High Risk Look Ahead

Figure 26: High Risk Look Ahead

Description

Provides a list of high risk activities for a specified number of days from the data date. For each activity, the report lists the ID and Name (as Title), Start, Finish, Remaining Duration, Critical, the following User Defined Fields: Dpt, Sys, Equip ID, WO Type, and WARM.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Industry Samples** folder.
   d. Expand the **Utilities** folder.
   e. Expand the **Online** folder.
   f. Click **High Risk Look Ahead**.

T-Week Hit List

Figure 27: T-Week Hit List

Description

Provides a list of activities that are on hold, listing the Activity ID, Activity Name (as Title), Start, Finish, Remaining Duration, and the following User Defined Fields: Dpt, Sys, Equip ID, Status, WO, and WO Type.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Industry Samples** folder.
   d. Expand the **Utilities** folder.
   e. Expand the **Online** folder.
   f. Click **T-Week Hit List**.

T-Week Look Ahead

Figure 28: T-Week Look Ahead

Description

Provides a list of activities for the specified T-week, listing the Activity ID, Activity Name (as Title), Start, Finish, Remaining Duration, and the following User Defined Fields: Dpt, Sys, Equip ID, WO, Status, Pri, WO Type, Crit, WARM, and SAP.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Industry Samples** folder.
   d. Expand the **Utilities** folder.
   e. Expand the **Online** folder.
   f. Click **T-Week Look Ahead**.

Weekly Resource Loading

Figure 29: Weekly Resource Loading

Description

Shows the week name, T-Week, Resource name, Scheduled Hours, Available Hours, and Scheduled shown as a percentage of Available.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Industry Samples** folder.
   d. Expand the **Utilities** folder.
   e. Expand the **Online** folder.
   f. Click **Weekly Resource Loading**.

Outage

Critical Path Report

Figure 30: Critical Path Report

Description

Provides a list of activities in the selected project which are critical for a given number of days. Enter parameters at runtime to define critical (by supplying a maximum Total Float) and a date range (the number of days from the data date). For each critical activity, the report lists the Activity ID, Activity Name (as Title), Start and Finish dates, Original and Remaining Duration, Total Float, and the following User Defined Fields: Dept, System Equip ID, WO, Stat WOT, Pri, Crit, and Risk.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Industry Samples** folder.
   d. Expand the **Utilities** folder.
   e. Expand the **Outage** folder.
   f. Click **Critical Path Report**.

Outage Look Ahead

Figure 31: Outage Look Ahead

Description

Shows a list of activities for the specified number of days from the data date. For each activity, the report shows Activity ID, Activity Name (as Title) Start, Finish, Original Duration, Remaining Duration, Total Float, and the following User Defined Fields: Dept, System Equip ID, WO, Stat WOT, Pri, Crit, and Risk.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Industry Samples** folder.
   d. Expand the **Utilities** folder.
   e. Expand the **Outage** folder.
   f. Click **Outage Look Ahead**.

Variance Report

Figure 32: Variance Report

Description

Shows a list of activities which have a schedule varience for the specified number of days from the data date. For each activity, the report provides Activity ID, Activity Name (as Title), Baseline Start, Baseline Finish, Start, Finish, Variance, Total Float, and the following User Defined Fields: Dept, System Equip ID, and Risk.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Industry Samples** folder.
   d. Expand the **Utilities** folder.
   e. Expand the **Outage** folder.
   f. Click **Variance Report**.

Portfolio Reports

Code Assignments

Figure 33: Code Assignments

Description

Provides a list of projects for the specified portfolio along with the code values assigned for the selected project code.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Portfolio** folder.
   d. Click **Code Assignments**.

Investment Alignment Chart

Figure 34: Investment Alignment Chart

Description

Displays a bubble chart that plots selected projects against their Strategic and Financial Rating with the bubble size representing the At Completion Cost.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Portfolio** folder.
   d. Click **Investment Alignment Chart**.

Portfolio Counts

Figure 35: Portfolio Counts

Description

Provides a count of all projects and activities within the selected portfolio. In addition, two pie charts display the number of open and closed issues and risks.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Portfolio** folder.
   d. Click **Portfolio Counts**.

Project Portfolio Review

Figure 36: Project Portfolio Review

Description

Identifies Issues and Risks within the selected portfolio and groups them by project. Includes Status and Priority of the issue or risk along with project-level information.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Portfolio** folder.
   d. Click **Project Portfolio Review**.

Project Reports

Baseline Projects Summary

Figure 37: Baseline Projects Summary

Description

Lists all the baselines for a project and shows the Baseline name, Date Added, Current Budget, Original Budget, Current Variance, Activity Count, Planned Labor Units, and Planned Labor Cost.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Project** folder.
   d. Click **Baseline Projects Summary**.

Document Assignments

Figure 38: Document Assignments

Description

Provides a list of all documents assigned to activities and WBSs within the specified project, grouped by Document Category.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Project** folder.
   d. Click **Document Assignments**.

Issues

Figure 39: Issues

Description

Lists all Issues identified for the selected projects, grouped by Status. The issue details include Priority, Criticality, and issue description, if provided.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Project** folder.
   d. Click **Issues**.

Project Earned Value

Figure 40: Project Earned Value

Description

Displays monthly Actual Cost, Earned Value, and Planned Value in both a bar chart along with a table for the selected projects.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Project** folder.
   d. Click **Project Earned Value**.

Project Plan Hierarchy

Figure 41: Project Plan Hierarchy

Description

Displays the project plan which lists all WBSs and activities for the selected project. The activity details include the Status, Start and Finish dates, and the associated activity Steps.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Project** folder.
   d. Click **Project Plan Hierarchy**.

Project Status Report

Figure 42: Project Status Report

Description

Provides a project overview that includes project code values, project costs, Issues, Risks, Status of the milestones, and a list of Notebook Topics.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Project** folder.
   d. Click **Project Status Report**.

Qualitative Risk Report

Figure 43: Qualitative Risk Report

Description

Reports on all risks for the select projects. Includes risk information, Risk Impact Assessment, Impacted Activities, and Risk Response Plans.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Project** folder.
   d. Click **Qualitative Risk Report**.

Risk Scoring

Figure 44: Risk Scoring

Risk Scoring

Figure 45: Risk Scoring (v2)

Risk Scoring (v2)

Description

Choose which version of the report to run from **Template**.

Risk Scoring shows the project risk scoring matrix. Includes threshold definitions grouped by type (Probability, Schedule, Cost, User-defined, and Tolerance) and numeric and alphanumeric probability and impact diagrams (PIDs).

Risk Scoring (v2) shows project risk scoring matrix. Includes threshold definitions grouped by type (Tolerance Threshold, Probability and Tolerance), PIDs for Risk Matrix, Risk Count and Risk Score and Total Risk Score.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Project** folder.
   d. Click **Risk Scoring**.

S Curve

Figure 46: S Curve

Description

This report consists of a chart and a table. The chart shows Planned Labor Units on the y-axis and date on the x-axis and plots the Original Planned Labor Units, Achieved versus Plan, Additional Work and Milestone Dates. The table gives the Total Target Planned Work, Planned Work To Date, Cancelled Work To Date, Additional Work To Date, Planned Work Achieved To Date, Total Work Achieved To Date, Manhours Planned, Manhours Achieved, Lost Time Manhours To Date, Actual Percent Complete To Date, Target Percent Complete To Date, and Actual Manhours To Date.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.

b. Expand the **P6Reports** folder.
c. Expand the **Project** folder.
d. Click **S Curve**.

Weekly Schedule Performance

Figure 47: Weekly Schedule Performance

Description

Compares the activity Actual Finish date to the Baseline Finish date. Activities are grouped by week and project. The report will display information starting four weeks prior to the date set in the report parameters.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Project** folder.
   d. Click **Weekly Schedule Performance**.

Resource Reports

Activity Resource Assignments

Figure 48: Activity Resource Assignments

Description

Lists resources assigned to each activity in the selected projects. Information includes Start and Finish dates along with Duration.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Resource** folder.
   d. Click **Activity Resource Assignments**.

Limit Line

Figure 49: Limit Line

Description

A bar-line graph for each resource showing bars for Actual Units, Remaining Units, and Overallocated Units and a line for the resource's Limit. The y-axis shows hours. The x-axis shows week.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Resource** folder.
   d. Click **Limit Line**.

Resource Code Assignments

Figure 50: Resource Code Assignments

Description

Displays a list of all Resource Codes and Resource Code Values along with the resources assigned to each code value.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Resource** folder.
   d. Click **Resource Code Assignments**.

Resource Role Associations

Figure 51: Resource Role Associations

Description

Displays a list of all roles in the system and the resources assigned to each role. The Primary Role and Proficiency level are identified for each resource.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Resource** folder.
   d. Click **Resource Role Associations**.

Resource Role Skill Sets

Figure 52: Resource Role Skill Sets

Description

Lists all resources along with their assigned roles. The Primary Role and Proficiency level are identified for each role.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Resource** folder.
   d. Click **Resource Role Skill Sets**.

Resource Stacked Histogram

Figure 53: Resource Stacked Histogram

Description

Displays a stacked histogram that shows effort as Planned Units (in hours) for selected resources, stacking bars by resource within the start and end date ranges.

Location

1) Click **Reports**.
2) On the **Report** page:
   a. Click the **Reports** tab.
   b. Expand the **P6Reports** folder.
   c. Expand the **Resource** folder.
   d. Click **Resource Stacked Histogram**.

About Publication Services

Before you can generate reports or view data in the Team Usage or Resource Analysis pages, data must be refreshed and calculations must be made in precisely arranged tables and fields. *Publication Services* address these needs gathering and calculating data as close as possible to real-time. To make this happen, you can configure P6 to automatically publish data to specific tables used for these features. An administrator must configure settings for Publication Services before publishing data. For reports, depending on the type of data published, P6 tables may still be used to generate reports, or a combination of P6 and reporting tables may be used to generate them.

Your organization's P6 EPPM data has two categories: *project* data and *global* data. Published project data includes all information about your projects, including summaries, calculations, and auditing data. Published global data includes enterprise data, project, activity, resource, calendar, enterprise data dictionary, security, and auditing data. The Team Usage and Resource Analysis pages use published project data. Reports use published project data and published global data.

To summarize the process:

1) Users create new data or make changes to existing data in P6.
2) P6 global and project data publishes, automatically or manually.
   a. Team Usage and Resource Analysis pages draw from the published project data.
   b. Reports generate directly from the collective P6 EPPM database with the P6 Extended Schema reporting tables.

> **Note**: The BI Publisher sample reports were designed to be run against the small data set included in the sample database. These reports are provided as an example of the product's capability only. Oracle provides no guarantee, implied or explicit, that the BI Publisher sample reports will run against your database or will produce meaningful data when they are run against your database. You may modify the BI Publisher sample reports to suit your own data set, including adding filter criteria to limit data output or changing filter criteria to suit your data. You need a full BI license to modify sample reports.

Working with Publication Services

To achieve near real-time reporting, team usage and resource analysis, you can configure P6 to automatically publish to tables that store updated data, including calculations and summary data. These tables also create views for generating reports. The P6 data is split into two general categories: *project* data and *global* data. Project data includes all information about your projects, including summaries and calculations. Global data includes enterprise data, as well as resource and role, portfolio, and security data. The image below summarizes the key concepts in the publication and reporting process.

Table of Key Publication Services Concepts

Item	Description
	EPPM Database: The EPPM database captures all the data your organization generates every second of every day. However, the raw data in the EPPM database is not structured for immediate reporting.

Item	Description
	Project Data: You can configure P6 to automatically publish a project based on publication thresholds. Based on the options you select, you can prioritize projects for publication in a queue. If necessary, you can manually add a project to the queue.
	Global Data: You can configure services in P6 to schedule the publication of global data based on recurring intervals that you specify. If necessary, you can also immediately publish this data manually.
	Project Queue: Projects publish in sequential order based on priority. Your administrator can control which projects are added to the publishing queue, when, and in what order. These options ensure the project data you need most is available for P6 in near real-time.

Item	Description
	P6 Extended Schema Tables: The project and global services recalculate certain logical fields in the P6 EPPM database and store them as physical fields in the P6 Extended Schema tables so they are available for reporting and other purposes. Some fields in P6, such as durations, are calculated in real time as related field data is changed and are not stored in the database. Publication services recalculate these fields and store their values in the extended schema tables. Other fields, such as note fields, are not stored in the database in a format suitable for reporting. For these fields, publication services will convert them to a format more suitable for reporting. **Note**: For information about which tables are updated by the Publication Services, see the following knowledge management document: What PX tables are updated when running Global Scheduled Services or Publish Project [ID 1491245.1] https://support.oracle.com/epmos/faces/ui/km/DocumentDisplay.jspx?id=1491245.1
	P6 Reports: You can run reports directly against P6 Extended Schema table views.

P6 administrators control project and global publication processes, which are summarized below.

Table of Key Publication Services Elements

Item	Description
	Application Settings for Publication Services: Located under the **Administration** tab, begin by clicking **Application Settings**, and then choose **Services**. On the **Services** page, specify the start date, period of time to add to the current publication date to determine a finish date, and time-distributed interval for publication. In the **Project Publication** section, you can enable the *Publish Projects* services to refresh project data according to a time interval you set. You can further determine a change threshold, time threshold, and even decide if idle projects should be added to the queue, and if so, set a maximum limit to the concurrent number of idle projects being published.

Item	Description
	Project Preferences for Publication Services: Then, navigate to the **EPS** page in the Projects section. Click a project and select **Set Project Preferences** from the **Actions** menu or the **Row Actions** menu. On the **Services** or **Analytics and Services** page, select the **Enable Publication** option to indicate you want to include this project in the *Publish Projects* services. All new projects are enabled for publication by default. Clear the option if you do not want to publish the project's data. On this page, you can also set the project's priority relative to other projects entering the publication queue.
	Global Scheduled Publication Services: Return to the **Administration** tab and navigate to the **Global Scheduled Services** dialog box to enable the types of global data services you want to schedule. Below each service you enable, specify the recurring interval and start time in the detail window.

Publishing P6 Data

Reports based on P6 data require timely access to the most current data in order to be accurate. For example, report recipients expect to see updated enterprise data and project data including any calculations.

Some other areas of P6, including Team Usage and Resource Analysis also rely on published data to provide accurate information.

In order to provide this data, P6 generates and stores data in reporting tables (the *P6 Extended Schema*). You can configure P6 to automatically publish essential data to the tables or manually generate it so that the most current data is available. You can select to be notified by email if publication services fail.

The data is split into two general categories: *project* data and *global* data. Project data includes all information about your projects, including baselines, summaries, calculations, and audit data and global data includes enterprise data, project, activity, resource, calendar, enterprise data dictionary, resource and role data, security and audit data. The Team Usage and Resource Analysis views access project data. Reports can use both project and global data.

Publication Services

Data in the P6 Extended Schema is calculated and stored by Publication Services, which gives administrators control over when data is calculated and stored in the P6 Extended Schema. Publication Services exist for project and global data. Global data includes enterprise data, as well as resource and role, portfolio, security and audit data. Project data includes all information about projects and baselines, including summaries and calculations.

The Publish Project service is dedicated to publishing project and baseline data to the P6 Extended Schema.

> **Note**: The Publish Project service recalculates and publishes all project business objects containing calculated or denormalized data including, but not limited to: the WBS, activities, resource/role assignments, high-level planning assignments, relationships, risks, documents, expenses, steps, milestones, UDF values, notes, issues, budget change logs, timesheets, code assignments, funding source assignments.

These additional Publication Services publish global data to the P6 Extended Schema:

- Publish Audit Data
- Publish Enterprise Data
  - Project Data
  - Activity Data
  - Resource Data
  - Calendar Data
  - Enterprise Data dictionary definitions
- Publish Enterprise Summaries
- Publish Resource Management
- Publish Security

The first time a data type is published to the P6 Extended Schema all data is recalculated and published to the extended schema tables. After a data type has been published for the first time, future publication services recalculate and publish only data that has changed since the last time that data was published.

When any of the publication services runs, each business object type processed by the service is individually timestamped, and the timestamp stored in the database. The services can accurately determine exactly which data has changed since the last time it was published using these timestamps because they exist at the individual business object type level.

Configure Publication Services in P6 as follows:

- Set up automatic publication and enable P6 to publish project and global data on the Services page in Application settings.
- Enable the types of global data to be scheduled in Global Scheduled Services.
- Disable or enable publication for a selected project on the Services page in Project Preferences.
- Add, verify the status of, modify, or delete project management services on the Project Scheduled Services page.

Tip

Run the global data services before turning on the Project Arbiter service.

Defining Publication Periods

Before publishing global or project data for reporting, define the publication period. The publication period you define should be large enough to capture all the project data you need to include in reports.

> **Caution**: You can perform these steps again at any time to modify your settings. However, if an *Admin Superuser* modifies the Start date, Time distributed interval, or Finish date is current date plus fields, all data will be fully recalculated. Oracle recommends that you only reconfigure publication options on weekends or during off-peak hours to prevent the disruption of other P6 features.

To define the publication period:

1) Click **Administration**.
2) On the Administration navigation bar, click **Application Settings**.
3) On the **Application Settings** page, click **Services**.
4) On the Services page, in the Publication Periods section:
   a. In the **Start date** field, click **Select Date** to select the exact month, day, year, and time to mark the initial start of the data publication period. Select any date in the past that represents a reasonable amount of historical spread data for your organization. For example, in order for users to be able to produce time-distributed reports for any date range, enter the earliest project start date at your organization.
   b. In the **Finish date is current date plus** field, select a numeric quantity and unit of time to construct a dynamic period of time. Whenever a publication service runs, this period of time is added to the current date to determine the finish date for the publication of data. For example, if the value is 5 years, time-distributed data will always be published covering the period of time that begins with the value in the Start Date field and extends five years into the future each time a service runs.
   c. In the **Time distributed interval** field, select the unit of time in which time distributed data will be recalculated and published. Time distributed interval is set to Week by default. Set this to Day if you need to see daily data.
   d. Click **Save**.

Enabling Automatic Publishing of P6 Project Data

Perform the following procedure to enable projects for publication, and to set options for automatic project publication. Then, as you work, P6 automatically detects the changes to your projects that trigger the publication of their data.

To enable Publication Services for project data:

1) Click **Administration**.
2) On the Administration navigation bar, click **Application Settings**.
3) On the Application Settings page, select **Services**.
4) On the Services page, in the Project Publication section:
   a. Select **Enable Publish Projects** to enable automatic project publication based on defined thresholds. Selecting this option also allows users to manually publish projects.
   b. In the **Publish projects every** field, select an interval by which projects are polled to be published.
   c. Enter a number in the **Number of changes exceeds** field. This threshold setting determines the number of edits users can make to the project data before P6 publishes its data. Assuming a constant rate of change among projects, a lower value will result in more frequent publication of project data. If you enter a value of 0, projects with tracked changes will be automatically published.
   d. Enter a time period for the **Time since last publication exceeds** field. This threshold setting determines how often the publication of project data should occur. For example, if you enter 12 hours, the project data will be published every 12 hours unless the threshold for the number of changes has already been reached.
   e. Select **Publish idle projects** to add projects to the service queue that are enabled for publication but have not been changed during the time threshold. This setting is only valid for the initial run of the service.
   f. In the **Maximum number to publish** field, enter the maximum number of pending idle *Publish Project* services that can be present at once in the service queue. This prevents performance problems during peak demand when enabling the publication of a large number of projects. For example, if the service runs and queues 40 projects that have exceeded specified thresholds and must be published, or that have been manually published, and you have set the maximum to 100, P6 will schedule up to 60 idle projects for publication.
   g. Select **Publish resource and role data** if you want to be able to publish resource and role data in the Team Usage view.
   h. Select **Enable Baseline Publication** if you want to be able to publish baseline data.
   i. Select **Enable Notification Email** and type an email address in the **Notification Email address** field if you want to receive an email if publication services fail.
   j. Click **Save**.

Tips

- If your organization is upgrading to P6, select Publish idle projects to add your migrated projects to the service queue after your database is upgraded. This will publish all your projects in the queue and refresh the available data for reporting. After an upgrade, this setting is no longer applicable, and projects will be submitted to the service queue based on threshold values specified on the Application Settings page.
- Clear the Publish idle projects option if your organization does not report against completed projects.
- The Maximum number to publish field is only applicable immediately following an upgrade, when all projects are considered idle. When all projects have been published, the service queue will no longer be constrained based on this setting.
- A project will be automatically submitted to the service queue if you change the project baseline, calendar, or data date. Projects are also automatically submitted to the queue if you select or clear Calculate Activity % Complete from activity steps option, or modify the default price/unit value for assignments without activities, from the Set Project Preferences dialog box available from the Actions menu on the EPS page.
- For threshold settings, projects are added to the service queue based on tracked changes to data. Only changes to activities, resource/role assignments, relationships, and the WBS are tracked.
- You can delete published project data by selecting **Delete Published Data** on the

Actions menu of the EPS page.

Enabling Automatic Publishing of P6 Global Data

Perform the steps below to configure P6 to automatically publish any of the following types of global data to reporting tables.

- Enterprise Data
  - Project Data
  - Activity Data
  - Resource Data
  - Calendar Data
  - Enterprise Data dictionary definitions

- Enterprise Summary Data including portfolio data
- Resource Management Data
- Security Data
- Audit Data

To automatically publish P6 global data:

1) Click **Administration**.
2) On the Administration navigation bar, click **Scheduled Services**.
3) On the Scheduled Services page, select **Global**.
4) On the Global page:
   a. Select a service, then configure its settings in the Service Settings detail window. For example, you might specify that the service runs daily on Wednesdays with a start time of 10:15 PM.

      Note: Oracle recommends running the Publish Security service first if the Run After Previous option is selected in the Run Service list for other publication services. Running the Publish Security service first will ensure that security data updates in the extended schema as soon as possible and ensures that the security restrictions are in place before you run the report.

   b. Select the **Enabled** option for any of the global services listed.
   c. If you choose to run one or more services with the relative frequency value of *After previous service*, click **Move Up** or **Move Down** to arrange the services in your preferred sequence.
   d. Click **Save**.

Configuring Publication Service Settings for Projects

After enabling automatic publishing, perform the following procedure to configure settings for each individual project in *Publication Services*. Then, as you work, P6 automatically detects the changes to your project that trigger the publication of its data in the service queue.

To configure Publication Service settings for a project:

1) Click **Projects**.
2) On the Projects navigation bar, click **EPS**.
3) On the **EPS** page:
   a. Select a project.
   b. Click **Row Actions** and select **Set Project Preferences**.
   c. In the **Project Preferences** dialog box, select **Analytics &Services**.
   d. On the **Analytics &Services** page, in the **Publication** section:
      - Select the **Enable Publication** option.
      - Adjust the relative **Publication Priority** up or down between 1 and 100 with 50 being the default priority value, 1 being the highest priority, and 100 being the lowest.

e. Click **OK**.

Tips

- By default, all projects are enabled for publication. The **Enable Publication** setting only needs to be modified if you wish to disable publication for a project or re-enable publication of a previously disabled project.
- Clearing the **Enable Publication** setting does not delete previously published data. You can delete published project data by selecting **Delete Published Data** on the **Actions** menu in the EPS page.
- If you wish to modify publication settings for many projects at one time, you can display the **Enable Publication**, **Last Published On**, and **Publication Priority** fields as columns in your EPS view.
- If you want to publish Baseline data, the project must be published.

Configuring Publication Service Settings for Baselines

After enabling automatic publishing, perform the following procedure to configure settings for each individual project's baselines in *Publication Services*. Then, as you work, P6 automatically detects the changes to your baselines that trigger the publication of its data in the service queue.

To configure Publication Service settings for a baseline:

1) Click the **Projects** menu and choose **Open Projects**.
2) In the **Open Projects** dialog box, open one or more projects whose baselines you want to enable for publication.
3) On the **Project** navigation bar, click **Activities** or **EPS**.

a. On the **Activities** or **EPS** page, click **Actions** and select **Define Baselines**.
b. In the **Define Baselines** dialog box, decide if you want to switch on publication for all baselines for a project or only for some:
   - If you want to switch on publication for all baselines, select the **Publish** option in the project band.
   - If you want to switch on publication for only some baselines, expand the project band and select the **Publish** option for the baselines you want to publish.

   Note: You cannot switch on baseline publication if the project has not been published.

   - Click **Save**.

Tips

When a new baseline is added, the **Publish** option is off by default.

Manually Publishing P6 Project Data

Perform the steps below to publish the data from one or more projects. Any of the projects' baselines which is enabled for publishing will also be published when you perform these steps. P6 will automatically publish project data; however, you may want to publish the data manually in special cases such as when generating an important report at a specific time.

To manually publish P6 project data:

1) Click **Projects**.
2) On the Projects navigation bar, click **EPS**.
3) On the **EPS** page:

a. On the **Actions** menu, click **Publish Projects**.

Tips

- In order to manually publish project data from the EPS page, *Publication Services* must be enabled and configured.
- You can publish all open projects by clicking Publish Projects on the

Actions menu of the Activities page. You can also publish projects by selecting one or more projects on the EPS page, and then using the right-click menu.

- Projects are not immediately published. Instead, they will be added to the queue of projects being processed for publication the next time the Publish Projects service runs. View settings for the Publish Projects service, including how often the service runs, on the Services page, which is located on the Application Settings pane. Depending on your security privileges, the Application Settings pane may not be accessible. You can check the status of the Publish Projects service after it has been added to the service queue by selecting View Service Status from the Administer menu.
- If some of the selected projects are not enabled for publication, only those projects enabled for publication will be submitted to the service queue. If none of the selected projects is enabled for publication, you will not be able to select the

Publish Projects or **Publish Projects** option.

- A project will be automatically submitted to the service queue if you change the project baseline, calendar, or data date. Projects are also automatically submitted to the queue if you select or clear the Calculate Activity % Complete from activity steps option, or modify the default price/unit value for assignments without activities from the Set Project Preferences

dialog box available from the **Actions** menu the **EPS** page.

- You can delete published project data by selecting **Delete Published Data** on the **Actions** menu of the EPS page.

Manually Publishing P6 Global Data

Perform the steps below to manually publish any of the following types of global data to the reporting tables.

- Enterprise Data
  - Project Data
  - Activity Data
  - Resource Data
  - Calendar Data
  - Enterprise Data dictionary definitions
- Enterprise Summary Data including portfolio data
- Resource Management Data
- Security Data
- Audit Data

P6 will automatically publish global data; however, you may want to publish the data manually in special cases such as when generating an important report at a specific time.

To manually publish P6 global data:

1) Click **Administration**.
2) On the Administration navigation bar, click **Scheduled Services**.
3) On the Scheduled Services page, select **Global**.
4) On the Global page:
   a. Select any of the global services listed.
   b. Click **Run Service**.
   c. In the resulting message box, click **OK**.

Tips

- If the service listed under the manually selected service is configured to run After previous service, it will run automatically when the selected service finishes.
- You must have the *Administer Global Scheduled Services* global security privilege to run a global scheduled service.

Deleting Published P6 Project Data

In Standard View, perform the steps below to delete published project data. This is useful when you no longer need to report on projects which are completed, but you need to retain the projects in your database.

To manually delete P6 global data:

1) Click **Projects**.
2) On the Projects navigation bar, click **EPS**.
3) On the EPS page:

   a. On the **Actions** menu, click **Delete Published Data**.

Tips

- You need the xxx privilege assigned
- This process is for Oracle databases only.

Supported Parameters in P6

You can use any parameter for BI Publisher, but users will have to ensure they enter the value correctly, or the SQL statements in the data template will fail. Using supported parameters will allow you to provide a user interface to enter the values for parameters. Supported parameters for P6 fall into one of three categories:

- **Enumeration** parameters allow users to pick parameters from static lists.
- **Dynamic** parameters will generate the list at run time. For example, when focusing on Project ID, users will see a project list that pulls the current projects from the P6 EPPM database.

- **Primitive** parameters support basic selections. For example, if a parameter is a boolean, an option will appear for users to select or clear a text box instead of typing true or false.

The following are the supported parameters for P6, grouped by category:

Enumeration Parameters

- Activity Priority
- Assignment Proficiency
- Activity Status
- Activity Type
- Constraint Type
- Duration Type
- Percent Complete Type
- Project Status
- Rate Source
- Rate Type
- Resource Type
- Risk Status
- Risk Type

Dynamic Parameters

- Activity Code Value
- User Defined Activity Code (type and value)
- Cost Account
- EPS
- Expense Category
- Funding Source
- Portfolio
- Project
- Project Code Value
- User Defined Project Code (type and value)
- User Defined Resource Code
- Resource Code Value
- Resource Team
- Resource ID
- Responsible Manager
- Risk Category
- Role
- Role Team
- Timesheet Period
- User

Primitive Parameters

- Date

- Boolean
- Integer
- Float

Custom Parameters

- List of Values

Enumeration Parameters

Enumeration parameters map to fields that have a set list of possible values. When running a report with a enumeration parameter, P6 will offer a list to select one of the values. Users will see the localized text for the enumeration value's description; however, the return value will be the English description of the enumeration, which is the value the PX Views database stores.

This section contains the following information for each supported enumeration parameter:

- **Identifier**: The value you must enter in the identifier field in BI Publisher when creating the parameter for the report.
- **Details**: A description and technical details of the parameter.
- **Values**: The values that will be available in P6.
- **Maps to field**: The database field the return value maps to in the PX Views database. It could match multiple fields in the database, so only the primary table is listed.
- **Use case**: An example of how you might use the parameter in a report.

The following enumeration parameters are supported:

Parameter: Activity Priority

- **Identifier**: p_activity_priority
- **Details**: Allows users to select the leveling priority of an activity.
- **Values**: Top, High, Normal, Low, Lowest
- **Maps to field**: ACTIVITY.LEVELINGPRIORITY
- **Use case**: Filter activity data by leveling priority.

Parameter: Assignment Proficiency

- **Identifier**: p_assignment_proficiency
- **Details**: Allows users to select a value for assignment proficiency.
- **Values**: Master, Expert, Skilled, Proficient, Inexperienced
- **Maps to field**: RESOURCEASSIGNMENT.PROFICIENCY
- **Use case**: Filter resource assignment data by the proficiency of the assignment.

Parameter: Activity Status

- **Identifier**: p_activity_status
- **Details**: Allows users to select activity status.
- **Values**: Not Started, In Progress, Completed

- **Maps to field**: ACTIVITY.STATUS
- **Use case**: Filter activity reports based on a certain status.

Parameter: Activity Type

- **Identifier**: p_activity_type
- **Details**: Allows users to select the activity type.
- **Values**: Task Dependent, Resource Dependent, Level of Effort, Start Milestone, Finish Milestone, WBS Summary
- **Maps to field**: ACTIVITY.TYPE
- **Use case**: Filter activity reports based on the type of the activity.

Parameter: Constraint Type

- **Identifier**: p_contstraint_type
- **Details**: Allows users to select an activity constraint type.
- **Values**: Start On, Start On or Before, Start On or After, Finish On, Finish On or Before, Finish On or After, As Late As Possible, Mandatory Start, Mandatory Finish
- **Maps to field**: ACTIVITY.PRIMARYCONSTRAINTTYPE and ACTIVITY.SECONDARYCONSTRAINTTYPE
- **Use case**: Filter activities in a report by the activity primary or secondary constraint type.

Parameter: Duration Type

- **Identifier**: p_duration_type
- **Details**: Allows users to select the duration types of an activity.
- **Values**: Fixed Units/Time, Fixed Duration & Units/Time, Fixed Units, Fixed Duration & Units
- **Maps to field**: ACTIVITY.DURATIONTYPE
- **Use case**: Filter activities in a report based on their duration type.

Parameter: Percent Complete Type

- **Identifier**: p_percent_complete_type
- **Details**: Allows users to select the percent complete type of an activity.
- **Values**: Physical, Duration, Units
- **Maps to field**: ACTIVITY.PERCENTCOMPLETETYPE
- **Use case**: Filter activities in a report based on the percent complete type of the activity.

Parameter: Project Status

- **Identifier**: p_project_status
- **Details**: Allows users to select the status of a project.
- **Values**: Planned, Active, Inactive, What If, Requested, Template
- **Maps to field**: PROJECT.STATUS
- **Use case**: Filter the projects in a report based on the desired type. For example, you might want to use this for a report that needs to display information only on planned projects.

Parameter: Rate Source

- **Identifier**: p_rate_source
- **Details**: Allows users to select the rate source of an assignment.
- **Values**: Resource, Role, Override
- **Maps to field**: RESOURCEASSIGNMENT.RATESOURCE
- **Use case**: Filter resource assignments included in a report based on the rate source of the assignment.

Parameter: Rate Type

- **Identifier**: p_rate_type
- **Details**: Allows users to select the rate type of an assignment.
- **Values**: Price/Unit, Price/Unit 2, Price/Unit 3, Price/Unit 4, Price/Unit 5
- **Maps to field**: RESOURCEASSIGNMENT.RATETYPE
- **Use case**: Filter resource assignments included in a report based on the rate type of the assignment.

Parameter: Resource Type

- **Identifier**: p_resource_type
- **Details**: Allows users to select the resource type of an assignment.
- **Values**: Labor, Nonlabor, Material
- **Maps to field**: RESOURCEASSIGNMENT.RESOURCETYPE
- **Use case**: Filter resource assignments included in a report based on the resource type of the assignment.

Parameter: Risk Status

- **Identifier**: p_risk_status
- **Details**: Allows users to select the status of a risk.
- **Values**: Proposed, Open, Active, Rejected (Closed), Managed (Closed), Impacted (Closed)
- **Maps to field**: RISK.RISKSTATUS
- **Use case**: Filter risks in a report based on the status of the risk.

Parameter: Risk Type

- **Identifier**: p_risk_type
- **Details**: Allows users to select the type of a risk.
- **Values**: Threat, Opportunity
- **Maps to field**: RISK.RISKTYPE
- **Use case**: Filter risks in a report based on the type of risk.

Dynamic Parameters

Dynamic parameters map to fields that have a varying list of possible values. When running a report with a dynamic parameter, P6 will offer a list to select one of the available values.

This section contains the following information for each supported dynamic parameter:

- **Identifier**: The value you must enter in the identifier field in BI Publisher when creating the parameter for the report. In some cases, identifiers can pass in context by appending short names to the end of the identifier. The character in quotations is the separator that the code splits and <name> represents the context you are trying to pass in.
- **Details**: A description and technical details of the parameter.
- **P6**: What the editor for the parameter will be in the Reports section of P6.
- **Return Value**: The values that will be available in P6.
- **Maps to field**: The database field the return value maps to in the PX Views database. It could match multiple fields in the database, so only the primary table is listed.
- **Use case**: An example of how you might use the parameter in a report.

The following dynamic parameters are supported:

Parameter: Activity Code Value

- **Identifier**: p_a_code_val__<short name>
- **Details**: Enables users to select an activity code value via a list. Context passes into the parameter by appending a colon":" followed by the short name of the activity code type you want to set.
- **P6**: Provides a list that displays the Activity Code Values for the Activity Code type passed in the context.
- **Return value**: Short name of the Activity Code (unique per code type).
- **Maps to field**: ACTIVITYCODE.CODEVALUE
- **Use case**: Create a report that displays some basic information about activities. Users at five locations need to run the report, but they only want to see the data for activities with codes matching their location. Instead of creating five reports hard coding the location (for example, location=L1) on each report, you can create one report and add this parameter to it (for example, p_a_code_val__Location).

  In the data template for the report, filter the activities based on this parameter. Hard code the left side of the activity filter to match the activity code you selected, which in this case is location.

  Example query: CODETYPENAME='Location' & CODEVALUE=:p_a_code_val__Location

  If you did not have a parameter for this, you would need different templates for each location.

Parameter: User Defined Activity Code

- **Identifier**: p_activity_code_value "." <number> p_activity_code_type "." <number>
- **Details**: Enables users to select a user defined Activity Code. The user defined Activity Code is two parameters on the report in BI Publisher, but will display only as one row in the report settings parameter table.

- **P6**: Provides a list that displays all global Activity Code types. When users expand a type, the list shows the values for that type. By selecting a value, both the type and value will return to the report.
- **Return value**: Short name for the Activity Code Value, primary key for the Activity Code type.
- **Maps to field**:
  - p_activity_code_value maps to ACTIVITYCODE.CODEVALUE
  - p_activity_code_type maps to ACTIVITYCODE.CODETYPEOBJECTID
- **Use case**: Create a report that can have a variable Activity Code. The report pulls activities and displays some basic statistics of the activities. The data template for the report must accommodate setting both sides of the query. While a typical parameter just sets the IN clause for a user defined field, this parameter must set both sides. The "Activity Code Value" parameter **Use case** example shows where it hard codes the CODETYPENAME to be **Location**. This parameter enables multiple user defined activity codes to be used on the same report. For each parameter you use, you must add p_activity_code_value.1 and p_activity_code_type.1. There must be a pair of numbers to ensure that the editor works properly.

Parameter: Cost Account

- **Identifier**: p_cost_account
- **Details**: Enables users to select Cost Accounts. The P6 user must have access to view Cost Accounts for the list to populate.
- **P6**: Provides a list that displays all Cost Accounts in a hierarchical tree.
- **Return value**: Short name of the cost account (unique).
- **Maps to field**: COSTACCOUNT_FULL.NAME
- **Use case**: Filter items using certain Cost Accounts or generate information on the Cost Accounts.

Parameter: EPS

- **Identifier**: p_eps_id
- **Details**: Enables a user to select an EPS.
- **P6**: Provides a list that displays all of the EPS nodes where the user has access.
- **Return value**: The short name of the EPS.
- **Maps to field**:
  - EPS_FULL.NAME
  - EPS_U.NAME
- **Use case**: Use a parameter for EPS to filter a query to load all projects under an EPS for a report.

Parameter: Expense Category

- **Identifier**: p_expense_category
- **Details**: Enables a user to select Expense Category where the user has access.
- **P6**: Will provide a list that displays all of the Expense Categories.

- **Return value**: The short name of the Expense Category (unique).
- **Maps to field**:
  - EXPENSECATEGORY_FULL.NAME
  - EXPENSECATEGORY_U.NAME
- **Use case**: Run a report filtered by assignments that use a certain Expense Category associated with them.

Parameter: Funding Source

- **Identifier**: p_funding_source
- **Details**: Enables a user to select a Funding Source.
- **P6**: Provides a hierarchical list filled with Funding Sources where a user has access.
- **Return value**: The short name of the Funding Source (unique).
- **Maps to field**:
  - FUNDINGSOURCE_FULL.NAME
  - FUNDINGSOURCE_U.NAME
- **Use case**: Filter the report data to include only projects that have the selected Funding Source assigned.

Parameter: Portfolio ID

- **Identifier**: p_portfolio_id
- **Details**: Enables a user to select a Portfolio where the user has access.
- **P6**: Provides a list of Portfolios where the user has access.
- **Return value**: The portfolio short name (unique).
- **Maps to field**: PROJECTPORTFOLIO_FULL.NAME
- **Use case**: Filter the report data to include only the projects in a Portfolio.

> **Note**: If there is a user portfolio that shares the same name as one of the global portfolios, then the report will return data for both when you run it. You'll need to use the Portfolio Name and User ID to make a unique constraint.

Parameter: Project ID

- **Identifier**: p_project_id
- **Details**: Enables a user to select one or more projects where the user has access.
- **P6**: Click the Projects _ menu, and select **Open Project** to display the Project list. Enables switching between Template and Regular projects.
- **Return value**: The project short name (unique).
- **Maps to field**: PROJECT_FULL.ID
- **Use case**: Run a report where the data comes from selected projects.

Parameter: Project Code Value

- **Identifier**: p_p_code_val__<short name>

- **Details**: Select a Project Code value. Note that underscores (_) are the only special character allowed. Do not use other special characters.
- **P6**: Provides a list containing the project code values for the Project Code whose short name matches the second part of the parameter. For example: If the short name was Scope, and there were four values – Local, Regional, Country, and Global – the list would display Local, Regional, Country, and Global in the list.
- **Return value**: Activity code value short name (unique per code type).
- **Maps to field**: PROJECTCODE_FULL.CODEVALUE
- **Use case**: Filter the set of projects loaded to those projects that have the user-selected Project Code Value assigned to them.

Parameter: User Defined Project Code

- **Identifier**: p_project_code_value"."<number> p_project_code_type"."<number>
- **Details**: Similar to the User Defined Activity Code, this parameter consists of two parameters in BI Publisher: One parameter returns the selected Project Code Value, and the other parameter returns the Project Code type ID. For each parameter you use, you must add both **p_project_code_value.#** and **p_project_code_type.#**. There must be a pair of numbers for the editor to work properly. You can have multiple sets to allow for more than one User Defined Code Value.
- **P6**: Provides a list populated with all the global Project Codes as the first level. Expanding a Project Code type will list all the values for the type. In the parameter table, only one row will represent both parameters. After you select a Project Code Value, both parameters will be set.
- **Return value**: The short name for p_project_code_value and the object id for p_project_code_type.
- **Maps to field**:
  - p_project_code_value maps to PROJECTCODE_FULL.CODEVALUE
  - p_project_code_type maps to PROJECTCODE_FULL.CODETYPEOBJECTID
- **Use case**: Create a report that enables the projects to filter based on a Project Code that the user defines. Unlike the Project Code Value parameter, the report creator should not hard code the Project Code type. Instead, they should write the query to enable the p_project_code_type.1 parameter to determine the Project Code type. This lets a report be more flexible in the filter criteria.

Parameter: User Defined Resource Code

- **Identifier**: p_resource_code_value "." <number> p_resource_code_type "." <number>
- **Details**: Similar to the other user-defined codes this parameter consists of two parameters on the report in BI Publisher: One parameter returns the selected Resource Code Value, and the other parameter returns the Resource Code type ID. For each parameter you use, you must add both **p_resource_code_value.#** and **p_resource_code_type .#** There must be a pair of numbers in order for the editor to work properly. You can have multiple sets to allow for more than one user-defined code value.

- **P6**: Provides a list populated with the Resource Codes as the first level. Expanding a Resource Code type will list all the values for the type. In the parameter table, only one row will represent both parameters. After you select a Resource Code Value, both parameters will be set.
- **Return value**:
  - p_resource_code_value: short name for the code value
  - p_resource_code_type: object id for the code type
- **Maps to field**:
  - p_resource_code_value maps to RESOURCECODE_FULL.CODEVALUE
  - p_resource_code_type maps to RESOURCE_CODE_FULL.CODETYPEOBJECTID
- **Use case**: Create a report that allows for the resources to be filtered based on a Resource Code Value and type that the user defines. Unlike the Resource Code Value parameter, the report creator should not hard code the resource code type. Instead, they should write the query to enable the p_resource_code_type.1 parameter to determine the resource code type. This allows a report to be more flexible in the filter criteria.

Parameter: Resource Code Value

- **Identifier**: p_r_code_val__<short name>
- **Details**: Select a Resource Code value to use for filtering loaded resources for a report.
- **P6**: Provides a list populated with the resource code values for the resource code type indicated by the <short name> at the end of the parameter. For example: If the short name was Department, the list would display Engineering, Marketing, Research, and Development as the values in the list.
- **Return value**: The short name of the Resource Code Value (unique per code type).
- **Maps to field**: RESOURCECODE_FULL.CODEVALUE
- **Use case**: Create a report where the resources filter based on the resources that match the user-selected Resource Code Value for a particular Resource Code type. The report data query must hard code the Resource Code type for matching resources to the returned code value.

Parameter: Resource Team

- **Identifier**: p_resource_team
- **Details**: Enables resource team selection.
- **P6**: Provides a list populated with resource teams that the user has access to view.
- **Return value**: The short name of the resource team (unique).
- **Maps to field**: RESOURCETEAM_FULL.NAME
- **Use case**: Filter a report to load resources that are on the selected resource team.

Parameter: Resource ID

- **Identifier**: p_resource_id
- **Details**: Select a resource to filter a report.
- **P6**: Provides a list populated with resources that the user has access to view.

- **Return value**: The short name of the resource (unique).
- **Maps to field**: RESOURCES_FULL.NAME
- **Use case**: Filter the activities in a report based on the user-selected resource assigned to the activity.

Parameter: Responsible Manager

- **Identifier**: p_responsible_manager
- **Details**: Select a responsible manager (OBS).
- **P6 GUI**: Provides a list populated with the OBS structure that the user has access to view.
- **Return value**: The short name of the OBS (unique).
- **Maps to field**: PROJECT_FULL.OBSNAME and OBS_FULL.NAME
- **Use case**: Filter a report to load only the projects that have the user-selected responsible manager.

Parameter: Risk Category

- **Identifier**: p_risk_category
- **Details**: Select a Risk Category.
- **P6**: Provides a list populated with all the Risk Categories that the user has access to view.
- **Return value**: The name of the Risk Category (unique).
- **Maps to field**: RISK_FULL.RISKTYPE
- **Use case**: Filter a report to load only the Risks of the user-selected category.

Parameter: Role Team

- **Identifier**: p_role_team
- **Details**: Select a Role Team.
- **P6**: Provides a list populated with all the Role Teams the user has access to view.
- **Return value**: The name of the Role Team (unique).
- **Maps to field**: ROLLTEAM_FULL.NAME
- **Use case**: Filter a report of Resources to include only the Resources that are assigned to the user-selected Role Team.

Parameter: Role

- **Identifier**: p_p6_role_id
- **Details**: Select a Role.
- **P6**: Provides a list populated with all the Roles the user has access to view.
- **Return value**: The short name of the Role (unique).
- **Maps to field**: ROLL_FULL.ID
- **Use case**: Filter a report of Resources to include only the Resources that have the user-selected Role.

Parameter: Timesheet Period

- **Identifier**: p_timesheet_period_start and p_timesheet_period_end
- **Details**: This parameter consists of two parameters on the report in BI Publisher, but is represented by a single row in parameter list for P6. The user will select a timesheet period, and it will set the Start Date to p_timesheet_period_start and the End Date to p_timesheet_period_end.
- **P6**: Drop down menu of the Timesheet Periods in the database. Selecting a Timesheet Period will return the Start Date and End Date in the parameters.
- **Return value**: The Start Date and End Date of the Timesheet Period selected by the user.
- **Maps to field**: N/A
- **Use case**: Filter a report to look for a date between two dates of a Timesheet Period. Instead of adding two date parameters and making the user manually enter the Start and End of the period, the user can use a drop down with the Timesheet Periods in the database.

Parameter: User

- **Identifier**: p_p6_user_id
- **Details**: Select a P6 EPPM user name.
- **P6**: Provides a list populated with the P6 users that the logged-in user has access to view.
- **Return value**: The user name (unique).
- **Maps to field**: USERS_FULL.NAME

Primitive Parameters

In BI Publisher, when you create a parameter, a field Data Type allows the following options: String, Integer, Boolean, Float. The default type is String, and you should use it for all supported enumeration and dynamic parameters. For primitive parameters, select the appropriate option for the parameter that you are configuring.

Type: Date

- **Editor**: P6 will use the date picker to select the date.
- **Return**: The date string in the format entered in BI Publisher.

Type: Boolean

- **Editor**: Will use a check box editor.
- **Return**: Either true (selected) or false (cleared).

Type: Integer

- **Editor**: Will use a default text box without validation.
- **Return**: The text entered in the box.

Type: Float

- **Editor**: Will use a default text box without validation.
- **Return**: The text entered in the box.

Allowing for Multiple Values Returned via a List

If you need a supported parameter to return a comma separated list of values for an IN clause in the data template, do the following:

1) In BI Publisher, set the parameter type to **Menu**. This will allow you to link it to a list.
2) Create a hard-coded list or a query to get the possible values for the parameter.
   See examples of this in BI Publisher's pre-packaged reports.
3) Select the list of values you just created for the parameter.
4) Check the **Multiple Selection** option for the parameter.

If a parameter allows for multiple selection, P6 allows selection of multiple values from the list or allows users to continue to assign values without closing the list. When the return value appears, parameter values are comma-delimited.

About Table Auditing

Table auditing helps you to determine what changes have been made at a table level in the database. You can log changes made to each table regardless of who made the change or when the change was made. You can then run reports on audited data. Two sample BI Publisher reports are available.

Notes:

- You must configure auditing before any data will be captured against which you can run reports.
- Table auditing involves an increased amount of interaction between P6 and the database, which can affect performance.

Configuring Audit Settings

Configure Auditing in P6 so that you can produce reports about incremental changes to projects and project related data.

Note: Table auditing involves an increased amount of interaction between P6 and the database, which can affect performance.

To configure Auditing:

1) Click **Administration**.
2) On the Administration navigation bar, click **Application Settings**.

3) On the Application Settings page, click **Audit**.
4) On the Audit page:
   a. In the **Interval to store user login information (in days)** field, enter a number of days.
   b. In the **Interval to store audit information (in days)** field, enter a number of days.
   c. In the Select the tables and operations to audit list, select a table or operation to audit and click **Add**.
   d. In the Audit Tables section:
      - Select **Audit Insert** to audit insertions to the table.
      - Select **Audit Update** to audit updates to data in the table.
      - Select **Audit Delete** to audit deletions of data in the table.

      Notes:
      - Select **Audit Inserts** to see when new rows have been added to that table. For example, auditing inserts on the PROJECT table will show you when someone has created a new project.
      - Select **Audit Updates** to see when data in a table has been edited. For example, auditing updates on the PROJECT table will show you when someone has changed the name of a Project.
      - Select **Audit Delete** to see when data in a table has been deleted. For example, auditing updates ona the PROJECT table will show you when someone has deleted a project.

   e. Select **Enable auditing for all tables**.
5) Click **Save**.

Tips

- To stop auditing on a particular table, remove it from the list by selecting ✕**Delete**.
- If you need to suspend all auditing without changing the configuration of the actions and tables which will be audited, clear the **Enable auditing for all tables** option.

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