Oracle
Primavera Unifier
Earned Value Management User Guide

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Oracle Primavera Unifier Earned Value Management User Guide

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Contents

Working with Earned Value Analysis

If you have access to the Earned Value Manager (EVM) feature, the following explains how to work with it.

Within our documentation, some content might be specific for cloud deployments while other content is relevant for on-premises deployments. Any content that applies to only one of these deployments is labeled accordingly.

> **Note**: The instructions and information presented in the documentation is based on an out-of-the-box (OOTB) setup and before being customized by the user.

The Earned Value Analysis (EV Analysis) is an industry standard for analyzing project performance, and it can be used to track:

- Progress to date
- Forecast completion date
- Forecast completion cost
- Schedule variances
- Budget variances
- Performance

As a feedback tool, the EV Analysis helps you to:

- Identify where the problems may occur and whether the problems are critical or not.
- Determine what needs to be done to put the project back on track.

The **Earned Value Analysis** node (in the left Navigator, select **Earned Value Manager**, and then select **Earned Value Analysis**) is based on the project schedule data (activities and assignments) and company rates (resources and roles) imported from P6 or Oracle Primavera Cloud through integration. The **Earned Value Analysis** node:

- Optimizes the use of cost control features.
- Calculates earned value and other related measures for a project, such as planned value, actual cost, variances, performances indexes, and at completion values using rates defined in the system.

> **Note**: EVM requires database partition tables in Oracle Database. The database partition feature is only available in Oracle Database Enterprise Edition.

Use the **Earned Value Analysis Report** node ((in the left Navigator, select **Earned Value Manager**, and then select **Earned Value Analysis Report**) to generate American National Standards Institute (ANSI) Reports.

In This Section

Prerequisites

To be able to use the Earned Value Management (EVM) module with P6 *or* Oracle Primavera Cloud:

- You must have access to the EVM feature, which is enabled through the User Mode Access settings in Access Control.
- Oracle DB, being used for Unifier, must have DB Partition feature enabled.

To be able to use the EVM module with P6:

- The following Oracle third-party applications must be available:
  - P6
  - Gateway
- Unifier and P6 Integration through Gateway must be established.

  Ensure that P6, Gateway, and Unifier integration are configured properly. P6 must have at least one project (if baseline is available in P6 you are set; otherwise, you must use the P6 Current Schedule as baseline).

  The option to enable multiple projects mapping between P6 and Unifier is included in the Shell Attributes form. In the Shell Attributes form, use the Integration tab to map multiple P6 projects with the respective shell in Unifier using P6 Project ID.

To use the EVM module with Oracle Primavera Cloud and Oracle Integration, make sure that you have an account for, and access to, an instance of Oracle Primavera Cloud and Oracle Integration. For more information, see the *Unifier General Administration Guide*.

Summary of Steps for Earned Value (EV) Analysis in P6

The following is a summary of steps that you must perform for EV Analysis:

1) Begin by setting up integration parameters in Gateway, P6, and Unifier.
2) In Company Workspace (Admin mode), use the two new synchronizations in the Gateway node to import P6 activities, assignments, and rates for EV analysis.
3) In Company Workspace (User mode), initiate the synchronizations from the company-level Master Rate Sheet node to fetch the global roles and resources data from P6.
4) In Shell Details, Integration tab, select the **Link Multiple P6 Projects** check box and add P6 projects.

> **Notes**:
>
> - The same P6 project cannot be mapped to other shells. The one-to-many relationship is unique for EVM functionality.
> - The Unifier company Base Currency and P6 base currency must be the same.

5) In the Shell (User mode), the **Activity Manager** module is available to store an activity sheet and shell-level rate, WBS, and OBS sheets.
   a. Initiate synchronizations in the **Activity Sheets** log to get the *activities and assignments data* from the linked P6 projects.
   b. In the **Rate Sheet** node, create rate sheets, if shell-specific rates are required. This creates a shell-level Rate Sheet with roles and resources that will be used in the shell.
6) In the Shell (User mode):

   In the **Earned Value Analysis** node (in the left Navigator, select **Earned Value Manager**, and then select **Earned Value Analysis**), perform earned value analysis corresponding to an activity sheet.

   - Activity sheet data (WBS, CBS, and all projects) is consolidated, rolled up, and displayed in summary tables in an EV scenario.
   - Earned value analysis can be generated directly for cost loaded projects, with Unifier Rate Sheet.
   - For resource loaded projects, resource and role rates must be present before analyzing earned value and other matrices.
   - Duration-based projects are ignored because they do not have cost data.
7) In the Company Workspace and Shell, the related areas in Unifier include all permissions, reporting, and Configuration Package Management modules.

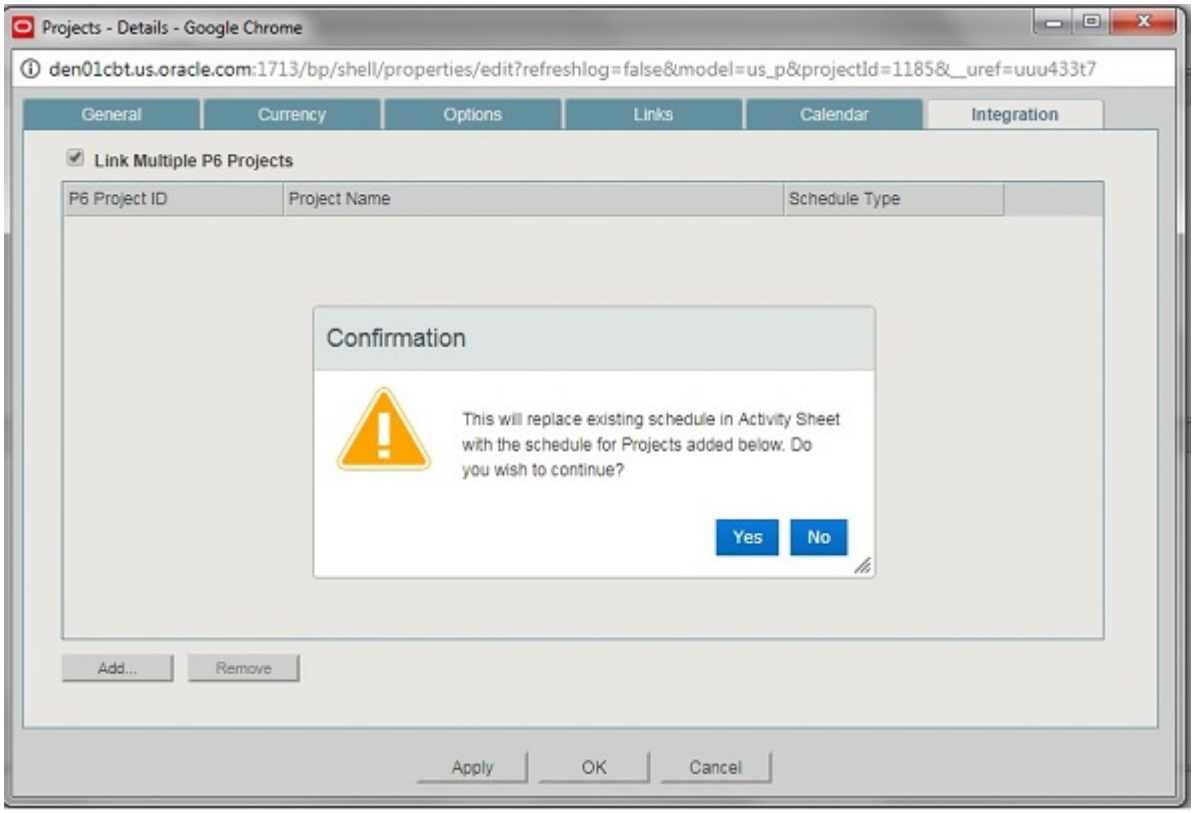
> **Note**: Only the Cost-loaded and Resource-loaded projects are used for EV analysis. Although it can be included in an Activity Sheet, a duration-based project cannot be used for Earned Value Analysis.

Configuring the Gateway Integration for P6

After integration parameters are set up in P6 and Gateway, configure the Gateway integration options.

Notes:

- The Summary sheet Integration will not work when you enable link to multiple projects in the Integration tab of a shell.
- All existing Activities data, and corresponding Audit log data, will be deleted when you enable link to multiple projects in Integration tab of a shell.



- When the P6 project id is added in **General** tab of a Shell Details (which is already added in another Shell Integration tab), priority is given to the shell in which the p6 project id added in **Integration** tab on running **Get Data** from any of the shells.

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) In the left Navigator, select **Integrations**, and then select **Gateway**.
3) From the toolbar, click **Open** to open the **Integration Settings** dialog box.
4) Complete the two synchronizations that are available to import P6 activities and rates for Earned Value analysis:
   I. Select Synchronization to import Activity & Assignment data.

2. Select Synchronization to import Role & Rate rates.

   The solution uses existing Unifier and P6 projects only. The existing export synchronization will be used to export data from Unifier to P6 for activity sheet with multiple projects.

   For a successful integration, the Schedule type must be selected in P6. This is a mandatory condition.

3. P6 Base Currency

   By default, the P6 currency is populated with Company Currency [Base Currency in Unifier].

   If the P6 base currency is different from the Company Currency [Base Currency in Unifier], the admin can change it to the relevant P6 base currency.

Begin initiating the Gateway synchronizations to import and store P6 data:

- Role and Resource Rates
- Activity and Assignment Data

In This Section

Role and Resource Rates

In the **Company Workspace** (**User** mode), initiate the synchronization from the **Master Rate Sheet** node to fetch the global roles and resources data from P6.

Click **Get Data** to run the synchronization and create the **Master Rate Sheet**. The **Master Rate Sheet** fetches and stores global roles and resource data from P6. Effective dates and standard price/unit imported from P6 on first import can be modified in Unifier. Rates from the **Master Rate Sheet** are used in the Activity Sheet in a Unifier project for P6 resource loaded projects. See ***Master Rate Sheet*** (on page 21) for more information.

> **Note**: Rates are not imported on subsequent synchronizations. Only resource and role lists are updated.

Activity and Assignment Data

In the shell Details, use the **Integration** tab to map P6 projects.

1) Click to expand the **Activity Manager** module.
2) Click the **Activity Sheet** sub-node to open the log.
3) Click **Get Data** to run the synchronization and create the Activity Sheet.

The Activity Sheet fetches and stores the activity and assignment data from P6, and the role and resource rates data from the company-level Master Rate Sheet. Subsequent synchronizations will update the data. For more information, see the following:

- ***Mapping P6 Projects in Shell Details*** (on page 17)
- ***Earned Value Management Attributes*** (on page 171)

Prerequisites for Configuring the Gateway Integration

- Integration Parameters in Gateway and P6
- Permissions

Integration Parameters in Gateway and P6

Complete configuration of the integration parameters in Gateway and P6. The Schedule type must be selected for projects in P6 for successful integration.

Permissions

Grant the required **Administration (Admin)** and **User** mode permissions for the relevant modules in Unifier by using the following modules:

- Permission templates
- Access Control
- User Administration

For **Admin** mode access (Company) use:

- Gateway

For **User** mode access (Company) use:

- Master Rate Sheet

For **User** mode access (Project/Shell)

- Activity Manager
  - Activity Sheet
  - Rate Sheet
  - WBS Sheet
  - OBS Sheet
- Earned Value Manager
  - Earned Value Analysis
  - Earned Value Analysis Report

See **Setting Up the Earned Value Management Permissions** in the *Unifier Modules Setup Administration Guide* for details.

Mapping P6 Projects in Shell Details

When Unifier is integrated with P6 via Gateway, an additional **Gateway Integration** tab is displayed in shell details.

1) Navigate to the shell in which you want to map multiple P6 projects to perform Earned Value analysis.
2) Click the more menu option (the three horizontal dots icon next to **My Dashboard**) and select **Details**.
3) In the **Gateway Integration** tab, select the **Link Multiple P6 Projects** check box.
   This drives the synchronizations in the Gateway node.
4) Click **Add**.
5) In the **Add P6 Project** dialog box, enter the project ID and click **OK**.

The project name and schedule type are auto-populated after running the sync.

Only Cost Loaded and Resource Loaded projects are used in Earned Value Analysis. The Duration Based projects are ignored because they do not have cost data.

P6 includes a "Cost Spread" option that enables the user to spread cost based on "Linear" or "Units" spreads. Unifier only supports the "Linear" spread; it does not support the "Units" spread.

After the P6 project and its activities are synced to the Activity Sheet, you cannot modify or delete respective Project IDs. Clearing the **Link Multiple P6 Projects** check box also cannot be done if any P6 project IDs are added.

Note: The same P6 shells cannot be mapped to other shells in Unifier. The one-to-many relationship is only unique for Earned Value Management functionality.

In This Section

Integrating Activity Sheet for Multiple Shells

Notes:

- Permission for "Get / Set Activity Sheet Data" from Shell log are configured in Admin mode while permissions to take these action from within a Shell (User mode) are given at User mode level.
- The options listed here are not available from the User mode of the Shell log (CBS type Shell) window menu toolbar.

To integrate multiple Shell instances with P6, switch to Admin mode, go to a CBS type Shell and from the Shell log perform any of the following operations.

To get an activity sheet data:

1) Click **File** from the menu.
2) Select **Get Activity Sheet Data**.
3) Select one of the following choices:
   - All Shells
   - Selected Shells
   - Filtered Shells
   - History

To send an activity sheet data:

1) Click **File** from the menu.
2) Select **Send Activity Sheet Data**.
3) Select one of the following choices:
   - All Shells
   - Selected Shells
   - Filtered Shells
   - History

When in Admin mode, the following options are available in the CBS type Shell (in the Shell log) toolbar:

- Get Activity Sheet Data
- Send Activity Sheet Data

The following explains the options above in detail:

- **Get Activity Sheet Data**, **All Shells**

  You can select this option without having to select a Shell from the log.
- **Get Activity Sheet Data**, **Selected Shells**

  You can select this option only when you select at least one Shell instance from the log.
- **Get Activity Sheet Data**, **Filtered Shells**

  You can select this option after filtering Shells by using the Find option in the Shell log.
- **Get Activity Sheet Data**, **History**

  Similar to the History option in other modules, you can select this option to view the history of a "Pull" action to see whether a request has been submitted successfully.
- **Send Activity Sheet Data**, **All Shells**

  You can select this option without having to select a Shell from the log.
- **Send Activity Sheet Data**, **Selected Shells**

  You can select this option only when you select at least one Shell instance from the log.
- **Send Activity Sheet Data**, **Filtered Shells**

  You can select this option after filtering Shells by using the Find option in the Shell log.
- **Send Activity Sheet Data**, **History**

  Similar to the History option in other modules, you can select this option to view the history of a "Pull" action to see whether a request has been submitted successfully.

Note: Each time you initiate a "Get" data or a "Send" data action, the systems displays a confirmation message. Click OK on the message window to exit.

Master Rate Sheet

A company will only have one Rate Sheet called the "Master Rate Sheet." So, users are not allowed to create a copy sheet of the Master Rate Sheet under Company Workspace. This sheet will contain rates for both roles and resources, users will be able to toggle between resource and role rates from the display. By default, the rates present in Master Rate Sheet will be used across all the resources and roles present in all activity sheets across all shells unless the user has assigned another rate sheet present at the shell level to the activity sheet/project.

In This Section

Master Rate Sheet and P6

Unifier enables you to set a series of rate rules that should be applied when certain conditions are met in a project by way of the **Master Rate Sheet**.

In P6, users can assign a role, or resource, to an activity under the assignments tab of an activity for any project. The rates (Price/Unit) for assigned roles and resources are managed at global level in P6, which can then be used in a project while doing the costing (calculating Present Value, Earned Value, and so on) of the project depending on the rate source (resource, role or override) corresponding to that assignment in an activity.

A **Master Rate Sheet** is created after the first P6-Unifier integration via Gateway. It fetches and stores global roles and resource data (and their corresponding rates) from P6.

Subsequent synchronizations will update roles and resources but not the rates. By default, the rates present in the **Master Rate Sheet** are used across all the resources and roles present in the activity sheets across all shells unless you assign a shell-level rate sheet to the **Activity Sheet** in that shell.

There is no support to export data from the **Master Rate Sheet** in Unifier to P6 in the multiple mapping paradigm.

The sheet stores all the changes made across all the resources and roles present in it manually or by way of synchronization.

The P6 synchronization for Resource rates and Role rates can result one of the following scenarios:

Scenario One:

P6 Resource currency = P6 Project currency = Unifier Base Currency

No changes required

Scenario Two:

P6 Resource currency <> P6 Project currency = Unifier Base Currency

The value against any resource rate from P6 comes in P6 company currency, even if the resource currency is different. As a result, while synchronizing with P6, the value coming from P6 as resource rate will be converted to the respective amount in the resource currency.

The exchange rate for doing this will be fetched from the Standards & Libraries with Unifier Base Currency (company currency).

If there is no exchange rate, by default the system uses zero as the exchange rate. The converted resource rate will be stored in the Master Rate Sheet for an effective date.

If there are multiple rates with different effective dates, the system uses the exchange rate applicable to the effective dates, for conversion.

Scenario Three:

P6 Resource currency = P6 Project currency = <> Unifier Base Currency

The currency object between P6 and Unifier will be mapped in Gateway to get the P6 Project currency. After the application receives the P6 project currency, it treats it as explained in *Scenario Two*, by applying the exchange rate to individual resources.

Scenario Four:

P6 Resource currency <> P6 Project currency <> Unifier Base Currency

The application implements the process indicated in *Scenario Three*; thereby converting all the resource rates in Unifier Base Currency.

If the resource rate currency is different from the P6 project currency, Unifier applies the process indicated in Scenario *Two* to handle this scenario (*Scenario Four*).

> **Note:** While creating a shell-level rate sheet, the system keeps the currencies that are being used in the Company Workspace because that is where the currency is going to be used by a resource.

Master Rate Sheet and P6 (Multiple Row Rates)

In P6 both the resource and role rates are maintained globally. You can import P6 resource and role rates into the **Master Rate Sheet**.

For a *resource loaded schedule*, you need rates corresponding to these roles and resources for doing costing of any project. For more information about costing, see the **About Costing** section below.

There are two types of rate sheets:

- **Master Rate Sheet** (at **Company Workspace**), which you can access by going to the **Company Workspace** tab, switching to **User** mode, and selecting **Master Rate Sheet** in the left Navigator.
- **Rate Sheet** (at Project/Shell), which you can access by going to the project/shell tab, switching to **User** mode, selecting **Activity Manager** in the left Navigator, and then selecting **Rate Sheet**.

For P6 resource loaded schedule, the **Master Sheet** receives the standard rates which correspond to the roles and resources, and the rates are used in costing of any project in Unifier.

In P6 you can define a role with multiple rates and multiple effective dates and bring the information into the **Master Rate Sheet**.

> **Note**: When you click **Get Data** from the **Master Rate Sheet** log, the rate sheet displays all the existing role rates with effective date as 01/01/2020.

When you create a project rate sheet that only has the resources and roles that are being used in the resource-loaded project in the system activity sheet of a shell, you can see the assigned roles, with the multiple rates, that have been sent to the **Master Rate Sheet**.

You can assign the role rate to the activities and resource assignments and any cost calculations will use the assigned rate.

When you refresh data in the **Master Rate Sheet**, Unifier performs all the existing validations.

For a *cost loaded schedule*, there are no calculations conducted in Unifier, and Unifier uses the data directly from P6.

In P6, rates are assigned to a role or resource at global level. To maintain the consistency, the P6 global data is imported to Unifier Company Workspace. This data is captured under the **Master Rate Sheet**. That is, the rate sheet is created through P6-Unifier integration and is saved as "Master Rate Sheet" under a new node in company workspace called **Master Rate Sheet**.

Under **Company Workspace**, there is only one rate sheet called **Master Rate Sheet**. You are not permitted to create a copy sheet of the **Master Rate Sheet** under **Company Workspace**. The **Master Rate Sheet** contains rates for both *roles* and *resources*. You will be able to toggle between *role* and *resource* rates within the window.

> **Note**: By default, the rates present in the **Master Rate Sheet** are used across all *roles* and *resources* present in all activity sheets across all shells unless the user has assigned another rate sheet (present at the shell level) to the activity sheet/project.

To assign rates at the activity sheet level, you can use a subset of **Master Rate Sheet** in a shell with the *roles* and *resources* being used in the resource-loaded projects in the system activity sheet of only that shell. Rate sheets present at any shell are subsets of **Master Rate Sheet**. This means, when you click refresh data (Refresh) for any rate sheet at shell level, Unifier updates the **Master Rate Sheet** with:

- The list of *roles* and *resources* based on the latest data available in resource-loaded projects in the activity sheet
- The corresponding rates from **Master Rate Sheet**

The following rules are in place when refreshing data:

- If a *role or resource* rate has been removed from the system activity sheet, for that shell, the system deletes the *role or resource* rate along with the rates in the **Rate Sheet** being refreshed.

- If a *role or resource* rate has been added in the activity sheet, the system updates the rate sheet being refreshed with the new *role or resource* rate along with the rates in the **Master Rate Sheet**.
- For a *role or resource* rate that appears across both the system activity sheet and rate sheet, the system updates the currency or Resource/Role name (if applicable), using the *role or resource* ID as the identifier.

A rate sheet in the Master Rate Sheet (at **Company Workspace**) is updated through P6, but a rate sheet in the **Rate Sheet** (at Project/Shell) gets updated in Unifier through the Master Rate Sheet at Company Workspace) and system activity sheet at that shell.

About Costing

You can perform costing in:

- A rate sheet by using the standard rate defined in the rate sheet.
- An activity sheet by using the additional type of costs (labor, G&A, and so forth) along with the standard rate defined in the rate sheet.

In addition:

- You extend the rating to define various types of costs such as Labor.
- Each cost type has a categorization (such as direct or indirect) for reporting purposes.
- Each cost type can be a rate-based, a formula-based, or another cost type.
- Each cost type can be defined in a priority order, to be able to calculate the values accurately.

Master Rate Sheet and Oracle Primavera Cloud

When Unifier, Oracle Primavera Cloud, and Oracle Integration are integrated, you can use Oracle Integration recipes to update the Master Rate Sheet in Unifier with information from Oracle Primavera Cloud.

Accessing the Master Rate Sheet Log

To access the **Master Rate Sheet** log:

1) Go to the **Company Workspace** tab and switch to **User** mode.
2) In the left Navigator, select **Master Rate Sheet**.

> **Note:** The location of the node may differ in your implementation based on the **User Mode Navigator** configuration.

The **Master Rate Sheet** log displays the **Master Rate Sheet** created at the **Company Workspace** through P6/Oracle Primavera Cloud to Unifier integration.

The toolbar of the **Master Rate Sheet** log contains the **Get Data** option , which you can use to initiate the process of getting the data from P6 or Oracle Primavera Cloud.

The **Master Rate Sheet** log contains the following columns:

- **Name:** Displays the name of the Master Rate Sheet that has been created through integration; the name is "Master Rate Sheet."
- **Description:** It will be left blank while creating the Master Rate Sheet and is an editable field.
- **Last Updated:** Date when the Master Rate Sheet was last updated.
- **Created By:** The name of the user or administrator who created the Master Rate Sheet (at Company Workspace) through integration.

The *gear menu* (⚙) next to the **Master Rate Sheet** enables you to:

- **Open**
- **Export CSV**
  - **Export Role Rate Breakdown**
  - **Export Resource Rate Breakdown**
- **Update Data**
  - **Import Role Rate Breakdown**
  - **Import Resource Rate Breakdown**

The **Master Rate Sheet** log contains the following tabs (right pane):

Tab	Description
Audit Log	Stores all the changes made across all *roles* and *resource* present in the **Master Rate Sheet** (manual/synchronization).
Schedule	To schedule get data and see the history for a P6 integration only. The **Schedule** tab enables you to: ▸ Set frequency for getting data or sending data (**Set Frequency for**). ▸ Select the frequency time (**Frequency**). ▸ Set the start and end dates.
History	The History tab enables you to see a history of changes made on the system activity sheet such as: ▸ Action ▸ Requestor ▸ Initiated On ▸ Start Date ▸ End Date ▸ Status

When you open the **Master Rate Sheet**, the **Master Rate Sheet - Resource** overlay page opens.

The **Master Rate Sheet - Resource** overlay page contains the following toolbars:

Option	Description
View	This option, which is located in the upper-right corner of the page, lets you select the items according to **Resource** or **Role**.
Status	Use this option to change the status of a selected record. The options include: **Active**, **Inactive**, and **Delete**
Print	Enables you to print or export the items listed on the page.
Refresh	To refresh the list of items on the page.
Edit View	To change the view of the listed items on the page.
Search	To search for a particular item.
Find on Page	To find an item on the page.
Collapse All Groups or **Expand All Groups**	Enables you to collapse or expand the items on the page.
Menu Options	Depending on the selected View, use this option to export or import role or resource information, color the rows, or access the Audit Log.

The **Master Rate Sheet - Resource** overlay page contains columns that provide details about the resource or role, such as the **ID**, **Name**, **Type**, **Currency**, **Units/Time(hr)**, and **Status**.

The *gear menu* (⚙) next to an item listed on the **Master Rate Sheet - Resource** page lets you expand or collapse a row.

Master Rate Sheet Log: Toolbar Functions

Get Data is the only option available. Click **Get Data** to initiate the synchronization from the **Master Rate Sheet** node to fetch the global roles and resources data from P6 or Oracle Primavera Cloud. Currency and Rates are not imported on subsequent synchronizations. Only resource and role lists are updated. Rates can be modified in the **Master Rate Sheet**.

The main grid of the log displays the **Master Rate Sheet**. The log columns are as follows:

- **Name**: Master Rate Sheet
- **Description**: Master list of Resource and Role. Not editable.
- **Last Updated**: Date when sheet was last updated via synchronization or manually.
- **Created By**: The user who initiated the synchronization.

The *gear menu* (⚙) for the **Master Rate Sheet** are:

- **Open**: Select to open the Master Rate Sheet.
- **Export CSV**: Use the options to export Role or Resource Rates as CSV. This comprises the global list imported from P6 or Oracle Primavera Cloud. The structure includes the following information:
  - Resource ID
  - Resource Name
  - Resource Type (Labor, Non-labor, Material)
  - Status
  - Effective From
  - Price/Unit
- **Update Data**: Use the options to import the modified Role or Resource Rates CSV files to update role and resource rates.

> **Note:** You cannot modify the name and status fields in the import file. The rest (ID, effective from date and price/unit) are all required fields.

Master Rate Sheet Log: Tabs

The right pane of the Master Rate Sheet log has the following tabs: **Audit Log**, **Schedule**, and **History**

The **Audit Log** tab tracks all changes made inside the rate sheet.

The **Schedule** tab allows you to set the frequency of automatically running the Get Data synchronization at daily, weekly, monthly, or quarterly intervals between the specified start and end dates. This feature is only available for a P6 integration.

The **History** tab captures information about manual/synchronization (schedule get data) job. The toolbar has **Refresh** and **Find on Page** functions. When you click **Refresh**, Unifier refreshes the History. This enables you to track the status of an ongoing synchronization. For example, when you click **Get Data**, and switch to the **History** tab, and you see new record with "Running" (sometimes empty), and then click **Refresh** to see the status changed to "Completed," if the job is done.

Status values for tasks initiated through **Get Data** for P6 include:

- Running
- Completed
- Failed

Status values for tasks initiated through **Get Data** for Oracle Integration include:

- Initiated
- Started
- Completed
- Failed

The following rules are followed while synchronizing the **Master Rate Sheet** data with P6 or Oracle Primavera Cloud:

- If a resource/role has been removed from the global list in P6 or Oracle Primavera Cloud, the **Master Rate Sheet** role/resource and corresponding rates will not change.
- If a resource/role has been added to the global list in P6 or Oracle Primavera Cloud, the new role/resource is added to the **Master Rate Sheet** along with its corresponding rates.
- If the resource/role exists in both P6/Oracle Primavera Cloud and the **Master Rate Sheet**, the system updates only the resource/role name, if applicable (using resource or role ID as the identifier).

Opening the Master Rate Sheet

To open the Master Rate Sheet, either double-click its name in the log, or click the *gear menu* (⚙) and select **Open**. When opened, the **Master Rate Sheet** displays as an overlay.

The **Master Rate Sheet** log has the following toolbar options:

- **View**
- **Status**
- **Print**
- **Refresh**
- **Find on Page**
- **Expand All Groups** or **Collapse All Groups**

The **Status** option enables you to assign one of the following standings to a selected record on the sheet:

- **Active**
- **Inactive**
- **Deleted**

There are two default views available under the **View** option, which enables you to switch between views:

- **Resource**
- **Role**

The **Master Rate Sheet** log has the **Rates** tab, which provides Price/Unit, populated from P6 or Oracle Primavera Cloud. Click **Create** to manually add new breakdown structure for the following:

- **Cost Type**
- **Rate Type**
- **Price/Unit**

To add new values, click the **Add** icon (the plus + icon). When finished, click **Save**.

You can use a formula to establish rates based on other cost types. When you edit the cell Price/Unit, a formula icon is displayed and when you select the formula icon a new formula window will be displayed.

> **Note:** In Master Rate Sheet some Resources or Roles have incorrect breakdown structure, but they are not assigned to any project. If the

Resources or Roles have the correct breakdown structure in the project, the recost will work.

See ***Earned Value Management Attributes*** (on page 171) for details about column headings and elements. Refer to the *Unifier Data Reference Guide* for details on each element.

Master Rate Sheet and Manual Activity Sheet

The Master Rate Sheet receives the resources and roles values from the source, for example P6 or Oracle Primavera Cloud, and the standard rates.

A Master Rate Sheet is created by way of integration with P6, through Gateway, or with Oracle Primavera Cloud, through Oracle Integration. When your Master Rate Sheet is created by way of integration with P6 or Oracle Primavera Cloud, Unifier adds two fields to enable you define the calendar for a resource or role and the default number of units per day.

Similar to adding resources and roles to your shell activity sheet, you can manually add resources and roles to your Master Rate Sheet. When the resources and roles are integrated with P6 or Oracle Primavera Cloud, the application compares the calendar name in P6 or Oracle Primavera Cloud with the calendar name in Unifier.

- If the calendar names match, Unifier assigns the calendar to the resource and role.
- If the calendar names do not match, Unifier does not assign the calendar to the resource and role.

You can define and maintain new rates for the resources and roles in the Master Rate Sheet. The application uses this information across all the resource and role assignments in the System Activity Sheet across all shells, based on the Master Rate Sheet assigned.

Unifier supports defining multiple activity sheets, and the Master Rate Sheet supports the creation of resources and roles. In the Master Rate Sheet, you can define the standard rates and rate breakdown structure.

In general, if you have permission, you can:

- Define resources and roles in the Master Rate Sheet.
- Assign the resources and roles to the activities created in the custom activity sheets.
- Define the calendar for a resource or role and the default number of units per day.
- Define the standard rates for the resources and roles defined in the Master Rate Sheet.
- Provide a calendar and number of units per day for the resources and roles imported from P6 and assign the resources and roles to the activities in manual Activity Sheets.
- Get the resource calendar for the resources or roles that are created from P6 or Oracle Primavera Cloud (through integration), if the calendar name matches the custom calendars.

Note: Existing Master Rate Sheet supports the creation of the resources and roles.

Manual Activity Sheets will allow the assignment of the resources and roles that are created within Master Rate Sheet and the resources or roles that are integrated with P6 or Oracle Primavera Cloud. After the assignments are added, the resource costs will be calculated based on the type of activity, whether it is task dependent or resource dependent.

View (Resource - User Defined)

The following toolbar options are displayed in the **Master Rate Sheet Resource - User Defined** log:

- **Add Siblings**
- **Add Child**
- **Status**
- **Print**
- **Refresh**
- **Find on Page**
- **Expand & Collapse** (the plus or minus icon)
- **Menu Options** (☰)

You can add the resources by clicking the **Add Sibling** option. This action creates the first row in the log which enables you to define the resource **ID** and **Name**. There will be a unique value validation for both **ID** and **Name** when entering the value.

- The **ID** field supports only alphanumeric characters (max 50 characters).
- The **Name** field supports only alphanumeric characters (max 80 characters).

The manually added resource or role **ID** must be unique in the Master Rate Sheet, across the views.

Add Labor Type Resource: When adding a resource, you can select the type as **Labor**, **Non Labor**, or **Material**. By default, the resource type will be **Labor**. You can switch between the types (from **Labor** to **Non Labor** or to **Material**) for the existing resources in the **Resource** view.

> **Note:** You cannot change the type after the resource is assigned to an activity sheet.

Currency: You can select a currency by using the **Currency** field drop-down. The default currency value will be the company default currency. The list of currencies displayed in the **Currency** field drop-down will be from the **Standards & Libraries**.

> **Note:** You cannot change the currency after the resource is assigned to an activity sheet.

The tooltip for the currency will indicate that the currency that was selected for your resource will be used in the custom activity sheets.

Units/day: You can select the default **Units/day** in this column. By default, 8 units per day is displayed, but you can update the resource capacity to up to any of number of units per day. The valid decimal value in this column is between 0 and 999,999.

The tooltip for the **Units/day** will indicate that the value for units, or time, selected for your resource will be used in the custom activity sheets. The default value is 8:00 units per day.

Status: The **Status** can be active or inactive. By default, the active status will be selected for a new resource.

Add Non Labor Type Resource: You can add a non-labor type resource by selecting the type as Non Labor. The creation of a Non labor resource is similar to a Labor resource.

> **Note:** The unit of measure is not applicable in the case of labor type and non-labor type resources.

Add Material Type Resource: You can create a material-type resource by selecting the type as Material. The **Currency** and **Calendar** fields can be set for a material-type resource the same way that they are set to a **Labor** resource. You can specify the unit of measure when creating a material-type resource. The unit of measure (**UoM**) field will display a list of all the unit of measures available under **Unit of Measure** (in the left Navigator, select **Data Structure Setup**, select **Data Definitions**, and then select **Unit of Measure**). The administrator can set additional **UoM**.

Creating Master Rate Sheet

When you go to your **Company Workspace** (**User** mode) and click the **Master Rate Sheet** node, the **Master Rate Sheet** log opens. If there is no existing Master Rate Sheet, and you have the **Create** permission, the **Master Rate Sheet** log displays the **Create** option enabling you to create a new Master Rate Sheet.

Creating Master Rate Sheet Manually (Properties)

In the **Master Rate Sheet** log, you can create a Master Rate Sheet either through the **Get Data** integration or through the **Create** options.

> **Note:** If a Master Rate Sheet is available and you click **Get Data**, the existing Master Rate Sheet will be updated with the latest data from P6 or Oracle Primavera Cloud.

You can manually create a Master Rate Sheet in the **Master Rate Sheet** log if:

- There is no Master Rate Sheet defined and present in the log, and you have the **Create** permission only.

  In this scenario, after you click **Create**, the **Master Rate Sheet Properties** window opens which enables you to enter a name and description for the Master Rate Sheet and click **Create** to open the **Master Rate Sheet** window.
- There is no Master Rate Sheet defined and present in the log, and you have the **Get Data** permission only.

  In this scenario, you click **Get Data** to proceed with manually creating a **Master Rate Sheet**, by way of integration.
- There is no Master Rate Sheet defined and present in the log, and you have both the **Create** and the **Get Data** permissions.

  In this scenario, you click either the **Create** option or the **Get Data** option to proceed with manually creating a Master Rate Sheet.

When the **Master Rate Sheet** log has an item (a Master Rate Sheet created through integration or manually), the **Master Rate Sheet** log displays the item **Name** as "Master Rate Sheet" and the item **Description** as "Master Sheet for Roles and Resources."

The **Master Rate Sheet** log will also contain the following information:

- **Last Updated**

- **Created By**

When the **Master Rate Sheet** log has an item, or an item is created, the right pane of the screen will display the following tabs:

- **Audit Log** tab
- **Schedule** tab
- **History** tab

The **Audit Log** tab displays the current events through the Master Rate Sheet option when in the **View** (for example, when **Resource - P6** or **Role - P6** is selected).

This topic explains the **Audit Log** tab in the user-defined and P6/Oracle Primavera Cloud views for resources and roles. Events such as Create, Update, and Remove of the resources and roles in a User Defined view will be audited along with the existing audit log events for resources and roles received from P6 or Oracle Primavera Cloud.

When a resource or role is added through CSV import, only an entry per resource or role will be added in **Audit Log** for each successful creation of a resource or role. The **Audit Log** entries of the User Defined view for resources or roles are as follows:

Date	Event	Action	Field Name	Old Value	New Value	User Name
Date and Timestamp of the event occurred	Resource > <Resource ID> or Role > <Role ID>	Create	Resource > <Field or Column Name> or Role > <Field Name>	NA	<NewValue>	<Logged in Username >
Date and Timestamp of the event occurred	Resource > <Resource ID> or Role > <Role ID>	Update	Resource > <Field or Column Name> or Role > <Field Name>	<OldValue >	<NewValue>	<Logged in Username >
Date and Timestamp of the event occurred	Resource > <Resource ID> or Role > <Role ID>	Delete	Resource > <Field or Column Name> or Role > <Field Name>	NA	NA	<Logged in Username >
Date and Timestamp of the event occurred	Import	Create	Resource > <Resource ID>	NA	<NewValue>	<Logged in Username >

The **Audit Log** entries (for updated resources or roles received from P6or Oracle Primavera Cloud) when you add or update the values for the **Calendar** and **Units/day** fields are as follows:

Date	Event	Action	Field Name	Old Value	New Value	User Name
Date and Timestamp of the event occurred	Resource > <Resource ID - Name> or Role > <Role ID - Name>	Update	Resource ID > Calendar	<OldValue >	<NewValue>	<Logged in Username >
Date and Timestamp of the event occurred	Resource > <Resource ID - Name> or Role > <Role ID - Name>	Update	Resource ID > Units/day	<OldValue >	<NewValue>	<Logged in Username >

You can enter values in the **Schedule** tab fields only if you have the **Get Data** permission. If you create a Master Rate Sheet manually (using the **Create** option), there will be no details on the right pane until the data is received from the source. If the Master Rate Sheet has data coming from P6 or Oracle Primavera Cloud, the right pane shows both the **Schedule** and **History** tabs.

The **History** tab displays the following information:

- **Action**
- **Requestor**
- **Initiated On**
- **Start Date**
- **End Date**
- **Status**

The column above contains the history of the changes made to the **Master Rate Sheet**.

Master Rate Sheet (View)

When you open the **Master Rate Sheet**, the following view options (**View** field) are available, which enables you to select different views of the Master Rate Sheet:

> **Note:** To see the different views, you must have the **Get Data** and **Create** permissions, and the Resources and Roles values are received from P6 or Oracle Primavera Cloud.

- **Resource - User Defined**
- **Resource - P6**

- **Resource - Primavera Cloud**
- **Resource - All Sources**
- **Role - User Defined**
- **Role - P6**
- **Role - Primavera Cloud**
- **Role - All Sources**

If the Resources and Roles values are not received from P6 or Oracle Primavera Cloud, the following view options are available:

- **Resource - User Defined**
- **Role - User Defined**

The following explains the various scenarios for the **View** options:

- If the Master Rate Sheet is created with existing resources and roles received from P6 or Oracle Primavera Cloud and you have **Create** permission, you can add resources using the options in the toolbar. When you open the Master Rate Sheet, the **View** drop-down will display **Resource** as an option. The **Add Sibling** and **Add Child** toolbar options will be displayed, for adding resources in a hierarchy. You can switch between custom resources and roles and P6 or Oracle Primavera Cloud resources and roles. The toolbar options will be updated based on the selected view.

  If you select **Resource - P6** or **Resource - Primavera Cloud**, you can add or update the **Rates**, **Calendar**, and **Units/day** columns for the resources and roles. Also, you can update the status of the resource, from active to inactive or delete.
- If the Master Rate Sheet is created with existing resources and roles received from P6 or Oracle Primavera Cloud and you do not have **Create** permission, the Master Rate Sheet will only receive data from P6 or Oracle Primavera Cloud, and the following **View** drop-down options will be displayed:
  - **Resource - P6**
  - **Resource - Primavera Cloud**
  - **Role - P6**
  - **Role - Primavera Cloud**

  In this scenario, the resources and roles will be received from P6 or Oracle Primavera Cloud, and they are read-only in the Master Rate Sheet. You will be able to update or add standard and breakdown rates to the resources and roles.

Notes:

- If you select **Resource - P6/Primavera Cloud** or **Role - P6/Primavera Cloud**, the **Units/day** column will be displayed.
- The resource calendar might not be displayed, depending on the version of Unifier that you use.
- Unifier uses the **Units/day** column selected for the resource in manual activity sheets to calculate units when resources are assigned to activities.

- If the Master Rate Sheet is without an existing resources and roles received from P6 or Oracle Primavera Cloud and you have **Create** permission, when you create or open the Master Rate Sheet, the following **View** drop-down options will be displayed:
  - **Resource - User Defined**
  - **Role - User Defined**

  When you select **Resource - User Defined**, the toolbar will display options that enable you to add resources. The Master Rate Sheet can be edited, for existing resources, if rates are available. You can add new sibling, or child, resources, by using the *gear menu* (⚙). The cut, copy, and paste options are available for rearranging the resources.

  You can drag-and-drop resources within the user-defined view.
- If the Master Rate Sheet is without an existing resources and roles received from P6 or Oracle Primavera Cloud and you only have **Get Data** permission, when you create or open the Master Rate Sheet, the following **View** drop-down options will be displayed:
  - **Resource - P6**
  - **Resource - Primavera Cloud**
  - **Role - P6**
  - **Role - Primavera Cloud**
- If the Master Rate Sheet is without an existing resources and roles received from P6 or Oracle Primavera Cloud, and you have both **Get Data** and **Create** permissions, you can create a Master Rate Sheet through one of the following methods:
  - Using the **Get Data** option from the Master Rate Sheet log
  - Using the **Create** option

  If the **Get Data** option is displayed, the **Create** option will be disabled.
- If you select the **Get Data** option, the **Create** option will be disabled. If the Master Rate Sheet is created in the log, the **Create** option will not be seen in the log. When you create or open the Master Rate Sheet, the **View** drop-down will show the following options:
  - **Resource - User Defined**
  - **Role - User Defined**

Adding Resources

You can use the *gear menu* (⚙) to add a hierarchy (**Add Sibling** and **Add Child**) of the resources:

- **Add Sibling**: See the toolbar options, above.

- **Add Child**: See the toolbar options, above.
- **Remove**: You can delete the resources and roles that are no longer used. If you delete a parent resource, the child rows (under the parent) will be deleted.

  When a resource is not used in an activity sheet, if you select on a resource and click **Remove**, all the selected resources will be deleted.

  When a resource is used in an activity sheet, if you select a resource and click **Remove**, the resource will be removed from the Master Rate Sheet and from all the activity sheets, where this resource is associated. If multiple resources are selected and one resource is associated to the activity sheet, the resource will be removed from the Master Rate Sheet and from all the activity sheets
- **Cut** or **Paste**: You can select one or more resources, or roles, under a parent and select Cut. When you paste the selected resources, or roles, at the destination, the selected resources, or roles, will be removed from the original location and added to the destination, as siblings for the selected resource. When you select a parent row, the child rows will be selected; therefore, if you select Cut and paste the selection in the destination, both the parent and the child rows will be removed from the original location and added to the destination.
- **Copy** or **Paste**: The copy and paste function is similar to the cut and paste function, except that the rows selected will be copied into destination row and will not be removed from the original location. When the row is pasted in the destination, by default the ID will be shown as "**Copy of <Source Resource ID>**" and the Name will be "**Copy of <Source Resource Name>**." The **Paste** option will not be shown in the *gear menu* until you select a new row and click **Cut** or **Copy**.

Assigning Standard Rates, New Rates, and Rate Breakdowns

You can assign Standard Rate and Rate Breakdowns for the resources that were created manually, or through CSV import, in the Master Rate Sheet.

After the resource has been created, the right pane displays the **Rates** tab which will allow the creation of the **Standard** tab for the created resource.

The toolbar in the **Rates** tab, for the selected resource, will have the **Create** option. The **Create** option, enables you to open a rate breakdown structure grid and define the standard rates and rate breakdowns, by using the rate breakdown structure.

In the **New Rate Breakdown** window, you can add a new rate breakdown, modify or remove an existing rate breakdown, and define the rates per effective date. The **Effective From** field, the **New Rate Breakdown** window, is editable and displays the current date. By default, the row which shows the rate per unit with the effective data will show the latest effective date that rate becomes active. The **Code Type** and the **Rate Type** fields (drop-down) display **Standard** and **Direct**, by default. You can use the **Price / Unit** field to add rate.

You create a new rate breakdown by using a copy of an existing rate (right-click a row and select **Copy**). The generated grid title will be shown as the **Copy of Rate Breakdown** with the effective date editable, and all the existing rate breakdowns copied over. To complete creating a new breakdown, click **Save**.

Master Rate Sheet Resource

The following explains:

- Master Rate Sheet: Resource - P6 or Resource - Primavera Cloud
- Master Rate Sheet: Resource - All Sources (resource generic)

Master Rate Sheet: Resource - P6 or Resource - Primavera Cloud

In the **Resource - P6** or **Resource - Primavera Cloud** view, all the resources that are received from P6 or Oracle Primavera Cloud will be seen. The following resource fields are read-only:

> **Note:** Depending on your Unifier version, you might not receive any calendars from the resource when P6 resources are integrated by way of Gateway integration.

- **ID**
- **Name**
- **Type**
- **Status**
- **Currency**

Also, two additional columns will be displayed:

- **Calendar**
- **Units/day**

The columns above are editable in this view.

By default:

The **Calendar** column will contain the calendar information that is coming from P6 or Oracle Primavera Cloud, if the source has a calendar with the same name. You can assign a user-defined calendar in the **Calendar** column.

> **Note**: Unifier does not receive calendars from a source when resources are created through a Gateway integration.

The company calendar which is set as default will be assigned to all the resources that are created from P6 or Oracle Primavera Cloud. For **Labor** type and **Non labor** type resources, the default value of the **Units/day** will be 8.00 units/day.

Master Rate Sheet: Resource - All Sources (resource generic)

In the **Resource - All Sources** view, all the resources that are received from P6 or Oracle Primavera Cloud, and are created in Unifier, will be seen. The following resource fields are read-only:

- **ID**
- **Name**
- **Type**
- **Status**

- **Currency**

Also, two additional columns will be displayed:

- **Units/day**
- **Status**

The columns above are read-only in this view.

The values in the **Source** column will populate with the source of the resource created (User Defined, P6, or Primavera Cloud).

All the data seen in this view is read-only.

By default, the **ID** column will be sorted in ascending order.

Master Rate Sheet: Role - All Sources

In the **Role - All Sources** view, all the resources that are received from P6 or Oracle Primavera Cloud, and are created in Unifier, will be seen. The following resource fields are read-only:

- **ID**
- **Name**
- **Source**
- **Currency**
- **Calendar**

Also, two additional columns will be displayed:

- **Units/day**
- **Status**

The columns above are read-only in this view.

Adding Roles Manually

You can add user-defined roles in a similar way that you add the user-defined resources.

If you have the Create permission, when you navigate to **View** and select **Role**, the system displays a toolbar option that enables you to add, update, or remove roles.

When you add a role, the values for the **ID** and the **Name** fields are required, and the value for the **Currency** field will be *USD*, by default. You can change the role currency and the maximum number of units per day. By default, the role status is set as **Active**.

> **Note**: The system validates the uniqueness of the values in the ID and Name columns in the role.

You cannot create a role with the same ID across all roles (user-defined, P6, Oracle Primavera Cloud, or all three). When you define the role in the **Role - User Defined** view, the following columns show default values:

- **Currency**: Set to the Base Currency.
- **Units/day**: Set to 8.00 units per day.
- **Status**: Set to Active.

If you try to change role details such as **ID**, **Currency**, and so forth, you must assign the standard rate and rate breakdowns for the custom roles. After you create the role, the right pane displays the **Rates** tab. In the **Rates** tab you can create the **Standard** tab for the created resource.

When you click the **Add Rate** option, the **Rate Breakdown Structure** window opens. In this window, you can define the standard rates and the rate breakdowns. You can define the rate according to the effective date. By default, for the standard rate the cost type and rate type will be **Standard** and **Direct**.

Adding Standard Rates and Rate Breakdowns

You can assign Standard Rate and Rate Breakdowns for custom roles.

After the roles have been created, the right pane will show the **Rates** tab which will allow you to create the **Standard** tab for the created resource. The **Add Rate** option, on the toolbar, opens the **Rate Breakdown Structure** window. In the **Rate Breakdown Structure** window, you can define the standard rates and the rate breakdowns. You can define the rates per effective date. By default, for the standard rate the cost type and rate type will be **Standard** and **Direct**.

You can add new or modify or remove existing rate breakdown and click **Save** to create a new breakdown with different effective date.

You can edit the existing rate and effective date. By default, when you expand the row, the row will display the rate per unit, with the latest effective date from which point the rate becomes active.

You can create a new rate breakdown by copying (**Copy From**) an existing rate (a row). In this scenario, a new rate breakdown grid will be displayed above the existing rate breakdown. The grid title will be "**Copy of Rate Breakdown**," and the effective date is editable.

Importing Resources, Roles, and Rate Breakdown

You can create resources by way of CSV import. When you select Resource or Role as the view, the Menu option will allow for import or export.

When you select Resource as the view, the following export options are available:

Export, and then select **Resource Template**

Resource Rate Breakdown

The **Resource Rate Breakdown** option is available in the **Menu** option, for P6, Oracle Primavera Cloud, Resource, and Role views.

Import

Resource Rate Breakdown

The **Resource Rate Breakdown** option is available in the **Menu** option, for P6, Oracle Primavera Cloud, Resource, and Role views.

When you select Role as the view, the following export options are available:

Export

- **Role Template**

- **Role Rate Breakdown**

Import

- **Roles**
- **Role Rate Breakdown**

You can create resources in the custom view by using the **Menu** option, selecting **Import** , and then selecting **Resources**.

When you select **Export**, and then select **Resource Template**, Unifier exports the CSV template, which lists all the columns that are seen in the Master Rate Sheet, along with the rate breakdown columns.

The following fields are required in the CSV template:

- Resource ID
- Resource Name

If you do not provide values for the following fields, the system uses the default values:

- **Type**
- **Calendar**
- **Units/day**
- **Status**

You will encounter an error if the CSV template that is being imported contains rows with the same ID, when adding resources or roles by using the CSV template import.

You can import resources in a hierarchy by using ~~ (two consecutive tilde symbols) between parent ID and child ID.

You need to include the entire path (for the ID) in the CSV template to be able to import the resources or roles in a structure.

Ensure that you verify the validity of values in the following columns:

Type:

- **Labor**
- **Non Labor**
- **Material**

The default value is Labor.

Unit of Measure:

The default value is the value that has been set, as default, in the Unit of Measure field in the Data Structure Setup.

- **Status**
- **Active**
- **Inactive**

The default value is Active.

Currency:

All the currency symbols along with currency names that are available under the **Currencies** sub-node in **Standards & Libraries**. Default value is Base Currency.

Units/day:

A valid decimal value (any number between 1 to 999,999).

Rate Breakdown Import

> **Note:** The following fields are supported for Rate Breakdown Import only. The following additional columns will be available for the rate breakdown import, for existing resources and roles. More details are available in the "CSV Import for Role and Resource Rates" topic. This topic explains the import of resource and role breakdowns for the Resources and Roles created in 'Resource' drop-down.

Effective date:

It is a date only column and only dates are allowed. All the date-related validations will be performed, according to the date preferences.

Price/Unit:

Any positive decimal value. The value cannot be a negative number.

The following columns are displayed in the exported **Role Template**:

- **Role ID**
- **Role Name**
- **Currency**
- **Units/day**
- **Status**

Only the **Role ID** and **Role Name** are required in the exported CSV template. The other columns will take default values, if the values are not provided in the input CSV file.

You can import new resources using the downloaded CSV file. When creating resources through CSV import, the resources are always appended to the existing resources in the **Custom - Resource** view.

The following explains the CSV import validations:

- You can enter ID in hierarchy by using: <Parent ID> ~~ <Child ID>.
- You can verify the uniqueness for the ID when you are creating the resources/roles using CSV import.
- Unifier sorts the added resources/roles according to the column sorting.
- When a resource is created through CSV import, the ID and Name fields will be required fields and must have unique values. Additional columns like Currency, Calendar, Units/day, and Status will show default values if no value is provided in the CSV file.
- When importing resources and roles, if the parent exists, the child will get created. Similarly, you can import both parent and child together provided that the parent only is in one row and a parent with child is in a separate row, in the input CSV file.

CSV Import for Role and Resource Rates

When you use a CSV file to export role rates or resource rates, the following additional columns are added:

- **Cost Type**
- **Rate Type**

Use these columns to provide rate breakdowns.

When you use a CSV file to export role breakdown, the file shows the roles with existing breakdowns, similar to the resource breakdown.

> **Note**: You cannot import a role or resource without cost-type value or rate-type value.

An exported CSV must show the cost-type and rate-type values, as they are required.

Activity Manager

The **Activity Manager** node, or module, contains the following sub-nodes, when available:

- **Activity Sheet**
- **OBS Sheet**
- **Rate Sheet**
- **WBS Sheet**

To access the **Activity Manager** node:

1) Go to the project/shell tab and switch to **User** mode.
2) In the left Navigator, select **Activity Manager** to expand it.

The following table provides summary details about each sub-node.

> **Note**: To view the **Activity Sheet**, or other sheets, you must have the appropriate permissions.

You can create user-defined reports (UDRs) from the Activity Sheet Data Elements (DEs).

For a cost loaded schedule, Unifier does not perform any calculations in Unifier; it uses the data directly from P6.

The **Activity Manager** node contains the following sub-nodes:

Sub-node name	Description
Activity Sheet	The **Activity Sheet** sub-node contains a list of activity sheets listed in the **Activity Sheets** log. You can have multiple activity sheets. An activity sheet captures scheduling data from the mapped P6 or Oracle Primavera Cloud projects and role and resource rates from the company-level Master Rate Sheet (default) or shell-level rate sheets, and calculates the Earned Values metrics and derivatives. It is the primary source of data for the Earned Value Analysis.

Sub-node name	Description
Rate Sheet	The **Rate Sheet** node captures the list of resources and roles (based on the latest data available in activity sheet) and corresponding rates from the master rate sheet. In P6 or Oracle Primavera Cloud, users can assign a role, or resource, to an activity under the Assignments tab of an activity for any project. In P6 or Oracle Primavera Cloud, rates are assigned to a role or resource at global level. To maintain the consistency, the system will import the P6 or Oracle Primavera Cloud global data to the Unifier Company Workspace. This data will be captured under a new entity called Master Rate Sheet. The rate sheet being created through P6/Oracle Primavera Cloud to Unifier integration will be saved as 'Master Rate Sheet' under a new node in Company Workspace called Master Rate Sheet. The rates (Price/Unit) for assigned roles and resources are managed at global level in P6 or Oracle Primavera Cloud, which can then be used in a project while doing the costing (calculating Present Value, Earned Value, and so on) of the project depending on the rate source (resource, role, or override) corresponding to that assignment in an activity. For a resource loaded schedule, we need rates corresponding to roles and resources for costing of any project in Unifier. There will be two types of rate sheets: ▸ Master Rate Sheet (at company workspace) ▸ Rate Sheet (at Shell) explained in the subsequent sections. A company will only have one Rate Sheet called the "Master Rate Sheet." So, users are not allowed to create a copy sheet of the Master Rate Sheet under company workspace. This sheet will contain rates for both roles and resources, users will be able to toggle between resource and role rates from the display. By default, the rates present in master rate sheet will be used across all the resources and roles present in all activity sheets across all shells unless user has assigned another rate sheet present at the shell level to the

Sub-node name	Description
WBS Sheet	A **WBS Sheet** (Work Breakdown Structure sheet) contains the following information: ▸ Planned Units ▸ Planned Total Cost ▸ Actual Units ▸ Actual Total Cost ▸ Remaining Units ▸ Remaining Total Cost ▸ At Completion Units ▸ At Completion Total Cost The WBS Sheet node log displays the only available WBS sheet.
OBS Sheet	An **OBS Sheet** (Organization Breakdown Structure sheet) contains the following information: ▸ Full Name ▸ Short Name ▸ Unifier User ▸ Title ▸ Department ▸ Status ▸ WBS Name ▸ Contract No ▸ Weekly Capacity The OBS Sheet node log displays the only available OBS sheet.

This section provides information about the **System Activity Sheet**. For information related to the manual activity sheets, refer to the *Unifier Managers User Guide*.

In This Section

Activity Sheet Sub-Node: Activity Sheets Log and System Activity Sheet

The **Activity Sheet** sub-node contains a list of activity sheets, including the **System Activity Sheet**, and they are all listed in the **Activity Sheets** log.

You can use an activity sheet to capture the scheduling data from P6 or Oracle Primavera Cloud. A single activity sheet (called **System Activity Sheet**) is mapped to multiple source projects, by way of integration.

The source project (**P6** or **Oracle Primavera Cloud Project**) drop-down field is visible at the top of the system activity sheet as, "<Source name> Project : <Project ID>." The source project drop-down contains a list only if the activity sheet received activity data from multiple source projects. The link to the source project is based on the source URL (provided in the company properties). Also:

When connected to P6 or Oracle Primavera Cloud applications:

- If the selected project is open in the application, the data for the corresponding project (along with other projects, if they exist) is displayed.
- If a project other than the selected project is open in the application, only the data for the project other than the selected project is displayed. In this scenario, the data for the selected project is not displayed.
- If no project is selected in the application, the **Open** (projects) window is displayed that enables you to select the project for which you want to view the schedule

When not connected to P6 and Oracle Primavera Cloud applications:

The source application login page is displayed.

You have the option to view the activities (from the mapped source projects) by using the project drop-down field which contains a list of all source projects mapped to your shell.

The **Activity Manager** enables you to create, consolidate, and monitor activities that must be completed on a schedule.

You can have multiple activity sheets.

A **System Activity Sheet** captures the scheduling data from the mapped P6 or Oracle Primavera Cloud projects and role and resource rates from the company-level **Master Rate Sheet** (default) or shell-level rate sheets, and calculates the Earned Values metrics and derivatives. When Unifier, Oracle Primavera Cloud, and Oracle Integration are integrated, you can use Oracle Integration recipes to update the System Activity Sheet or the Master Rate Sheet (or both) in Unifier with information from Oracle Primavera Cloud. A **System Activity Sheet** is the primary source of data for the Earned Value Analysis.

After the P6/Oracle Primavera Cloud to Unifier integration has been run and P6/Oracle Primavera Cloud projects mapped in the **Integration** tab of shell details, a single **System Activity Sheet** can be created in the **Activity Sheets** log of the shell.

To access the Activity Sheets log:

1) Go to the project/shell tab and switch to **User** mode.
2) In the left Navigator, select **Activity Manager**, and then select **Activity Sheets** to access the **Activity Sheets** log.

Each P6/Oracle Primavera Cloud project is associated with a baseline project sheet and a current schedule project sheet. The activity sheet allows you to switch between baseline and current project types and view the specific scheduling information - activities, assignments, dates, and so forth.

Once produced, the baseline project sheet cannot be altered; however, you can update the current project sheet, per Data Date.

If you update the project baseline in P6/Oracle Primavera Cloud, the project baseline will get updated in Unifier (when running the sync by selecting the Baseline option for the respective project).

P6/Oracle Primavera Cloud projects in the **System Activity Sheet** are classified as:

Project Classification	Description
Duration Based projects	The Duration Based projects bring activity duration data only. They do not include resource assignment or cost related information, and are, therefore, not available for Earned Value analysis.

Project Classification	Description
Resource Loaded projects	The Resource Loaded projects load duration and resource assignment information but not cost related information from P6/Oracle Primavera Cloud. You can assign a rate sheet and costing to calculate resource costs in the projects. After costing is completed, they are available for Earned Value analysis.
Cost Loaded projects	The Cost Loaded projects bring duration, resource assignment, as well as cost information from P6/Oracle Primavera Cloud. No further cost calculation is necessary. You can directly use the Earned Value module for cost comparisons and analyses in these projects.

After integration, the data brought in to the **System Activity Sheet** are constrained by project categories, and the constrains govern the behavior of the **System Activity Sheet**.

The following explains the **Activity Sheets** log elements, followed by information specific to the **System Activity Sheet**.

Activity Sheets Log and System Activity Sheet

The **Activity Sheets** log lists the activity sheets which capture project scheduling data coming from P6 or Oracle Primavera Cloud.

To access the **Activity Sheets** log:

1) Go to the project/shell tab and switch to **User** mode.
2) In the left Navigator, select **Activity Manager**, and then select **Activity Sheet**.

> **Note:** The location may differ in your implementation based on the Project/Shell **User Mode Navigator** configuration.

You can use the **Activity Sheets** log to access your **System Activity Sheet**.

> **Note:** In the **Activity Sheets** log, if you open an activity sheet that has more than 1000 activities, the system will take time to prepare the list.

If your administrator defined views for the Activity Sheet or System Activity Sheet and pushed them to your project/shell, these views are listed in the **Manage Views** dialog box of the sheet that you open. You can make these views visible in your sheet, and you can change the order in which they are listed. After they are visible, you can use them to create additional custom views. You cannot edit or delete the predefined views. If the administrator pushes additional updates to the template, custom views that you created are deleted. For more information on creating and managing views, see **Creating and Managing Views in Activity Sheets and the System Activity Sheet** in the *Unifier Managers User Guide*.

Activity Sheets Log (Toolbar Options)

If you have the **Create Manual Activity Sheets** permission or the **Full Access** permission (see **Activity Sheet in Shell (User Mode) Permissions** in *Unifier Modules Setup Administration Guide*), the toolbar options in the **Activity Sheets** log are as follows:

Toolbar Option	Description
Create	Enables you to create new activity sheets. This option is enabled when the user has at least the **Create** permission for the manual activity sheets. The **Create** option has two sub-options to support the manual creation of an activity sheet and creating an activity sheet from Activity Sheet template (when the Activity Sheet templates is made available in the **Admin** mode). When you click **Create**, the application checks for manual activity attribute form, if a system activity sheet has been created by using the system activity sheet attribute form. If there is no system activity sheet attribute form defined, or there is no manual activity attribute form, in the design, the application uses the canned form for the activities in the activity sheet. An **Activity Attribute** form must be defined to create custom activity sheets. If a **System Activity Attribute** form is defined in uDesigner, but no manual activity attribute form exists, the following message displays: *Activity attribute form must be defined in order to create custom activity sheets.*
View	Enables you to select how to view the list of the activity sheets that are available. To be able to see any activity sheets in the Activity Sheets log, you must have the **View** permission, or above. The **View** drop-down field displays the following out-of-the box, or default, options: ▸ **All:** To display all the activity sheets. ▸ **Active:** To display all the activity sheets with active status. Available if there are activity sheets in the log that have active status. **Note**: The System Activity Sheet will be active (Status) at all times, and the status cannot be changed.

Toolbar Option	Description
Actions	To set permissions and import options: ▸ **Permissions:** To assign a rate sheet to the activity sheet: ▸ **Assign Rate Sheet:** To assign activity sheet-level permissions similar to the record-level permissions set for the non-Workflow BPs. ▸ **Import** (**Microsoft MPP** or **P6 XML**)

Toolbar Option	Description
Get Data  **Get Data into Activity Sheet**	Enables you to create a System activity sheet for the first time, or update an existing activity sheet with the most recent data from P6, Oracle Primavera Cloud, or Oracle Integration. The **Get Data** synchronization that created the activity sheet also populates the activity sheet with the: ▸ Scheduling data (activities along with assignments and spread data) from the P6 projects mapped to the current shell in the **Integration** tab. **Note:** The integration of scheduling data is not currently supported with Oracle Primavera Cloud. ▸ Role and resource rates data from the Master Rate Sheet for the mapped projects. Subsequent updates of Role and Resource Rates in P6 or Oracle Primavera Cloud will not trigger the updates in the Master Rate Sheet. Subsequent updates of CBS Code for activities in P6 will trigger the updates in the Activity Sheet CBS assignments. The **Get Data** option will be enabled when you have: ▸ **Get Data** permission at the node level in the **Permissions** tab. This option enables you to receive the schedules from P6 or Oracle Primavera Cloud based on synchronization selected in Gateway settings. ▸ Set up an Oracle Integration connection, and relevant integrations have been configured for Manual Activity Sheets, System Activity Sheets, or the Master Rate Sheet when you select **Company Workspace**, select I**ntegrations**, and select the **Oracle Integration Cloud** node. Use the **Get Data** option to: ▸ Create an activity sheet for the first time ▸ Update an existing activity sheet with the most recent activity spread data from an Oracle Primavera Cloud project Updating an existing activity sheet triggers a new out-of-the-box import

Toolbar Option	Description
Send Data **Send Data from Activity Sheet**	Enables you to send data from Unifier to P6 or Oracle Primavera Cloud. This will trigger the synchronizations at the Gateway level. **Note:** The Send Data feature is not currently supported with Oracle Primavera Cloud through Oracle Integration. The **Send Data** option will be enabled when you have: ▸ **Send Data** permission at the node level in the **Permissions** tab. This option enables you to receive the schedules from P6 or Oracle Primavera Cloud based on synchronization selected in Gateway settings. ▸ Set up an Oracle Integration connection, and relevant integrations have been configured for Manual Activity Sheets, System Activity Sheets, or the Master Rate Sheet when you select **Company Workspace**, select I**ntegrations**, and select the **Oracle Integration Cloud** node. Use the **Send Data** option to run the export synchronization to send updated activities and schedules from Unifier Activity Sheet to Oracle Primavera Cloud. The data elements in the business processes, or the shell attribute form, which have been set to reverse auto-populate (RAP) back to the Oracle Primavera Cloud Activity Sheet (using P6 Activity Picker) will get the latest updates into the Oracle Primavera Cloud Activity Sheet. You can send updated Activity Sheet data (such as updated Actual Start Date or Finish Dates) to the Oracle Primavera Cloud project which is linked by way of the out-of-the-box export synchronization option, Update Unifier Activity data to Oracle Primavera Cloud. The **Schedule** tab, in the **Activity Sheet** log, shows this option. You can set the scheduled send data based on the frequency. Before initial synchronization, **Get Data** is the only toolbar function available in the log. Click **Get Data** to initiate

Toolbar Option	Description
Refresh	To retrieve the latest number of activity sheets created in the log.
Print	To print the log contents into HTML, CSV, or Excel formats.
Find on Page	To search in the log.

If you do not have the **Create Manual Activity Sheets** permission, or the **Full Access** permission, the toolbar options in the **Activity Sheets** log will not display the **Create** option.

Activity Sheets Log (Columns)

The **Activity Sheets** log contains the following columns:

- **Refresh:** A refresh icon will be displayed in this column if the activity calendar is edited in the following areas:
  - Working and Non-working days
  - Working hours
  - Start time of working day

  Use the **Refresh** toolbar option to update the sheet based on the new calendar values. The refresh will be captured in the **History** tab of the sheet.
- **Name:** The name of the manual activity sheet.
- **Description:** The description for the manual activity sheet.
- **Source Type:** To show whether the source for the manual activity sheet is standard, project/shell, or custom.

  Note: The **Source Type** for a **System Activity Sheet** is **P6** or **Oracle Primavera Cloud**.
- **Status:** To show whether the manual activity sheet is active.
- **Last Updated On**
- **Creation Date**
- **Created By**

Activity Sheets Log (System Activity Sheet Gear Menu)

To access the Activity Sheets log:

1) Go to the project/shell tab and switch to **User** mode.
2) In the left Navigator, select **Activity Manager**, and then select **Activity Sheets** to access the Activity Sheets log.

The log lists the **System Activity Sheet** as well as the manual activity sheets.

The **System Activity Sheet** has a *gear menu* (⚙) which enables you to open (**Open**) the **System Activity Sheet**.

Activity Sheets Log (System Activity Sheet Properties Tabs)

In the **Activity Sheets** log, when you click and select the **System Activity Sheet**, the following properties tabs appear in the right pane:

- **Mapped Projects** tab
- **Schedule** tab
- **History** tab

The following describes the tabs listed above.

Mapped Projects tab

Toolbar options

- **Assign Rate Sheet**

  To select **Planning** and **Actuals** specifications. You can select a rate sheet from the list and specify the project to which the rate sheet will be assigned (from the Project).
- **Recost**

  To roll up the CBS costs (Cost Loaded), or to re-calculate all costs (Resource Loaded). It enables you to perform the cost calculations in an activity sheet, for type selected (that is, current schedule or baseline schedule).
- **Refresh**

  To refresh the **Mapped Projects** tab log items.
- **Find on Page**

  To find a particular project in the **Mapped Projects** tab log items.

Columns

- **Project ID**
- **Project Name**
- **Project Type**
- **Project Start Date**
- **Data Date**
- **Schedule Type**
- **ETC Techniques**
- **Rate Sheet (Planning)**
- **Rate Sheet (Actuals)**

Schedule tab

The **Schedule** tab enables you to:

- **Set Frequency for**

  Set frequency for getting data or sending data (Set Frequency for).
- **Frequency**

  Select the time frequency.

- **Start Date**
  Set the start date.
- **End Date**
  Set the end date.

History tab

The **History** tab enables you to see a history (the history of all events that have been performed across project sheets present in the activity sheet) of changes made on the system activity sheet.

Toolbar options

- **Refresh**
- **Find on Page**

Columns

- **Action**
- **Requestor**
- **Initiated On**
- **Start Date**
- **End Date**
- **Status**

When you click an item in the **History** tab, the **History Details** split screen appear at the bottom of the page which provides more details about the selected item.

Mapped Projects Tab (System Activity Sheet)

The **Mapped Projects** tab lists the P6 or Oracle Primavera Cloud projects drawn from the **Integration** tab of shell details into the **Activity Sheet**.

The **Mapped Projects** tab toolbar options are:

The toolbar options are:

- **Assign Rate Sheet:** See ***Assign Rate Sheet*** for details.
- **Recost:** See ***Recost*** for details.
- **Refresh**
- **Find on Page**

Use the toolbar options to assign a shell-level rate sheet to selected projects, recost resource loaded or cost loaded projects, refresh the page, and find an item displayed on the page respectively.

The **Mapped Projects** tab columns are:

- Project ID
- Project Name
- Project Type: The values are Current or Baseline
- Project Start Date

- Data Date: The date a project is updated in P6 or Oracle Primavera Cloud
- Schedule Type: The values are Duration, Resource, or Cost for projects integrated from P6. The value is always Resource for projects integrated from Oracle Primavera Cloud.
- ETC Technique: The formula used to calculate the Estimate to Complete. For example: PF = 1/CPI; PF = 1; (1/CPI)*(BAC - EV); 0.75 * (BAC - EV)

> **Note:** When entering the percentage values in your sheet, if you are working in Classic View, enter the value by using decimal number format. For example, for ten percent, enter: 0.1, and if you are working in Standard View, enter the value by using percent format. For example, for ten percent, enter: 10%. The value that Unifier uses to validate the value of the Percentage column, when applicable, will be: 0-100.

- Rate Sheet (Planning): The **Master Rate Sheet** or a shell-level rate sheet used to calculate the costs.
- Rate Sheet (Actuals): The **Master Rate Sheet** or a shell-level rate sheet used to calculate the costs.

Assign Rate Sheet

When you click the **Assign Rate Sheet** sub-tab, the **Assign Rate Sheet** window opens which contains the following fields:

- **Planning**
- **Actuals**

You can click **Select** to open the **Select Rate Sheet** window and select a sheet.

By default, the resource and role rates in the activity sheet are retrieved from the **Master Rate Sheet** and applied across all the projects. If you have created shell level rate sheets, you can assign a rate sheet to one or more projects.

1) Select one or more projects in the tab.
2) Click **Assign Rate Sheet** to open the **Assign Rate Sheet** window. The **Assign Rate Sheet** window has the following options:
   - **Planning**

     If you are familiar with the rate sheets in the shell, you can click the drop-down arrow to select a rate sheet, or Master Rate Sheet, as the source. If you need more details about the rate sheets, click the select icon (next to the drop-down arrow) to open the Select Rate Sheet window and review the details of the available rate sheets before selecting.

     Alternatively, you can enter the name of the rate sheet in this window that you want to use to calculate the respective cost.
   - **Actuals**

     If you are familiar with the rate sheets in the shell, you can click the drop-down arrow to select a rate sheet, or Master Rate Sheet, as the source. If you need more details about the rate sheets, click the select icon (next to the drop-down arrow) to open the Select Rate Sheet window and review the details of the available rate sheets before selecting.

     Alternatively, you can enter the name of the rate sheet in this window that you want to use to calculate the respective cost.

3) Click **Assign** (or click **Cancel** to exit without making any changes).

> **Note:** An alert "No Rate Sheets to Assign" is displayed if no rate sheets exist. You can Assign Rate Sheet only to Resource-loaded projects in the Activity Sheet.

The role and resource rates are applied to the activities/assignments in the selected projects, when refreshed. You must perform **Recost** to apply rates from the new assigned rate sheets.

When a different rate sheet is assigned to a project, the system displays the following alert message: Perform Recost to see updated costs.

Recost

The **Recost** sub-tab enables you to perform the cost calculations in an activity sheet, for type selected (that is, current schedule or baseline schedule). Upon initiating this option, Unifier refreshes the rates for Price/Unit for each assignment, based on the rate source from the rate sheet assigned using the latest rates present. The field will be updated (or used) in recost according to the following rules:

- If the rate source is Resource, the system gets the corresponding data from the resource rate sheet.
- If the rate source is Role, the system gets the corresponding rate from the role rate sheet.
- If the rate source is Override, the system updates the Price/Unit and uses the Price/Unit for the respective assignment present in the Activity Sheet.

This functionality applies to Resource loaded projects. Recost for Cost-loaded Projects also takes care of applying the exchange rates for Cost fields if P6 Currency or Oracle Primavera Cloud Currency is different than Unifier Base Currency or Shell Currency. Use Recost to perform cost calculations in the Activity Sheet for the schedule type selected (current or baseline).

> **Note**: Recosting cannot be performed on Duration-based projects.

The **Recost** action must be manually triggered by the user after the following actions are performed in the Activity Sheet or the Rate Sheet:

Assigning CBS

This option can be used to assign a CBS code to a resource and/or role. Select Assign CBS and select a code in the CBS field.

Assigning Rate Source

Select **Assign Rate Source** to assign a rate source to an assignment.

The **Rate Source** drop-down list has the following options:

- Resource (default)
- Role
- Override

Assigning Price/Unit

Unifier updates the rates for price/unit of each assignment after retrieving them from the corresponding source fields in the rate sheets as follows:

- If the rate source is **Resource**, the data is fetched from the Resource Rate Sheet.

- If the rate source is **Role**, the data is fetched from the Role Rate Sheet.
- If the rate source is **Override**, the Price/Unit data is not refreshed.
- In this case, you must manually specify the value. To do so, click **Rate Source** and follow the prompts. The **Assign Rate Source** is only applicable for Resource-loaded projects.

The system rolls up the assignment values to calculate values at the activity level.

Updating Data in actions button inside the activity sheet.

Changing Rates for any of the resources/roles in the Rate Sheet, in case the resources/roles are referred in **Assignments**.

By default, the **Master Rate Sheet** is used to perform costing; however, if a shell level rate sheet is assigned, values are derived from it instead.

When you activate recost, the following fields (within activities and assignments) are refreshed using the spread data and rates from the assigned rate sheet.

See the following topics for details:

- ***Recost - Activity Attributes*** (on page 171)
- ***Recost - Assignment Attributes*** (on page 177)

The values are taken from the baseline or the corresponding baseline values from the current schedule.

The *activity attributes* are re-calculated by using the spread data and rates from the assigned rate sheet.

The corresponding values at the activity level are calculated by rolling up the values from the assignments.

> **Note**: For recosting, if price/unit and resource/role rates are not defined in the **Activity Sheet**, a default value of 0 is used, and a warning is displayed. If the values are defined, the project currency is used for the calculations. The rate is multiplied by the number of units to get the cost.

Unifier applies the following logic to recosting:

The calculations are triggered while doing the re-costing for Activity Sheet. After the application receives all the rates, it proceeds according to one of the following scenarios:

Scenario One

Resource Currency = Base Currency = Shell Currency

No changes are required.

Scenario Two

Resource Currency <> Base Currency = Shell Currency

The application calculates all the spread data (currency fields) that is present in the Activity Sheet (in the company currency [Base Currency]) by using the resource/role rates applicable at each spread Data Date field.

If the resource rate currency is different from the company currency [Base Currency], the exchange rate will be applied at each spread Data Date field to calculate the spread data.

The spread data will then be rolled up to the respective currency field.

These calculated values in the company currency [Base Currency] are used to calculate any dependent field (for example, CPI, SPI, and so on) as part of recosting.

Scenario Three

Resource Currency = Base Currency <> Shell Currency

Unifier calculates all the spread data (currency fields) that is present in the Activity Sheet (in the company currency [Base Currency]) by using the resource/role rates applicable at each spread Data Date field.

The spread data will then be rolled up to the respective currency field.

These calculated values in the company currency [Base Currency] are used to calculate any dependent field (for example, CPI, SPI, and so on) as part of recosting.

> **Note**: Only Scenario Three is applied to the cost-loaded.

The values in the shell currency will be calculated by using the applicable exchange rate for that shell currency at each spread Data Date field for all currency fields. The system uses these values to calculate any dependent field (for example, CPI, SPI, and so on) as part of recosting.

> **Note**: Despite being in the Activity Sheet user interface, you can only see the Activity Sheet data in the Shell currency.

Scenario Four

Resource Currency <> Base Currency <> Shell Currency

Apply the steps indicated in *Scenario Two* and then apply the steps indicated in Scenario Three.

Schedule Tab (System Activity Sheet)

The following fields are available in the **Schedule** tab:

Set Frequency for

Set the frequency of synchronizations to automatically get data from P6 or send data from Unifier at daily, weekly, monthly, or quarterly intervals (**Frequency**).

Start Date and **End Date**

Define the start and end dates for the scheduled syncs.

> **Note**: The **Schedule** tab will be seen for the users who have full access permission to the **Activity Sheet** sub-node.

History Tab (System Activity Sheet) and (Manual Activity Sheet)

The **History** tab, for both the system and manual activity sheets, displays the history of all scheduled jobs that are performed across the projects included in the Activity Sheet. The toolbar has the **Refresh** and **Find on Page** options. The columns include:

- **Action**
  Displays actions related to Get Data, Send Data, Recost, and Cost Roll up
- **Requestor**
- **Initiated On**
- **Start Date**
- **End Date**
- **Status**
  Displays Failed, Running, or Completed

Creating a System Activity Sheet

The System Activity Sheet (P6 or Oracle Primavera Cloud) is used to calculate ETC or EV. The **Get Data** option is used for the System Activity Sheet.

You can create a **System Activity Sheet** using the following synchronizations:

- Get Activity data from P6
- Get Activity and Assignment data from P6 for EVM
- Get Activity data from Oracle Primavera Cloud using Oracle Integration
- Send Oracle Primavera Cloud Activity data to Unifier

> **Note:** For an activity sheet, the blocks and fields on the right pane can differ based on the synchronizations.

You have the option to view activities present in a P6 or Oracle Primavera Cloud project mapped to Unifier Shell, in the **Activity Sheets** log, by selecting the corresponding Project ID in the **Project** drop-down present inside the **Activity Sheet** log, when you open the system activity sheet from the **Activity Sheets** log.

The **Project** drop-down will contain the list of all P6 or Oracle Primavera Cloud projects mapped to the shell and selecting a project from this drop-down will load the respective scheduling data (activities) in the **Activity Sheets** log.

A project in P6 or Oracle Primavera Cloud can be a current schedule project or a baseline schedule project. Over the project life span, a user can create multiple baseline projects which are mapped to a current schedule project.

While sending data from P6 or Oracle Primavera Cloud, a baseline project sheet is created for the Project baseline (and not for Primary baseline, Secondary baseline, Tertiary baseline, and so on). As a result, every project from P6 or Oracle Primavera Cloud will have a baseline project sheet and current schedule project sheet (which will have the scheduling information, that is activities, assignments, and so on).

If a P6 or Oracle Primavera Cloud project has only current schedule, the system treats the planned data in current schedule as the baseline.

The project sheets, which are created by way of integration, are grouped under a single activity sheet that can be selected to perform Earned Value (EV) analysis.

The fields related to costing can be updated in Unifier and re-costed for a resource loaded schedule.

You can assign a rate sheet to a resource-loaded project present in the **Activity Sheet** log, when you open the system activity sheet from the **Activity Sheets** log; but if you want to perform an operation at the project sheet level, you can open the activity sheet, and select the project and schedule type while working on the activity sheet.

To create a System Activity Sheet:

1) Go to your project/shell and switch to **User** mode.
2) In the left Navigator, select **Activity Manager**, and then select **Activity Sheet**.
3) From the toolbar of the **Activity Sheets** log, click **Get Data into Activity Sheet** .
4) In the **Get Data** dialog box, choose one of the following options:
   - Select the **All Projects** checkbox to populate the field with all available projects. You can use the **x** next to a project name to remove it from the field.
   - Click the field to see the list of projects and then click the project that you need.
5) Select the project **Type**, **Baseline** or **Current** (or both).
   You may have to scroll down, if you select all projects.
6) To apply your selection and close the window, click **OK**.

When the **Activity Sheets** log opens, you will see the following additional option on the toolbar:

Send Data from Activity Sheet: Use this to send activity sheet data to the projects in P6. This action triggers the synchronizations at the Gateway level.

Notes:

- To avoid discrepancy of dates and time between applications, the P6/Oracle Primavera Cloud and Unifier servers are usually located in the same time zone.
- The **Send Data from Activity Sheet** feature is not currently supported with Oracle Primavera Cloud through Oracle Integration.

If your administrator defined views for the System Activity Sheet and pushed them to your project/shell, these views are listed in the **Manage Views** dialog box of your System Activity Sheet. You can make these views visible in your System Activity Sheet, and you can change the order in which they are listed. After they are visible, you can use them to create additional custom views. You cannot edit or delete the predefined views. If the administrator pushes additional updates to the template, custom views that you created are deleted. For more information on creating and managing views for the System Activity Sheet, see **Creating and Managing Views in Activity Sheets and the System Activity Sheet** in the *Unifier Managers User Guide*.

To learn how to create a Manual Activity Sheet, refer to the *Unifier Managers User Guide*.

System Activity Sheet Log Default

The **Activity Sheets** log captures project scheduling data coming from P6 or Oracle Primavera Cloud. A single **System Activity Sheet**, in Unifier, will be mapped to multiple project schedule sheets, which are created by way of integration.

When you open the **System Activity Sheet** that is created by way of integration with P6 or Oracle Primavera Cloud, it lists all the activities in the **Activity Sheet** log. The log lists all activities in a flat grid.

To access the System Activity Sheet:

1) Go to the project/shell tab and switch to **User** mode.
2) In the left Navigator, select **Activity Manager**, and then select **Activity Sheets** to access the Activity Sheets log.
3) In the log, select the **System Activity Sheet, click the** *gear menu* (⚙), and then select **Open**.

The log (named **Activity Sheet** in the image shown below) enables you to set up the log to show either the baseline project view, or the current project view (from the upper-right corner of the log). The link to view the baseline project is displayed next to the source project (upper-right), where you can select the link to view the baseline data for the selected source project. If there are no baselines received for the selected source project, this link is not displayed.

The log has the following toolbar options:

- **Actions**
- **View**

  The **Default** view shown in the image, below. You can use the **View** toolbar option to:
  - **Create New View**
  - **Manage Views**
- **Edit View**
- **Refresh**
- **Print**
- **Find on Page**
- **Menu Options**

  Use this toolbar option to export activities or assignments, import CBS code for activities or assignments, or color the rows.
- **Gantt**

The log has the following fixed columns:

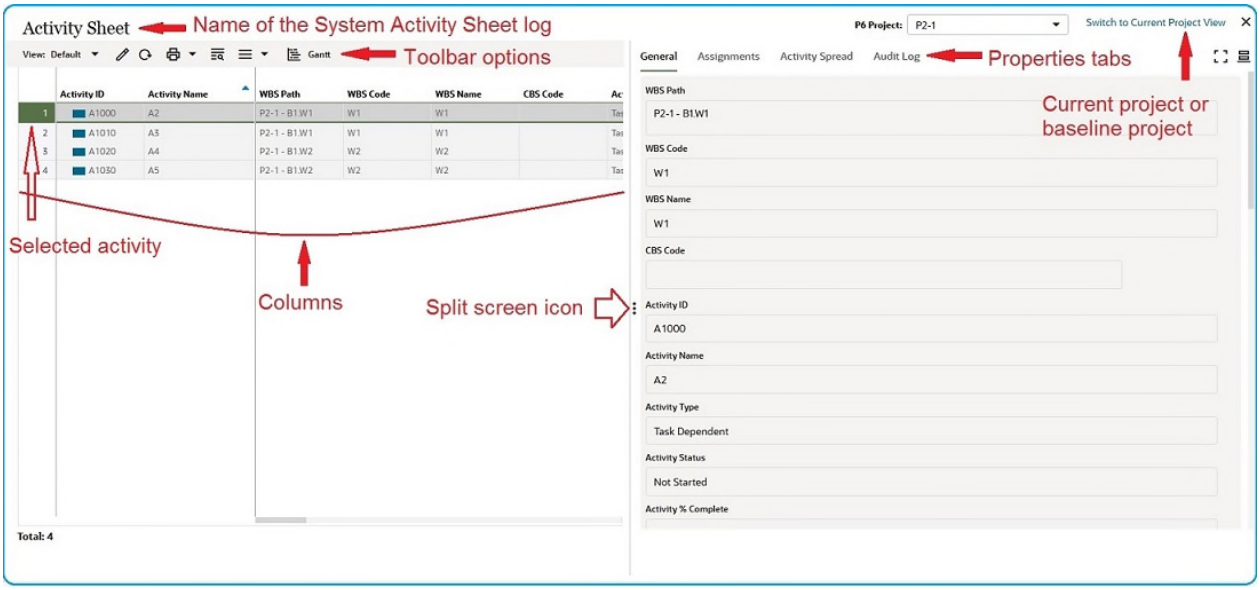
- **Sequence No.**
- **Activity ID**
- **Activity Name**

All the other columns seen in the grid are in the same order as showing the activity attribute form. The column labels are derived from the activity attribute form.

When you select an activity in the log, the following properties tabs will display:

- **General**
- **Assignments**
- **Activity Spread**

- **Audit Log**



The following topics explain the elements of the log.

System Activity Sheet Log Toolbar options

There are two sets of toolbar options based on the following project schedule types:

- Current project view
- Baseline project view

The following explains the toolbar options for each project schedule type.

Current Project View

The current project view of the log has the following toolbar options:

- **Actions**

  This option is only available in the current project view log.

  - **Apply CBS Code to All Assignments**

    Using this option enables you to apply the **CBS Code** assignments to all the resources associated to the highlighted activities. You can also use the *gear menu* (⚙) **Apply CBS Code to all Assignments** option to highlight multiple activities and apply the same CBS Code to the assigned resources.

- **View**

  Within the System Activity Sheet, the default name of the view is **Default**.

  - **Default**

    The default view is not editable.

    You can create new views based on the default view, when editing the view settings. This is similar to the default view available in **WBS Sheet**.

- **Create New View**

  Use this option to create a custom view. Custom views appear in the **View** list.
- **Manage Views**

  Use this option to reorder, show or hide views, and delete custom views.

> **Note:** Any existing views that were created prior to the 20.10 upgrade will not be seen in the **View** drop-down field.

- **Edit View**

  Enables you to select which columns to be displayed or remain hidden, apply filters, group and sort by available fields, and save custom views.
  - In the **Columns** tab, add/remove/reorder columns in the default view. You can save as a custom view.
  - In the **Filter** tab, add conditions to filter the results of a column.
  - In the **Group By** tab, create or modify groups using column elements. For example, activity status.
  - In the **Sort By** tab, define the sorting order (Ascending or Descending) of columns.
- **Refresh**

  To update the information displayed on the screen.
- **Print**
  - **Export To CSV**
  - **Export To Excel**

> **Notes:**
>
> - For export to Microsoft Excel, the system currently supports only Euro (EUR) and United States Dollar (USD) currency symbols.
> - If you export data from a business process (BP) record, sheet (such as an Activity Sheet), or log (such as Company Funding Sheet Log) to Excel, be aware that depending on how your negative values are formatted, you might need to configure your columns in Excel to match the correct data type (Number). Otherwise, the columns will not be treated as numeric and will not sum as expected. One supported format includes placing the negative sign between the currency symbol and the amount (for example, $-1,000).

- **Find on Page**

  To find items on the displayed page. When you click this option, the system inserts a row that lets you enter filter parameters.
- **Menu Options**

  All the actions related to the export of the activities and the assignments, and the import of the **CBS Code** assignments to the activities and the assignments, can be done by way of the **Menu Options** (☰), on the right side of the window.
  - **Export**

        - **CSV Template for Activities**
        - **CSV Template for Assignments**
        - **All Activities**
        - **All Assignments**
        - **Audit Log**
    - **Import**
        - **CBS Code for Activities**
        - **CBS Code for Assignments**
    - **Row Coloring**
        - **Multi-Color**
        - **Single-Color**

Baseline Project View

The baseline project view of the log has the following toolbar options:

- **View**

  Within the System Activity Sheet, the default name of the view is **Default**.
    - **Default**

      The default view is not editable.

      You can create new views based on the default view, when editing the view settings. This is similar to the default view available in **WBS Sheet**.
    - **Create New View**
    - **Manage Views**

      Note: Any existing views that were created prior to the 20.10 upgrade will not be seen in the **View** drop-down field.
- **Edit View**
- **Refresh**
- **Print**
    - **Export To CSV**
    - **Export To Excel**

      Notes:

      - For export to Microsoft Excel, the system currently supports only Euro (EUR) and United States Dollar (USD) currency symbols.
      - If you export data from a business process (BP) record, sheet (such as an Activity Sheet), or log (such as Company Funding Sheet Log) to Excel, be aware that depending on how your negative values are formatted, you might need to configure your columns in Excel to match the correct data type (Number). Otherwise, the columns will not be treated as numeric and will not sum as expected. One supported format includes placing the negative sign between the

currency symbol and the amount (for example, $-1,000).

- **Find on Page**
- **Menu Options**

  All the actions related to the export of the activities and the assignments, and the import of the **CBS Code** assignments to the activities and the assignments, can be done by way of the **Menu Options** (☰), on the right side of the window.

  - **Export**
    - **CSV Template for Activities**
    - **CSV Template for Assignments**
    - **All Activities**
    - **All Assignments**
    - **Audit Log**
  - **Import**
    - **CBS Code for Activities**
    - **CBS Code for Assignments**
  - **Row Coloring**
    - **Multi-Color**
    - **Single-Color**

System Activity Sheet Log Columns

The following explains the columns in the Activity Sheet log (System Activity Sheet).

- **Sequence No.**

  This is a read-only column, with a sequential number starting from 1 (one).

  The numbering sequence of activities. The column cells are pre-populated with the sequence number provided in the activity sheet properties. The sequence number is a unique value.

  This column displays the row number and errors, if any.

  To select an activity, click inside the corresponding Sequence No. cell.

  > **Note**: The task icon should be populated in this column for a particular Activity ID. The color of the task icon is blue for 'Not Started' activities. Similarly, the color of task icon will be orange for 'In Progress' activities, and green for 'Completed' activities.

- **Activity ID**
- **Activity Name**
- **WBS Path**
- **WBS Code**
- **WBS Name**
- **CBS Code**

  The **CBS Code** column is an editable column, for all the activities, and the picker is displayed when you double-click the **CBS Code** column cell.

You can assign the CBS codes to the activities by selecting the picker, or by using the type-ahead functionality. You can assign a single CBS code to multiple rows by dragging.

The CBS code initially assigned to an activity automatically assigns the same CBS code to all its resources. Unifier does not push to the resources any subsequent updates of the CBS code, at the activity level.

You can assign the same CBS code to multiple activities by selecting multiple consecutive cells, in the **CBS Code** column, and adding a CBS code. Similarly, you can remove a CBS code assignment by selecting the **Clear** option in the picker column.

- **Activity Type**
- **Activity Status**
- **Activity % Complete**
- **Planned Start**
- **Planned Finish**
- **Planned Duration**
- **Currency amount**
- **Planned Total Cost**
- **Actual Start**
- **Actual Finish**
- **Actual Duration**
- **Actual Total Cost**
- **Remaining Early Start**
- **Remaining Early Finish**
- **Remaining Duration**
- **Remaining Total Cost**
- **Start**
- **Finish**
- **At Completion Duration**
- **At Completion Total Cost**
- **Secondary Constraint**

The **Activity Sheet** overlay page has columns that provide more details such as:

- **Activity ID**
- **Activity Name**
- **Activity % Complete**
- **Activity Status**
- **Activity Type**

The following provides details about the columns:

Control Accounts (Editable)

This is a Unifier specific field and is editable in the tab. This can also be updated using import CSV. The accepted values are Yes/No.

Activity ID

This is a unique identifier of the activity. To identify and track activities, P6 or Oracle Primavera Cloud assigns each activity a unique Activity ID that is the result of joining the Activity ID Prefix with the Activity ID Suffix and then adding an Increment value. For example, a prefix of PROJ-A# combined with a suffix of 2500 and an Increment of 5 will yield the following activity IDs: PROJ-A#2500, PROJ-A#2505, and so on.

Type

Determines how duration and schedule dates are calculated for an activity.

Task Dependent:

Activities are scheduled using the activity's calendar rather than the calendars of the assigned resources. Choose task dependent when you want to control the duration of the activity yourself (that is, no resources are assigned), or when one or more resources assigned to the same activity can work according to the same calendar.

For example, you might have an activity to cure concrete; you know how long the task takes and the addition of resources will not complete the task any earlier. You would designate this activity as task dependent.

Resource Dependent:

Activities are scheduled using the calendars of the assigned resources. This type is used when several resources are assigned to the activity, but they might work separately. Choose resource dependent when you want to schedule each resource according to his/her own time schedule, or resource calendar, not the activity calendar. The assigned resource availability determines the start and finish dates of the activity. Typically, you use this type when multiple resources assigned to the same activity can work independently, or when availability can affect the activity's duration.

For example, an activity that requires an Inspector might be delayed if that resource is assigned to multiple projects or is on vacation.

Level of Effort:

Activities have a duration that is determined by its dependent activities and are typically administration type. Choose level of effort to indicate that the activity's duration depends on its predecessor and/or successor activities. A level of effort activity is usually one that is ongoing, such as clerical work, Change Management, or project management tasks. For example, site cleanup could be considered a level of effort activity; it occurs repeatedly and is dependent on the completion of a phase.

Start or Finish Milestone:

Milestone activities are zero-duration without resources, marking a significant project event. Choose start milestone or finish milestone to indicate that the activity marks the beginning or end of a major stage in the project. Milestones have zero duration. A primary resource or an activity owner, and expenses can be assigned to a milestone. In an office building addition project, examples of milestones might include Project Definition Complete, Structure Complete, or End Bidding Process.

CBS Summary:

Activities that are used to aggregate date, duration, and percent complete values for a group of activities that share a common WBS code level. Choose WBS Summary to indicate that the activity is a summary-level WBS activity. A WBS Summary activity represents a group of activities that share a common WBS level. The summary-level WBS activity enables roll-ups of dates for the activity group. The duration of a WBS Summary activity extends from the start of the earliest activity in a group to the finish of the latest activity. WBS codes control which activities are part of a WBS Summary activity; P6 or Oracle Primavera Cloud incorporates any activities that share a component of the WBS Summary activity's WBS code into the WBS Summary activity. For example, all activities whose WBS codes begin with A (A.1, A.1.1, A.1.2, and so on) can be part of one WBS Summary activity whose WBS code is A. At a lower level, all activities whose WBS codes start with A.1 (A.1.1, A.1.2, and so on) can be part of a WBS Summary activity whose WBS code is A.1.

CBS Code (Editable)

The CBS code to which you want to link an activity, assignment, or expense. This is and editable field and can also be updated using import CSV.

Performance % Complete

The percentage of the activity, or project, planned work that is currently complete. The Performance % Complete is used to calculate earned value (EV). It can be based on the activity percent complete, on the 0/100 rule, on the 50/50 rule, depending on the technique for computing earned-value percent complete for the activity's CBS.

Actual Start

If work has started, the date work on the activity, CBS, project, or EPS began. If resources (labor, non-labor, or material) or roles are assigned to the activity, the actual start date is the earliest among all the resource or role assignments. For a CBS, project, or EPS, the actual start date is the earliest actual start date among all activities within the CBS, project, or EPS. When P6 or Oracle Primavera Cloud is integrated with Unifier, the Actual Start date might have been imported from Unifier rather than calculated by P6 or Oracle Primavera Cloud.

Actual Finish

The date on which the item, such as an activity, assignment, or project, is complete. When P6 or Oracle Primavera Cloud is integrated with Unifier, the Actual Finish date might have been imported from Unifier rather than calculated by P6 or Oracle Primavera Cloud.

Planned Duration

The expected amount of time required to complete an activity. The planned working time is calculated in P6 or Oracle Primavera Cloud using the activity's calendar. The duration is measured from the activity's planned start date to its planned finish date.

Actual Duration

The total working time from the activity Actual Start date to the Actual Finish date for completed activities, or the total working time from the Actual Start date to the data date for in-progress activities. The actual working time is computed using the activity's calendar.

Remaining Duration

The total working time from the activity remaining start date to the remaining finish date. The remaining working time is calculated using the activity calendar. Before the activity is started, the remaining duration is the same as the planned duration. After the activity is completed the remaining duration is zero.

At Completion Duration

The total working time from the activity's current start date to the current finish date. The current start date is the planned start date until the activity is started, and then it is the actual start date. The current finish date is the activity planned finish date while the activity is not started, the remaining finish date while the activity is in progress, and the actual finish date after the activity is completed. The total working time is calculated using the activity's calendar.

Activity Attributes (Units)

Planned Total Units

The planned units of work for the activity.

Actual Total Units

The exact number of units that have been expended on the selected activity.

Remaining Total Units

The remaining units of work to be performed by the resource on the activity. Calculated as Planned Units minus Actual Units.

At Completion Total Units

The sum of the actual units and remaining units for the resource assignment on the activity. Calculated as Actual Units plus Remaining Units.

Activity Attributes (Cost)

Planned Total Cost

The expected total cost of the activity, consolidating costs of all assignments.

Actual Total Cost

The actual non-overtime plus overtime cost for all the resource assignments of the activity.

Remaining Total Cost

The remaining cost of all the resource assignments for the activity.

At Completion Total Cost

The sum of the actual costs plus remaining costs for the resource assignment on the activity. Calculated as Actual Costs plus Remaining Costs.

Activity Attributes (Earned Value)

Planned Value

The portion of the baseline total cost of the activity or project that is scheduled to be completed as of the project data date.

Earned Value

The portion of the project baseline total cost of an activity or all activities in the project that are actually completed as of the project data date. Budget at completion is calculated from the project baseline. Calculated as Budget At Completion multiplied by Performance Percent Complete. The method for computing performance percent complete depends on the Earned Value technique selected for the activity CS.

Estimate to Complete

The estimated cost to complete the activity, CBS, or project. Calculated as Remaining Total Cost for the activity or the Performance Factor multiplied by (Budget At Completion minus Earned Value), depending on the Earned Value technique selected for the activity CBS (calculated from the primary baseline). Budget at completion is calculated from the project baseline.

Schedule Performance Index

A measure of the work accomplished as a percentage of the work scheduled. Schedule Performance Index indicates whether you are meeting earned and planned values within your schedule. A value less than 1 indicates that less work was performed than was scheduled. Calculated as Earned Value divided by Planned Value.

Cost Performance Index

A measure of the value of work accomplished as a percentage of the actual costs. Cost Performance Index (CPI) indicates whether you have spent money over the budget to date. On the My Preferences page, you can set performance thresholds for CPI calculated values to determine whether you need to take corrective action. Calculated as Earned Value Cost divided by Actual Cost. A value less than 1 indicates that the actual cost has exceeded the planned value.

Cost Schedule Index

Product of Schedule Performance Index & Cost Schedule Index

Schedule Variance

The measure of schedule performance on a project. A negative value indicates that less work was actually performed than was scheduled. Calculated as Earned Value minus Planned Value.

Cost Variance

A measure of cost performance on an activity, CBS, or project. A negative value indicates that the actual cost has exceeded the planned value. Calculated as Earned Value minus Actual Cost.

Complete Performance Index

The ratio of the remaining work to the remaining funds. Calculated as (Budget at Completion minus Earned Value) divided by (Estimate at Completion minus Actual Units or Cost).

Estimate at Completion

The expected total cost of a schedule activity, a work breakdown structure component, or the project when the defined scope of work will be completed. Calculated as Actual Cost plus Estimate to Complete Cost. The method for calculating estimate to complete depends on the earned value technique selected for the activity CBS.

Budget at Completion

The planned total cost through activity or project completion. Calculated as Planned Labor Cost plus Planned Nonlabor Cost plus Planned Expense Cost plus Planned Material Cost.

Variance at Completion

The difference between the baseline total cost and the current estimate of total cost. A negative value indicates an estimated cost overrun. Budget At Completion is calculated from the current baseline. Calculated as Budget At Completion minus Estimate At Completion.

System Activity Sheet Log Gear Menu Options

In the log, click an activity and then click the *gear menu (* ⚙) to access the following options:

- **Apply CBS Code to All Assignments**

  To assign the **CBS Code** to all the resources under that activity. After the **CBS Code** is updated at the activity level, you can assign same **CBS Code** to all the resource assignments of the activity by right-clicking the activity and selecting the option **Apply CBS Code to all Assignments**. This selection causes all the assigned resources **CBS Code** to be updated.

  After you assign or update the **CBS Code**, both at the activity level and the assignment level, the system updates the contents of the **Audit Log** tab.

  You can select multiple activities and update the **CBS Code** to the resources of the selected activities by right-clicking and selecting the option **Assign CBS Code to All Assignments**.

  Use the **Assign CBS Code to All Assignments** to apply the **CBS Code** value to the resource assignments. When you select the **Assign CBS Code to All Assignments**, the CBS codes for the selected activities will be added to resource assignments.

- **View Activity Spread**

  To go to the Activity Spread tab (right pane), click the *gear menu* and select **View Activity Spread** to open the **Activity Spread** tab. You can select your options from the following fields to display the results on the **Activity Spread** window:

  - **Frequency**
  - **Cost Type**

> **Note**: When you assign resources or roles that have multiple rates to an activity sheet, to update the total cost (Total Cost value), you must reschedule, or recost, the activity sheet; otherwise, the system will assign earliest assigned resources or roles rates (price/unit) to the activity sheet, and you will not be able to view the correct accumulated cost.

System Activity Sheet Log Properties Tabs

In the log, you can view the activity details by selecting a row and clicking the split screen icon to open the right panel and see the details of the activity in the following tabs:

- **General** tab
- **Assignment** tab
- **Activity Spread** tab
- **Audit** tab

These tabs are explained in the following topics.

General Tab

Contains all the details related to the activity sheet, which are defined in activity attribute form including the **WBS Details**. The data elements and the order of the data elements, shown in the **General** tab, are based on the activity attribute form. The hidden data elements are not shown in the **General** tab. You can dock this pane to the right side of the screen. If you dock the pane at bottom, or right side, manually, the system retains your choice after closing the **Activity Sheet** window. You can expand the bottom pane by using the expand icon on the right side.

The **General** tab displays the attributes for the selected activity in groups:

- WBS Attributes
- Activity Attributes (General)
- Activity Attributes (Schedule)
- Activity Attributes (Units)
- Activity Attributes (Cost)
- Activity Attributes (Earned Value)

Actual Dates

- An activity progress <uuu_P6PercentComplete> will be editable after the <uuu_P6ActualStart> has been entered, or the <uuu_P6ActivityStatus> has changed to 'In Progress'. If <uuu_P6ActualStart> has been entered, the uuu_P6ActivityStatus will be changed from 'Not Started' to 'In Progress' and conversely, automatically.
- When <uuu_P6ActivityStatus> has changed from ' In Progress' to 'Completed' the <uuu_P6ActualFinish> will be populated with current date and conversely.
- When <uuu_P6ActivityStatus> has changed from ' Not Started' to 'Completed' the <uuu_P6ActualStart> and <uuu_P6ActualFinish> will be populated with current date.
- Actual Start Date <uuu_P6ActualStart> cannot be entered in future date (cannot be different from the current date).
- Actual Finish Date <uuu_P6ActualFinish> cannot be entered in future date (cannot be different from the current date).

Assignment Tab

Use this tab to view the resources and roles assigned to the activity selected in the main grid.

The *gear menu* (⚙) options in the **Assignments** tab vary depending on the project type.

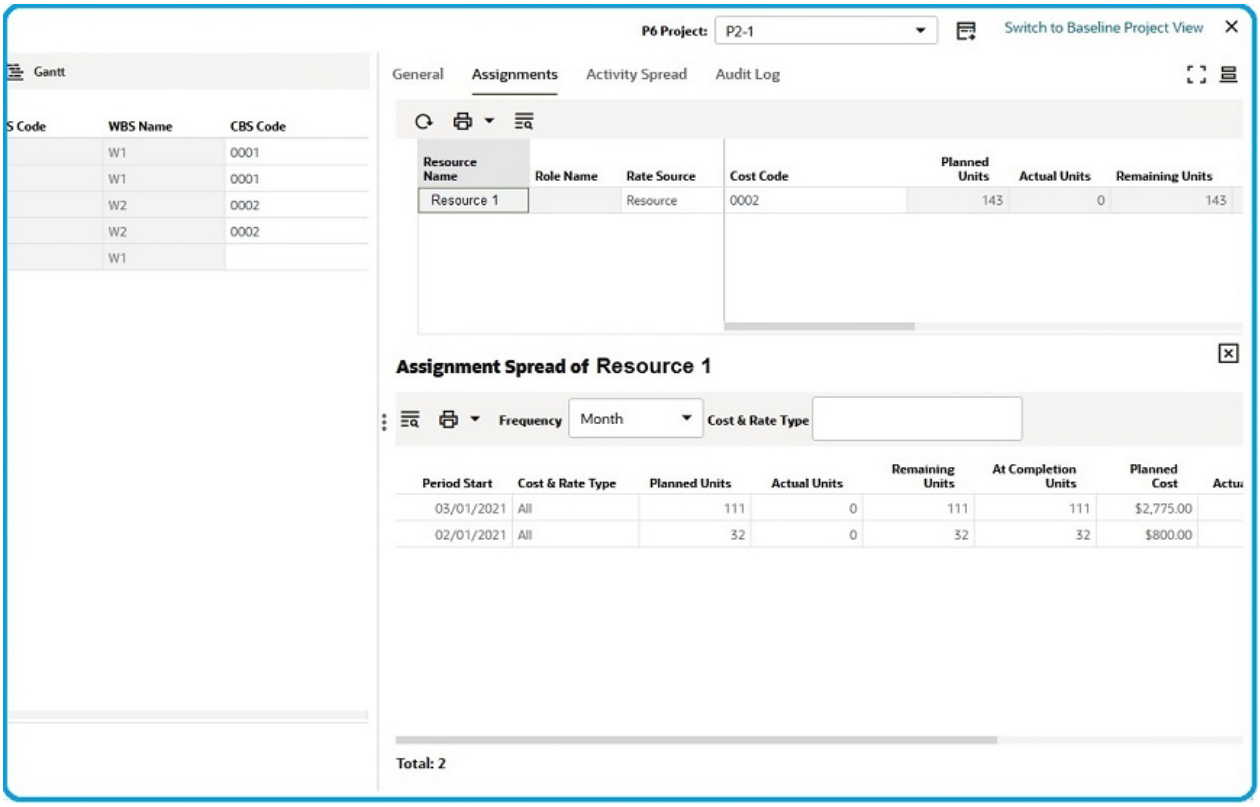
There is only one option for *Cost-loaded* and *Schedule-based projects*:

- **View Assignment Spread**

The following options are available for the *Resource-loaded projects*:

- **View Assignment Spread**
- **Assign CBS**
- **Assign Rate Source**

Click a resource row, click *gear menu* for that row, and select **View Assignment Spread**. This option (for any selected resource) displays the spread data for that resource, in a split screen "Assignment Spread of ..." at the bottom, as shown.



You can view the daily spread data of the resource. The **Frequency** drop-down field and the **Cost & Rate Type** field will show additional options to select.

- In the **Frequency** list, change the granularity level of the spread to Week, Month, or Year.
- In the **Cost & Rate Type** list, select Cost or Units. Column headings change accordingly.

The "**Assignment Spread of ...**" pane also displays spread details, such as **Period Start**, **Panned Units**, and so forth in columns.

All the resources associated with the activity are displayed. Both the **CBS Code** and the **Rate Source** columns are editable. By default, the picker icon is not displayed until you click the cell of the columns.

- **Resource Name**
- **Role Name**
- **Rate Source**

You can double-click in the **Resource Source** cell and select one of the following rate sources:

- **Resource**

  In the case of the resource.
- **Role**

  For the roles.

- **Override**

  You can edit the price or unit for planning and actuals if the value for the Rate Source is selected as: **Override**.
- **Cost Code**

  You can edit the value of the **CBS Code** field for a particular resource and assign the same **CBS Code** field value to other resources by dragging the CBS Code to multiple rows.
- **Planned Units**
- **Actual Units**
- **Remaining Units**
- **At Completion Units**
- **Price/Unit (Planning)**
- **Price/Unit (Actuals)**
- **Planned Cost**
- **Actual Cost**
- **Remaining Cost**
- **At Completion Cost**

The **Cancel** and **Save** options appear when you attempt to edit the **Rate Source** value, or the **CBS Code**, or other fields based on the **Rate Source** in the **Assignments** tab. If you try to navigate to an activity sheet without saving the tab information, the system notifies you.

Activity Spread Tab

Enables you to select the values for:

- **Frequency**

  The Frequency drop-down field enables you to select the frequency of the spread in:
  - **Day**
  - **Week**
  - **Month**
  - **Year**
- **Cost & Rate Type**

  Enables you to select:
  - **All Cost Types |Direct**
  - **All Cost Types |Indirect**
  - **Standard |All Rate Types**

You can view the activity spread data by using the *gear menu* (⚙) option (**View Activity Spread**) or by navigating to the **Activity Spread** tab.

In **Activity Spread** tab, you can see the spread data of the selected activity.

The **Activity Spread** tab will show all the data (both for costs and for units) in one spread sheet. The costs and units spread data appears on one single sheet. You can expand the screen to view more spread data. The order of the columns in the **Activity Spread** tab are as follows:

- **Period Start**

- **Cost & Rate Type**
- **Planned Total Units**
- **Actual Total Units**
- **Remaining Total Units**
- **At Completion Total Units**
- **Planned Total Cost**
- **Actual Total Cost**
- **Remaining Total Cost**
- **At Completion Total Cost**

You can view the spread data for each activity by navigating to different activities under the spread column.

> **Note**: Only one activity spread data is displayed. If you select multiple activity rows, the system displays: "**Details of multiple activities cannot be viewed.**"

Audit Log Tab

The following information will be captured in the Audit Log tab:

- **Date**
- **Event**
- **Action**
- **Field Name**
- **Old Value**
- **New Value**
- **User Name**
- **Proxy User**

CSV Import and Audit Log

For the existing activities, the Audit Log tab displays the entries for the fields that have been updated by way of CSV import as follows:

- **Date**

  Populated with date and time for the event.
- **Event**

  The value is "Import," in the case of adding or updating the activity.
- **Action**

  For the new activities, the value is populated with, "Create." For the existing activities, the value is populated with, "Update."
- **Field Name**

  Populated with the field that was updated.
- **Old Value**

Populated with the existing value in case of an update.

- **New Value**

  Populated with the new value.

> **Note**: If a new activity is created by way of the CSV import, the Audit Log provides an entry.

Activity Sheet User Defined Report (UDR)

You can create User-Defined Reports (UDRs) from the data present in your activity sheet.

The **Create User-defined Report** window lets you define the following fields for your UDR (template or individual reports):

- **Data Type**
- **Element**
- **Report Type**
  - **Tabular**
  - **Cross Tab**
  - **Summary**
  - **Alert**
- **Access Type**

> **Note**: The same fields will be available for system and permission-based data sources.

The elements (Currency/Decimal) in the OOTB Activity Sheet, along with any user-defined column, will be available as DEs for your report.

> **Note**: Only the data elements available in the Activity Sheet will be available in the respective UDR.

Data for reports can be imported to Unifier from the CSV file. You can import data for Date Field, only (if it is in the same format as in the Unifier client). In cases where the client is using mm/dd/yyyy, you have to create custom settings in the CSV file.

In Excel, add the new custom formats as follows:

1) Right-click the applicable cell and select **Format Cells**.
2) On the **Number** tab, select the **Custom** category, and specify a **mm/dd/yyyy** format.

Roll Up Activity Sheet to Cost Sheet

The **Column Properties** window enables you to select your cost sheets.

The **Type** field enables you to select the following:

- Worksheet
- Activity Sheet

The **Name/ID** field displays the name of the worksheet that you have selected; otherwise, this field displays the Activity Sheet, using the following naming conventions:

- Activity Sheet 01 (Activity) - for Activity Sheet with ID 01
- Activity Sheet 01 (Resource)

If there is no data or sheet for that ID, Unifier displays an error message when you click **OK**, after making the selection, and the value will be zero in the Cost Sheet for that column.

The **Column** field enables you to select the currency and decimal fields from the Activity Sheet that are available to be rolled up into the Cost Sheet as a column.

Assignments

- uuu_P6PlannedCost (Planned Cost - cost)
- uuu_P6ActualCost (Actual Cost - cost)
- uuu_P6AtCompletionCost (At Completion Cost - cost)
- uuu_P6RemainingCost (Remaining Cost - cost)
- uuu_P6PlannedUnits (Planned Units- Units)
- uuu_P6ActualUnits (Actual Units- Units)
- uuu_P6AtCompletionUnit (At Completion Units- Units)
- uuu_P6RemainingUnits (Remaining Units- Units)

Activity

- uuu_P6PlannedTotalCost (Planned Total Cost - cost)
- uuu_P6ActualTotalCost (Actual Total Cost - cost)
- uuu_P6AtCompletionTotalCost (At Completion Total Cost - cost)
- uuu_P6RemainingTotalCost (Remaining Total Cost - cost)
- uuu_P6PlannedTotalUnits (Planned Units - units)
- uuu_P6ActualTotalUnits (Actual Units - units)
- uuu_P6AtCompletionTotalUnits (At Completion Units - units)
- uuu_P6RemainingTotalUnits (Remaining Units - units)

> **Note**: The decimal type Data Element (DE) is available in the cost formula.

The **Column Name** field, in the **Cell Details** window, displays the DE field label in the respective Activity Sheet.

> **Note**: You can have from 1 to 100 predefined cost DEs created in the Cost Sheet.

Roll Up of Earned Value Analysis Sheet Columns to Cost Sheet

You can roll up the EV analysis sheet columns (created on a manual activity sheet) to the cost sheet, similar to the EV analysis sheets that were created through the System Activity Sheet. All the existing options for an EV analysis sheet column in the cost sheet (columns, data format, and so on) will be available for EV analysis sheet that was created using a manual activity sheet. The EV analysis sheet column for a manual activity sheet is identified by using the Template ID, similar to the System Activity Sheet.

Roll Up of Earned Value Analysis Sheet Columns to WBS Sheet

You can roll up the EV analysis sheet columns (created on a manual activity sheet) to the WBS sheet, similar to the EV analysis sheets that were created through the System Activity Sheet. All the existing options for an EV analysis sheet column in the WBS sheet (columns, data format, and so on) will be available for EV analysis sheet that was created using a manual activity sheet. The EV analysis sheet column for a manual activity sheet is identified by using the template ID, similar to the System Activity Sheet.

Supported Objects for P6 XML Import (System Activity Sheet)

The following table lists the supported objects when you are importing a P6 XML file to create a project schedule.

The activity sheet selected will have the project schedule start date updated from the source, if there are activities with the start date earlier than the project schedule start date. In this case, the earliest start date will be the project schedule start date. If the project schedule start date is set to begin from the project start date defined in shell attributes, in the case of activities earlier than schedule start date, Unifier displays an error message.

Business Objects	Description	Unifier
Project Information (Project)	This is the highest level of information related to the project schedule.	With the import of P6 XML, the following project properties will be added to the activity sheet properties: Project Schedule Start Date, Calendar (if exists in Unifier; otherwise, the default project/shell calendar will be used), and Data Date.
Activity (Elements under Activity)	This is the parent node to all child business objects connected to any activity.	The import process will map non-complex type child elements from the Activity to Unifier Activity data elements.
Relationship (Elements	The <Relationship> element exists directly under the	The import process will only look at predecessor and

Business Objects	Description	Unifier
under Relationship)	project. It stores predecessor and successor relationships between activities. It also supports relationships between activities from different projects.	successor relationships between activities in the same project.
WBS (Elements under WBS)	The WBS element wraps one or more activities. WBS elements can itself contain other WBS elements.	The import process will map all WBS Summaries from source to Unifier WBS data elements in WBS Sheet.
Assignment (Elements under Assignment)	The <Assignment> element is a child of <Activity>.	The import process will import all assignments for each task. Assignment properties will be imported based upon data mapping.
Resources/Roles (Elements under Resource/Role tags)	The resources assigned to the activities under assignments tab.	The import process will map all resources/roles from source to Unifier resources/role in Master Rate Sheet. If not available then new resources will be created.

Rate Sheet Node

There are two types of rate sheets:

- **Master Rate Sheet** (company level)
- Rate Sheet (shell level)

> **Note**: No calculations are needed for a cost loaded schedule. The Earned Value Analysis module directly uses the data imported from P6.

A **Rate Sheet** is a subset of the **Master Rate Sheet** in a shell. You can create one or more rate sheets to assign rates to all or selected projects in the Activity Sheet of a shell. The rate sheets retrieve the resources and roles from the activity sheet of that shell and attain the corresponding rates from the **Master Rate Sheet**.

> **Note**: By default, the rates present in the **Master Rate Sheet** are used across all the resources and roles present in the activity sheets across all shells unless you assign a shell-level rate sheet to the **Activity Sheet** in that shell.

A rate sheet provides the rates for the roles and resources assigned to activities of resource loaded schedules. This is required to perform costing and subsequent earned value analysis in Unifier. You can have multiple rate sheets. These rate sheets are listed in the **Rate Sheets** node log.

The **Rate Sheet** (at Project/Shell) log does not show any record at the shell level. The first time that you use the **Rate Sheet**, you have to create a subset of the **Master Rate Sheet** by clicking the **Create** option. The **Create** option can be used subsequently to create a rate sheet directly from **Master Rate Sheet**.

You can define the rate breakdowns manually by using a formula to establish rates based on other cost types. When you edit the cell Price/Unit, you can click the formula icon to open the formula window. When you select the formula, Unifier displays the formula builder. The left pane displays the rate breakdowns defined for the rate that you have selected. You can select more than one breakdown and add a formula.

The **Rate Sheet** node log contains a list of rate sheets listed in the **Rate Sheets** log.

You have the following options for a rate sheet at shell level (in the **Rate Sheet**):

- **Create**

  If you click **Create**, the system creates a rate sheet, with the required activity sheet as the list of *roles* and *resources*, and gets the corresponding rates from the **Master Rate Sheet**, automatically.
- **Copy**

  You can select a rate sheet from the log at shell level (**Rate Sheet**) and click **Copy**. In this scenario, the system does not check the *roles* and *resources* list in activity sheet and just creates a copy of the rate sheet selected with user entered name through a window.

> **Note**: To view **Rate Sheet**, you must have appropriate permissions.

There are some minor differences in the log layout for rate sheet between **Master Rate Sheet** (at **Company Workspace**) and **Rate Sheet** (at Project/Shell).

Rate Sheets Node Log

To access the **Rate Sheets** log:

1) Go to the project shell tab and switch to **User** mode.
2) In the left Navigator, select **Activity Manager**, and then select **Rate Sheet**.

> **Note**: The location may differ in your implementation based on the

Project/Shell **User Mode Navigator** configuration.

You can use the **Rate Sheets** log to:

- See a list of rate sheets.
- Review the following information (on the right pane of the log) about a selected activity sheet:
  - **Audit Log**
  - **Permissions**
  - **Schedule**

The **Rate Sheets** log has the following toolbar options:

Toolbar option	Description
Create	To create a new rate sheet by copying a data from Company Workspace and Activity Sheet.
Refresh	To refresh the contents of the page.
Delete	To delete an item
Find on Page	To find an item on the page.

The **Rate Sheets** log has the following columns:

Column	Description
Name	The name of the rate sheet entered in the Create Rate Sheet dialog.
Description	The description for the rate sheet entered in the Create Rate Sheet dialog.
Last updated	The date the sheet was last updated manually or through Refresh.
Created By	The name of the user who created the rate sheet.

The **Rate Sheets** log lists the rate sheets and each rate sheet row has menu options that you can access by way of the *gear menu* (⚙). The following table explains the *gear menu* options for each rate sheet:

Option	Description
Open	To open a rate sheet. **Note**: You can also double-click to open the sheet.

Option	Description
Copy	To select a rate sheet and create a copy of that rate sheet. Enter a name and description and then click **Save** to complete the action.
Delete	To delete one or multiple rate sheets. **Note**: The **Delete** option in the toolbar allows you to delete multiple rate sheets simultaneously. If a rate sheet is being used in the **Activity Sheet**, it cannot be deleted.
Refresh	To refresh a rate sheet based on *resources and roles* that are used in the system activity sheet of the shell. Select a single or multiple rate sheets and click Refresh to update the list of resources and roles based on the latest data available in the **Activity Sheet**, and the corresponding rates from the **Master Rate Sheet**. When the **Confirmation** message appears, click **Yes**. On refresh, the following updates are implemented: ▸ If a resource/role has been removed in the **Activity Sheet** in the shell, the role/resource and corresponding rates are removed from the rate sheet. ▸ If a resource/role has been added to the **Activity Sheet** in the shell, the new role/resource is added to the rate sheet and its corresponding rates are retrieved from the **Master Rate Sheet**. ▸ If the resource/role exists in both **Activity Sheet** and the rate sheet, the system updates the resource/role name, if applicable (using resource or role ID as the identifier).

Option	Description
Export CSV	Use the options to export Role or Resource Rate Breakdown as CSV. This comprises the list retrieved from the shell Activity Sheet. The structure includes ID, name, status, effective date, cost type, rate type, and price/unit information. ▸ **Export Role Rate Breakdown:** To export role rates data. ▸ **Export Resource Rate Breakdown:** To export resource rates data.
Update Data	Use the options to import the modified Role or Resource Rates CSV files to update role and resource rates. ▸ **Import Role Rate Breakdown:** To update the role rates using an imported CSV and making changes to the data from **Export CSV (Export Role Rates)**. ▸ **Import Resource Rate Breakdown:** To update the resource rates using an imported CSV and making changes to the data from **Export CSV (Export Resource Rates)**.

The **Rate Sheets** log displays the rate sheet properties on the right pane within the following tabs:

Tab	Description
Audit Log tab	To provide the following information: ▸ Date ▸ Event ▸ Action ▸ Field Name ▸ Old Value ▸ New Value ▸ User Name ▸ Proxy User
Permissions tab	To provide information about: ▸ Selected Users/Groups ▸ Permissions
Schedule tab	To set Frequency for Refresh Rates.

> **Note:** To improve the view of the tab details, click the expand icon in the right pane.

The following explains each tab in detail.

Rate Sheets Log Tabs

The following explains the tabs in the **Rate Sheets** log:

Audit Log

The **Audit Log** tab tracks all the events of the rate sheet and the component roles and resources.

Permissions

Use the **Permissions** tab to add users and groups and assign permissions for the specific rate sheet:

- Modify Permission

  Users who have this permission will be able to modify the setup.
- Edit & Refresh
- View

The creator of the rate sheet is assigned all permissions by default.

Schedule

You can use the **Schedule** tab to set a frequency for automatic refresh of rates in the rate sheet at daily, weekly, monthly, or quarterly intervals between the specified start and end dates.

Creating a Rate Sheet

The **Create** option on the **Rate Sheets** log enables you to manually create a rate sheet and retrieve resources and roles information from the **Activity Sheet** and the corresponding rates from the **Master Rate Sheet**.

You can create multiple rate sheets as per business needs. For example, you can create an Internal Rate Sheet to apply internal rates for the resources and roles in the project. If they work on client sites, create another called External Rate Sheet. Other examples can include an Overtime and Standard rate sheets. Use the same rate sheet across the individual projects in the **Activity Sheet** or apply different rate sheets to the individual projects.

> **Note**: Creating rate sheets is optional.

To create a Rate Sheet:

1) From the toolbar, click **Create** to open the **Create Rate Sheet** window.
2) Enter a name in the required **Name** field.
3) Optionally, add a description.
4) Click **Create**. (Click **Cancel** to exit the Create Rate Sheet dialog.)

The new rate sheet appears in the **Rate Sheets** log.

Rate Sheet Window

To access the Rate Sheet:

1) Go to the project/shell tab and switch to **User** mode.
2) In the left Navigator, select **Activity Manager**, and then select **Rate Sheet** to access the **Rate Sheets** log.

The log lists the rate sheets. Each rate sheet has a *gear menu* (⚙) that can be used to open the rate sheet; you can also double-click a rate sheet to open it.

The rate sheet log has the following toolbar options:

- **View**
- **Print**
- **Refresh**
- **Find on Page**
- **Expand All Groups**, or **Collapse All Groups**

The **View** toolbar option (the **Resource** view as is the default view) enables you to view the attributes of the rate sheet derived from the activity sheet. From the **View** toolbar option, use the **Resource** or **Role** option to switch between **Resource** or **Role** views respectively. The main log, or grid, and the **Rates** tab layout are identical in the two views.

In the main log, or grid, you can see the following columns:

- ID
- Name
- Type (not available for the **Role** view)
- Status
- Currency

Select any item to view and the **Rates** tab displays the details.

Rates

In the **Rates** tab, there are two columns:

- Effective Date
- Price/Unit

Information is retrieved from the **Master Rate Sheet**. You can create multiple rate instances for a resource/role for different effective dates. The **Cancel** and **Save** options appear when you make a change.

From the *gear menu* (⚙) of a rate, click **Add** to add a row above it. Complete the **Effective Date** and **Price/Unit** fields. Click **Save** to save changes.

> **Note**: The effective date and rates entered in the tab are not overwritten on refresh. Clicking Refresh in the Rate Sheets log pulls any additional resources and roles from the Activity Sheet.

On the **Rates** tab, you can click the **Create** option to open the Create Rate Breakdown window. The Create Rate Breakdown window has the following columns:

- **Cost Type**

  To select the cost type corresponding to the rate which is being created for the role or resource.
- **Rate Type**

  To select the type of rate which is being created for the role/resource.
- **Price/Unit**

  To provide a price or unit by way of selecting from the drop-down field Manual (Price/Unit) from the method. This can be done manually or by using the Formula Builder (click the calculator icon in the Price/Unite cell).

WBS Sheet Node

To access the **WBS Sheet** node log:

1) Go to the project/shell tab and switch to **User** mode.
2) In the left Navigator, select **Activity Manager**, and then select **WBS Sheet**.

> **Note**: The location may differ in your implementation based on the Project/Shell **User Mode Navigator** configuration.

You can use a **System WBS Sheet** and:

- Define the work breakdown structure (WBS) for the entire project, by using CSV import. The System WBS Sheet is used across all the manual activity sheets.
- View the rolled-up costs (such as planned total costs/units, actual total costs/units, at completion total costs/units, and remaining costs) associated to the WBS codes in the System WBS Sheet.
- Define custom attributes for additional formulas (such as CPI, SPI calculations, and so forth).
- Capture the actuals incurred from the business processes, by using WBS pickers.
- Filter WBS data based on the Used By column.
- View planned, actual, remaining, and at completion costs and units from all activity sheets into default columns.

You can create the **System WBS Sheet** rows manually, by:

- Using Add Child and Add Sibling option.
- Using CSV import and RESTful services.

You can use the **System WBS Sheet** log (the name of the **WBS Sheet** sub-node log) window to:

- See the list and properties of a WBS sheet.

- Access a WBS sheet.

The **System WBS Sheet** log is divided into two panes:

- Grid or table (left)
- **Properties** tab (right)

The **WBS Sheet** node log displays the only available WBS sheet, the **System WBS Sheet**. In the **System WBS Sheet** log, or page, you can click a WBS item and use the three vertical dots icon ( ) to expand the screen and see the properties of the item, if necessary.

> **Note**: The EVM data sources are displayed in the WBS Sheet columns for customers with access to the EVM feature.

The Work Breakdown Structure (WBS) code assignment is applicable only to the manual activity sheet. The Cost Breakdown Structure (CBS) code assignment is applicable to both the manual and the **System Activity Sheet**.

You can use a System WBS Sheet and:

- Export WBS template
- Import WBS codes using CSV
- Create WBS structure using RESTful services
- Set the Used By Column and filter data
- Define columns using numeric logical source and select multiple Activity Sheets
- Default columns to show costs and units from all the custom Activity Sheets

A System WBS Sheet grid contains information about:

- WBS Code
- WBS Name
- Linked Record
- ETC Technique
- Planned Units
- Planned Total Cost
- Actual Units
- Actual Total Cost
- Remaining Units
- Remaining Total Cost
- At Completion Units
- At Completion Total Cost
- Planned Units
- Planned Total Cost
- Actual Units
- Actual Total Cost
- Remaining Units
- Remaining Total Cost
- At Completion Units

- At Completion Total Cost

System WBS Sheet Log Toolbar options

The following explains the **System WBS Sheet** log toolbar options:

Add Column ( )

Enables you to create a new column by providing values for the following required fields:

- Name
- Type
- Datasource
- Data Format
- Display Mode
- Total
- Column Position

View, which includes **Default**, **Create New View**, and **Manage Views**

Enables you to change the view of the WBS Sheet window. You can use these options to access created views, create new views, or manage the existing views.

Edit View

Enables you to select which columns to be displayed or remain hidden, apply filters, group and sort by available fields, and save custom views.

- In the **Columns** tab, add/remove/reorder columns in the default view. You can save as a custom view.
- In the **Filter** tab, add conditions to filter the results of a column.
- In the **Group By** tab, create or modify groups using column elements. For example, activity status.
- In the **Sort By** tab, define the sorting order (Ascending or Descending) of columns.

Print, which includes **Print**, **Export To CSV**, and **Export To Excel**

Enables you to print or export the **System WBS Sheet** contents.

Notes:

- For export to Microsoft Excel, the system currently supports only Euro (EUR) and United States Dollar (USD) currency symbols.
- If you export data from a business process (BP) record, sheet (such as an Activity Sheet), or log (such as Company Funding Sheet Log) to Excel, be aware that depending on how your negative values are formatted, you might need to configure your columns in Excel to match the correct data type (Number). Otherwise, the columns will not be treated as numeric and will not sum as expected. One supported format includes placing the negative sign between the currency symbol and the amount (for example, $-1,000).

Refresh

Enables you to see the added values to the columns of the **System WBS Sheet**.

Find on Page

Enables you to search a for a **System WBS Sheet** on the worksheet (window).

Expand All Groups or **Collapse All Groups**

Enables you to expand or collapse a **System WBS Sheet** to see the subordinates. The tree-like structure displays the summarized WBS and corresponding values of the project selected in the Projects list. You can export the WBS structure from the sheet.

Menu Options (☰)

Enables you to do the following:

Import

Enables you to import **Column Details**.

The **Column Name** drop-down list in the **Import Column Details** window displays all the direct cell entry columns that have been added to the sheet. You can select any one column and import the values into the column, using the exported CSV file.

Export

Enables you to export **WBS Details**, **Column Details** or **Summary WBS Sheet**. When you select **Summary WBS Sheet**, the exported file will contain the entire System WBS Sheet information including all WBS Codes and columns data.

Columns

Enables you to hide or unhide (**Unhide**) columns as well as **Copy Column Data**.

Row Coloring

Enables you to apply **Multiple Colors** or **Single Color** to the columns.

Variance Analysis Setup

Enables you to set up the variance analysis by selecting the BP, workflow, record owner, and trigger conditions.

Create Variance Analysis Record

Enables you to create the variance analysis records for all the WBS Codes in the sheet. Before creating a Variance Analysis Record, you must set up the Variance Analysis at WBS level. Ensure that the business process that you select is active; otherwise, the system displays this message: "Business Process has not been selected."

Audit Log

Enables you to open the **Audit-Log: System WBS Sheet** window and see a list of associated events related to the sheet.

System WBS Sheet Log Columns

The following columns appear in the **System WBS Sheet** log:

- **Sequence No.**
- **WBS Code**
- **WBS Name**
- **ETC Technique**

- **Planned Units**
- **Planned Total Cost**
- **Actual Units**
- **Actual Total Cost**
- **Remaining Units**
- **Remaining Total Cost**
- **At Completion Units**
- **At Completion Total Cost**

The values for the following columns are coming from P6 directly:

> **Note**: The **General** tab of each WBS code will not display these columns. In addition, formula values that depend on these columns will not display.

- **Planned Units**
- **Planned Total Cost**
- **Actual Units**
- **Actual Total Cost**
- **Remaining Units**
- **Remaining Total Cost**
- **At Completion Units**
- **At Completion Total Cost**

When you right-click each column heading, depending on which column on the grid, some or all of the following options will be made available:

Lock after this Column

To lock or release the position of a column on the grid.

Insert

To insert a column through:

- **Business Process Data Source**
- **Direct Cell Entry**
- **From EVA Sheet**
- **From Activity Sheet**
- **WBS Custom Attributes**
- **Formula**
- **Hidden**

Hide this Column

To hide the column that you had selected.

Delete

To delete a column.

Properties

To open the **Column Properties** window and review or change (with limitations) the properties of a column.

When you hover over each column heading, the system displays information about that column.

System WBS Sheet Log WBS Gear Menu

When you click a row (WBS code) in the **System WBS Sheet** log, you can click the *gear menu* (⚙) to:

- **Create Variance Analysis Record**

  Available if you have **Edit** permission for the **System WBS Sheet**.

  Enables you to create the variance analysis records for all the WBS Codes in the sheet. Before creating a Variance Analysis Record, you must set up the Variance Analysis at WBS level. Ensure that the business process that you select is active; otherwise, the system displays this message: "Business Process has not been selected."
- **Expand Row**
- **Collapse Row**

System WBS Sheet Log Properties Tabs

The following explains the properties tabs of the **System WBS Sheet** log:

On the right pane, you have the option to use the icons (on the right) to expand the pane or to dock the pane.

The following is a list of applicable properties tabs for each item in the System WBS Sheet log:

> **Note**: Users who have at least the view permission for the auto-created record should be able to view the record by double-clicking.

- **WBS Line Items** tab

  Displays the title, description, and amount, or quantity, of the WBS Line Items.
- **Cell Details** tab

  Displays the following information:
  - **WBS Code**
  - **Currency**
  - **WBS Name**
  - **Cell Total Quantity**
  - **Column Name**
  - **Status**
- **General** tab

  Displays details about the WBS Attribute Form such as the CM WBS name, code, and WBS type, ETC Technique, and EVM PV.
- **Earned Value** tab

Enables you to select a technique for computing the Estimate to Complete (ETC).

- **Variance Analysis** tab

  Enables you to access information about the BP setup, workflow, and record owner. The tab also enables you to see the trigger conditions. Once finished adding values, click **Create Now**, or click **Save** to keep your changes.

  This tab displays the following information:

  Setup block

  Business Process

  You can select the Business Process at WBS Code level similar to the Variance Analysis Setup done at WBS Sheet. The drop-down menu lists of all project/shell-level BPs, enabling you to select a new value or modify the existing value.

  Bypass Initiation Step during auto creation

  If you select this option, the auto-created BP record will bypass the initiation step and land on the second step of the workflow.

  Select Workflow

  You can select a workflow if your selected BP has multiple workflows. The Select Workflow field function is similar to the Variance Analysis Setup window.

  Record Owner

  You can select the record owner at WBS level. This field lists all the OBS Pickers, User Pickers, and User Data Pickers added to the WBS Attribute form. When you select the OBS Picker as the record owner, the picker in general tab displays the OBS users that you had selected.

  Trigger Conditions block

  Multiple trigger conditions can be defined for each WBS level. Adding trigger conditions is similar to adding at WBS Sheet level setup. You can add one or more additional conditions to indicate trigger condition of the current WBS. The Data Element, Condition, and Value must be specified exactly the same way as specified in the Variance Analysis setup at WBS Sheet level.

  The **Create Now** option is enabled after you select the required fields on the tab. Use the **Create Now** option to auto-create the business process record manually if a BP is present in the setup. If the record owner is not specified, the system uses the auto-creator in the destination BP (auto-creation tab) as the record owner.

  > **Note**: Any trigger conditions defined are ignored in case you select the **Create Now** option.

- **Linked Records** tab

  Enables you to access the records that are linked the sheet by listing all the linked records and details about each link such as record number, BP name, and so forth.

  For a WBS code, the **Linked Record** column indicates whether there are any associated auto-created records for the WBS code. When you click the link, the right pane opens, with **Linked Records** tab highlighted.

  The **Linked Record** column can be empty if no auto-creation of variance analysis record has been triggered.

All the auto-created records are shown in the Linked Records tab for each WBS code.

The following explains the toolbar options:

- **Refresh**: To refresh the items based on the latest records.
- **Find on Page**: To enable you to conduct a text-based search for each column.

The following explains the columns:

- **Record Number**: System auto-created business process record number.
- **BP Name**: The name of the Business process.
- **Title**: the title value from the business process record.
- **Status**: The current status of the auto-created record, including the terminated records.
- **Created By**: The username of the user who is creator of the auto-created record.
- **Creation Date**: The date that the record is auto-created.

- **Variance Analysis History** tab

  Enables you to access history details for associated actions related to the sheet.

  When a variance analysis record auto-creation fails, when you hover over the link cell, the following message is will be displays: "<failure reason>. Click to see history details." When you click, the right pane displays the history details. Here are some of the failure reasons:

  - Business Process is not configured.
  - Record owner does not have create permissions.
  - Record owner is not active.
  - Trigger conditions are not satisfied.

  If the rotate icon is displayed instead of the link icon, the auto-creation of the record is still in progress. The link icon is displayed after the auto-creation is complete.

  This tab captures the list of failed auto-creation for each WBS code, in case business process is inactive or trigger conditions have not been met, and so on. The following is a list of the columns in this tab:

  - **Event**: Displays, "Error" for failed auto-creations.
  - **Action**: Displays, "Auto Create."
  - **Field Name**: This will be WBS code where the auto creation failure occurs.
  - **New Value**: Displays the error text.

Creating a WBS Sheet

When an activity sheet is created, Unifier creates the WBS sheet, automatically.

About Auto-Creation

A BP record can be created automatically or manually from the WBS sheet. A new BP record can be created for any WBS, and the BP record will be permanently linked to the WBS. A WBS can be linked to one and only one BP record at a time.

In a Project, if any of the WBS Codes (the WBS Codes with line item data removed from P6) have line item data, the system dismisses the data and sets the WBS Status (uuu_cmwbs_Status) as inactive.

Note: In the scenario above, you will notice a discrepancy between P6

and Unifier.

When you attempt to create new line items, or records, in CBS- or WBS-type BP, the WBS Picker will not display inactive WBS Codes.

In the EVM Sheet, the WBS Picker displays the all the WBS Codes, regardless of the status. This is so you can see the actuals for the WBS Code that you select.

Manual WBS Sheet

WBS Sheets Log

A default **WBS Sheets** log, where there is no **System WBS Sheet**, contains the **Create** option, if you have the "**Create**" permission, which enables you to create a manual WBS Sheet.

If you do not have the "**Create**" permission for manual WBS Sheet, the **Create** option will not be available. If the **System WBS Sheet** has been created, the embedded sheet will be seen (with project drop-down) by default showing the current project name. You can navigate to the other source project data (received from P6) by using the project drop-down.

When a manual WBS Sheet has been created, the **WBS Sheets** log displays the sheet title as: **Project WBS Sheet**. The **Project** drop-down (on the top section) displays the current project as the selected project. This **Project** drop-down will be seen all the time, and the value defaults to the current shell name for the **Project WBS Sheet**.

You can select another source (project) in the **Project** drop-down. The **Project** drop-down will show the source if there is WBS data integrated from P6 or Oracle Primavera Cloud. The **Project** drop-down will show the projects received from source (P6 or Oracle Primavera Cloud). When you select a P6 project the WBS data that is related to the selected project will be displayed.

In addition to other options (explained in the previous topics), the toolbar within the WBS Sheets log displays the following options:

- **Add Sibling**
- **Add Child**

The above options are available when the current project, for example **Project WBS Sheet**, is displayed. If you navigate to a P6 or Oracle Primavera Cloud project, the above options will not be available.

The remaining options in the toolbar will be the same as seen for the WBS data received from a P6 or Oracle Primavera Cloud project.

The Project WBS Sheet view has the default project row with:

- The project/shell number as WBS Code.
- The project/shell name as WBS Name.

The default project row is a read-only row in the sheet.

When you add a parent WBS Code, by using the **Add Sibling** option, a new WBS row will be created with required fields such as WBS Code and WBS Name.

It is only after the creation of a new WBS row that the **Cancel** and **Save** options become available. You cannot save your entry until the required fields are entered.

The condition above applies when you select the **Add Child** option.

Menu

Menu Option (☰) contains the following options and sub-options:

- **Import**

  You can import the WBS codes by using a CSV file. The CSV import works similar to the import of CBS codes in the Cost Sheet. When you select the current project, the following options are available:

  - **WBS Details**

    To create WBS codes along with hierarchy, using CSV file.

    You can import the WBS Details in bulk by means of CSV import. This option, if you select the current project in the project drop-down, enables you to:

    - Add new WBS hierarchy and WBS codes.

    - Update ETC technique (see below for more information) and other attributes for an existing WBS hierarchy.

    When you import new WBS codes, using CSV file, Unifier checks for duplicate WBS codes. Your import will fail if:

    - You have modified an existing WBS hierarchy in the CSV file.

    - You have removed an existing WBS hierarchy, or WBS Code, in the CSV file.

    When you import the WBS codes successfully, the new WBS codes will be appended to the existing codes in the activity sheet. The audit log (**Audit Log**) entry for the creation of the WBS code, using CSV import will be:

    - Date: The date and time of the event that has occurred.

    - Event: WBS Details

    - Action: Import

    - Old Value: Not applicable.

    - New Value: Not applicable.

  - **Column Details**

- **Export**

  You can export the WBS codes by using a CSV file. When you select the current project, the following options are available:

  - **WBS Details**

    To export the existing WBS rows in the Project WBS Sheet.

    All the columns that are seen in the WBS Sheet will be exported as column headers, in the CSV file.

    The entire WBS path will be seen in the first column, for the WBS Code. All the existing WBS codes will be exported to add new WBS codes at the end, by appending the new WBS codes along with the hierarchy in the CSV file. You cannot remove the existing WBS rows in the CSV file. Always new WBS Codes will be added using CSV file. You cannot remove the existing WBS rows in the CSV file. New WBS codes will be added using CSV file, always.

  - **Column Details**

The following columns will be required and shown as required in the exported CSV file (the first two columns of the CSV file):

WBS Code

WBS Name

- **Summary WBS Sheet**

- **Columns**
- **Row Coloring**
- **Variance Analysis Setup**
  - **Create Variance Analysis Record**
- **Earned Value Setup**

  This option will be seen in the **Project WBS Sheet** in addition to the options available for the **System WBS Sheet**. This option allows you to set an ETC technique (see below for more details) that can be used in ETC calculations that will be performed at the WBS level. The technique selected here will be applied to all the WBS Codes in the sheet. The technique will override the individual WBS Code ETC technique selected, if one exists.
- **Properties**

  This option will be seen in the **Project WBS Sheet** in addition to the options available for the **System WBS Sheet**. This option will show the **Project WBS Sheet** default properties.
- **Audit Log**

  This option will be seen in the **Project WBS Sheet** in addition to the options available for the **System WBS Sheet**. There are no changes to the events that get audited in System WBS Sheet. For Project WBS Sheet audit log will capture the creation, update, and removal of WBS Codes in the Sheet. Besides any updates done manually in the Sheet will be audited. The details of audit log in Project WBS Sheet are explained in further section.

The current project log, for example **Project WBS Sheet**, contains the following columns:

Column	Description
Row number	This is a read-only column. This column does not have a header. When you enter a new row, delete a row, or reorder rows, the row numbers will get updated throughout the grid. You can use this column to capture errors in the grid. For example, if you miss entering data in a required field, or when validation fails, the cell for the corresponding row displays a red triangle. You can click the triangle to see the errors in a box, similar to a business process line item grid.

Column	Description
WBS Code (uuu_cm_wbscode)	This is an editable column and required when a new row is created by using the Add Sibling or Add Child options. The WBS Code value is unique across the hierarchy. The system notifies you if you enter a duplicate WBS Code by way of an error message. The value of the WBS Code cannot contain dots (.) because dots are used as separators in the WBS Path. Also, when creating or updating WBS codes in a sheet, ensure that the value of WBS codes within a CSV file (CSV import) or REST service do not include any dots. If the system detects dots in the value of the WBS Code, the following message is displayed: Invalid data entered in the following field(s).
WBS Name (uuu_cm_wbsname)	This is an editable column and required when a new row is created by using the Add Sibling or Add Child options. The WBS Code value is unique across the hierarchy.
Linked Records	This is a read-only column. This column is populated with the linked record associated to the WBS Code. The system populates the icon of the WBS Code that has the variance analysis record created.
Other columns	The other columns appear as defined in the column properties. The fixed columns will be seen along with the user-defined columns. If you do not define any user-defined columns, all the fixed columns will be seen by default.

You can drag the child WBS codes to another location, below any parent. The WBS Codes cannot be dragged to any row beyond the parent or hierarchy. You cannot drag a parent WBS Code.

Gear menu (⚙):

The *gear menu* is not available if you select multiple WBS rows (parent and child rows).

- **Add Sibling**
  To add a sibling to the row.

- **Add Child**

  To add a child to the row.
- **Copy**

  You can copy one or more WBS rows at the same level. This option is not available if the selected rows are in a hierarchy. This option is only available when you select multiple WBS child rows.
- **Paste**

  This option becomes available if you have copied a row. Use this option to paste the copied rows in the desired location, in the sheet. This option is only available when you select multiple WBS child rows.
- **Remove**

  This option becomes available if the WBS row is not associated to any activity sheet, or there are no costs allocated. This option is not available if at least one WBS row is associated to an activity sheet or has rolled up cost. This option is only available when you select multiple WBS child rows.

Rows Added to WBS Sheet

The WBS Sheet, with the WBS rows added, will be seen on the left side of the log. When a WBS Code is associated to the manual activities, the activity sheet name will be populated in the **Used By** column field, displayed in the WBS Details in the right pane. The **Used By** column field is a read-only field and displays all the activity sheets that this WBS Code is associated with. The **Used By** column field will be available in the **General** tab only, for the **Project WBS Sheet**. It is shown as a first field in the tab.

The WBS rows that are associated with an activity sheet cannot be removed. You can edit, or enter the data, in the editable columns in the sheet (the Cancel and Save options will become available at this stage). The WBS Picker (in the cost business process) will show the current projects WBS that are associated with the activity sheet along with the source projects WBS codes. You can create transactions against the WBS codes of the current project.

Earned Value at Project Level

You can set up the earned value at project level. Under **Menu Options** (☰), use the **Earned Value Setup** option to open the **Earned Value** window and select an ETC technique that can be applied to all the WBS codes. The selected ETC technique overrides the existing ETC technique defined at the WBS Code level.

In the **Earned Value** window, you can select the technique for computing estimate to complete (ETC). By default, the **ETC = Remaining Cost of activity** option is selected. When you select **ETC = PF * (Budget at Completion - Earned Value)**, ETC is equal to a performance factor (PF) multiplied by (Budget at Completion minus Earned Value), you can select one of the following to set a value for the performance factor:

- **PF = 1**

  Performance Factor equals 1. This method yields an optimistic result with ETC equal to the Budget At Completion (BAC) minus Earned Value Cost. This is the default option selected.
- **Performance Factor = 1 / Cost Performance Index**

Performance Factor equals 1 divided by the Cost Performance Index (CPI), where CPI equals the Earned Value Cost divided by Actual Cost.

- **PF = 1 / (Cost Performance Index * Schedule Performance Index)**

  Performance Factor equals 1 divided by the Cost Performance Index multiplied by the Schedule Performance Index (the Earned Value Cost divided by the Planned Value Cost).

- **PF =** <select a value>

  Performance Factor is specified by you. If you select this option, you must enter a value (factor) in the field.

After you select an option and save your selection, the system displays the following message: **The selected ETC technique will be applied to all WBS Codes in the Sheet. Do you want to continue?** If you select to continue, then:

- The selected ETC technique will be applied to all WBS Codes.
- The audit log (**Audit Log)** of the WBS Code displays an entry of the ETC technique update.

If you select not to continue, the selected ETC technique will not be applied to any WBS Code.

Earned Value Setup at WBS Level

For the WBS level, in the **Project WBS Sheet** log (bottom portion of the log), you can click the **Earned Value** tab to see the options for selecting a technique for computing the estimate to complete (ETC). The **Earned Value** tab is available for both the summary level and leaf level WBS codes. After you select a technique, for the summary level WBS codes, you can apply the ETC technique to all child WBS codes (**Apply the ETC Technique to all child WBS Codes**).

WBS Path Behavior in WBS Sheet

The **General** tab (in the **Project WBS Sheet** log (bottom portion of the log) contains a data element (uuu_P6WBSPath) that shows the WBS Path.

Example

Project1
W1
W2
Activity 1

For the WBS W2, the WBS Path will be displayed as Project1 > W1 > W2 so that any activity created using W2 (as WBS Code) will show WBS Path as Project1 > W1 > W2, using the auto-populate definition.

WBS Sheet Properties Window

You can use **Menu Options** (☰) in the **Project WBS Sheet** or **System WBS Sheet** to access the **Properties**.

When a manual WBS Sheet is created (through the **Create** option in the log), the system creates the following properties, automatically:

- **Name**

The name of the WBS sheet. For example, Project WBS Sheet. This field can be 100 characters long.

- **Description**

  The description of the WBS sheet. This field can be 4000 characters long.

- **Last Modified**

  This is a read-only field. The date the WBS sheet is created or updated.

- **Created By**

  This is a read-only field. The signed in user who created the WBS sheet (using the Create option).

Project WBS Sheet (Audit Log)

You can the **Menu Options** (☰) to access the **System WBS Sheet** and **Project WBS Sheet** audit log (**Audit Log**). The audit log captures the details for all the manual WBS sheets (including their attributes) that have been created, updated, and removed. The audit log entries for the events such as manual creation or update of the **WBS Codes** and **Earned Value Setup** will be as follows, and all the events are audited similar to the **System WBS Sheet**:

Attribute Update Reason	Date	Event	Action	Field	Old Value	New Value
WBS Code create	Date and time event occurred	Project WBS Sheet	Create	<WBS Code>	Not applicable	<New Value>
Fields in WBS attributes updates either from sheet or from form view	Date and time event occurred	Project WBS Sheet	Update	<WBS Code> > <Field Name>	<Old value>	<New Value>
WBS Sheet level setups	Date and time event occurred	Earned Value Setup	Create	Project WBS Sheet > Earned Value Setup > All WBS Codes	Not applicable	<New Value>
WBS Sheet level setups updates	Date and time event occurred	Earned Value Setup	Update	Project WBS Sheet > Earned Value	<Old Value>	<New Value>

Attribute Update Reason	Date	Event	Action	Field	Old Value	New Value
				Setup > All WBS Codes		
Rearrange of WBS Codes will be audited	Date and time event occurred	Rearrange	Cut, Copy, and Paste	<WBS Code>	<old location>	<new location>

Adding Columns to a WBS Sheet

You can add WBS custom attributes to a WBS sheet, as columns. The **WBS Sheet** window toolbar Menu Options icon (☰) enables you to add columns to the **WBS Sheet**.

> **Note**: By default, all the predefined columns that are in hidden block in the WBS Attribute Form will display when you open the WBS sheet.

The following explains how to add a column by way of creating a new column or copying an existing column.

To add a new column:

1) From the toolbar, click **Add Column** to open the **New Column** window.
2) Enter or select values in the following required fields:
   - **Name**
   - **Type**
   - **Datasource**
   - **Data Format**
   - **Display Mode**
   - **Total**
   - **Column Position**

   The following fields are optional and enable you to customize you newly added column:
   - **Data Format**
   - **Display Mode**
   - **Total**
3) Click **Save**, or **Save & Add New** to continue.

The following explains the required fields:

Name

The name of the column that you want to add. The value in this field is pre-populated according to the selected **Datasource**; however, you can override the pre-populated value.

Type

This field has the following options:

- **Business Process Data Source**: When you select this option, all the data elements, based on SYS BP Decimal Amount and SYS BP Currency Amount which are added on the WBS Attributes Form, are displayed in the **Datasource** drop-down list. Select this option if want to pull the roll up information for the new WBS (Type-cost BP). The **Datasource** drop-down list will be displayed followed by the Formula creator option which enables you to create the query for the column. When you select the Formula Picker, the Formula creator window displays the list of new Cost-type BPs with different statuses where you can select BPs to see the roll-up amount.
- **Direct Cell Entry**: When you select this option, all the data elements, based on SYS Numeric and Date logical data sources, are displayed. You can define manual entry column by using the logical sources. You can copy the data in the **Direct Cell Entry** field and paste it into other manual entry column.
- **From EVA Sheet**: When you select this option, all the data elements, based on SYS Numeric logical data sources as data sources, are displayed. Select this option if you need to populate data into WBS sheet from an EVA sheet. When you select the logical data source, you can select the sheet name and available DEs, per selected sheet, are displayed as columns to add.
- **From Activity Sheet**: Select this option if you need to populate data in to the WBS Sheet column from an Activity Sheet. When you select this option:
  - All the data elements are displayed in the **Datasource** field (based on SYS Numeric logical data sources and SYS Date logical sources).
  - The logical data source, you can select the sheet name and available DEs, per selected sheet, are displayed as columns to add.
  - When you select the SYS Date logical data source, all of the date columns (like Planned Start, Planned Finish, and so on) from the Activity Sheet will be available to pick.
- **WBS Custom Attributes**: When you select this option, all of the custom attributes that are added in WBS Attributes Form are displayed.
- **Formula**: When you select this option, all of the data elements are displayed in the **Datasource** field (based on SYS Numeric, SYS Date logical data sources, and SYS Integer Amount). If you select **Formula** as the type, the **Datasource** field displays the following:
  - A list of all of the SYS Numeric and SYS Date logical source data elements that allow formula-type entry. The logical source data elements that already have been used to create a column will not be listed.
  - A formula creator window (**Formula Creation Window**) that you can use to create the formula for the column. The formula window shows the list of all numeric columns that can be created as formula.

Datasource

The drop-down list displays a list of all SYS Numeric and SYS Date logical source data elements which allow the formula-type entry. The sources that have been used to create a column will not display in the list. The **Datasource** drop-down list will be displayed followed by the Formula creator option which enables you to create the formula for the column. The Formula window shows all of the list numeric columns (all Numeric Columns) that can be created as formula.

Data Format

The data format options are:

- **Currency**
- **Decimal**

The **Data Format** option is available only when SYS Numeric logical source **Datasource** is selected, and by default the **Currency** must be selected. There are no data format for Date- and String-type data elements.

If you select the SYS BP Currency Amount data element, the default option will be **Currency**.

If you select the SYS BP Decimal Amount data element, the default option will be **Decimal**.

When you select **Decimal**, and proceed to choose a number, the system displays the choice of decimal places (values are zero to eight).

Summary Rows

Within the formula columns, in the WBS Sheet, you can select the type of summary rows that you want to display. The options under the **Summary Rows** block enable you to display the roll-up value from children (**Sum of All Rows**), or to display the formula value (**Use Formula Definition**). Your options are:

- **Blank**
- **Sum of All Rows**
- **Use Formula Definition**

Display Mode

The display mode options are:

- **Show**
- **Hide**

Total

The total options are:

Blank

- Sum of All Rows
- Use Formula Definition: This option is available for a formula column.

Column Position After

To position the newly added column.

- If you choose a column in the Cost sheet and then select to add a column, the **Column Position After** drop-down will be pre-populated according to the name of the selected column in the WBS sheet.

- If you select no column and then select to add a column, the **Column Position After** drop-down will be pre-populated according to the name of the last column in the WBS sheet.

To add a new column by way of copying an existing column:

1. From the toolbar, click **Menu Options** (☰).
2. Click **Columns**.
3. Click **Copy Column Data** to open the **Copy Column Data** window.
4. Select values in the following fields:
   - **Copy from Column** (required)
   - **Percentage**
   - **Past to Column** (required)
5. Click **Save** to continue.

The following explains the fields:

Copy from Column (required)

Displays all the existing manual-entry or formula-based numeric columns for you to select.

Percentage

To enter the percentage value. The value must be greater than zero and less than or equal to 100.

Paste to Column (required)

Displays all the existing manual-entry numeric columns for you to select.

If you right-click the **Direct Cell Entry** of a numeric column, you can hide, lock, copy (the column data), paste (the column data) into, delete, or see the properties of that column. The **Copy Column Data** option is available only for:

- Direct Cell Entry columns
- Custom elements that have been added as columns

The **Copy from Column** field will be pre-populated with the name of the selected column; however, you can change the source to any other source.

If you right-click the column header, you can see some or all of the following options:

- **Insert**
- **Hide this Column**
- **Lock after this Column**
- **Delete**
- **Properties**

Entering WBS Code into a System WBS Sheet

Additional ways to enter the WBS code into a System WBS Sheet are by using import CSV or REST services.

> **Note**: The REST service data corresponds to the columns in the CSV template.

You can import bulk WBS codes by way of CSV. When you use a CSV template to import data:

The value for the **ETC Technique** required field, in the CSV template, is the remaining cost for the activity, by default, if you do not enter any other values.

The values, or codes, for the allowed **ETC Technique** are:

1 = Remaining cost for the activity

2 = 1*(BAC-EV)

3 = 1/(CPI)*(BAC-EV)

4 = (1/CPI*SPI)*(BAC-EV)

5 = Performance Factor * (BAC-EV)

For a WBS, you can enter "Yes" as the value for the **Apply ETC Technique to Child WBS** field to use the same **ETC Technique** value to the child WBS.

The default value for the **WBS Status** is **Active**.

After you finish preparing the CSV template, you can save the file and proceed to import the CSV file into the System WBS Sheet. To import:

1) Open the **System WBS Sheet**.
2) Click **Menu Options**, click **Import**, and click **WBS Details**.
3) Navigate to the location of the CSV file, select it, click **Open**, and confirm the import. You can see that the values are added in the columns (WBS Codes, WBS Name, and so forth).

Editing the Default Values of the Columns

In the **System WBS Sheet** log, you can edit the default values of the columns (Planned Units, Actual Units, and so forth).

1) Click the column header to select it.
2) Right-click and click **Properties**.
3) Proceed to update the fields in the **Column Properties** pop-up window. You can change the default columns structure in the **Column Properties** window.

Roll-up Value

In the **System WBS Sheet** log, you can add columns and conduct a roll-up value for the added column, either by using all manual activity sheets or a single activity sheet.

When you add a new column, you can select the (right-click in the **Sheet Name** field of the **New Column** window) **All Manual Activity Sheets** option to get the data (roll-up) from all the activity sheets, and not just one. You can only do the roll-up from activity sheets with an **Active** status.

Auto-Creating Variance Analysis BP Records

The **WBS Sheet** window toolbar menu drop-down enables you to set up the variance analysis. Click the toolbar menu drop-down icon and click the **Variance Analysis Setup** option. Use this option to set up the auto-creation of business processes for all the WBS Codes. The option enables you to open the **Variance Analysis Setup** window and select the following elements to be able to create the variance analysis record:

- *Business Process*

  The **Business Process** field enables you to select the business process (BP) record that must be auto-created. You can select from a list of all BPs that are active in the current project/shell, one BP at a time.
- *Initiation step*

  Selecting the **Bypass Initiation Step during auto creation** option enables you to create workflow BP records by passing I-Step during auto-creation and land on the second step of the workflow. In case of a non-workflow BP, an auto-created record will be in submitted mode.
- *Workflow*

  The **Select Workflow** field is available when multiple workflow schemas are available for the BP that you have selected. If the selected BP is a Non-Workflow BP, the **Workflow** field will be disabled.
- *Record Owner*
- *You can see the User Pickers, OBS Pickers, or User Data Pickers that have been added in the WBS form.*
- *Trigger Conditions*

  You can add one or more conditions to determine the trigger condition of the WBS. For example, the WBS Type can be CA. After you select the trigger condition, click the plus icon (+) to see an empty row in trigger conditions. A trigger condition is not required to save the variance analysis setup. The **Trigger Conditions** block lists the following information:

  - Data Element
  - Condition
  - Value
  - Message
- *Schedule*

  Under the **Schedule** block (scroll down on the **Variance Analysis Setup** window) you can schedule auto-creation of the BP record and set frequency.

  Range of Recurrence

  You can determine a range for auto-creation to reoccur.

Create Variance Analysis Record

> **Note**: Before creating a Variance Analysis Record you must set up the variance analysis (**Variance Analysis Setup**).

When you click the **Create Variance Analysis Record** option you trigger the auto-creation of the BP that you have selected during the variance analysis setup for all the WBS Codes.

Viewing a WBS Sheet

You can use the **View** option to access created views, create new views, or manage the existing views.

- **Default**
- **Create New View**
- **Manage Views**

You can click the three vertical dots on the left side of the window or the three horizontal dots at the bottom of the window (or) to expand the window and see the properties of any selected **WBS Code**.

The **Default** view provides a view similar to the BP log view, Cost Sheet log view, or other logs with the Standard View option.

To create a new view for the WBS Sheet worksheet window, click **Create New View**, then:

Use the **Save View** As field to name your new view. If you save a new view without selecting any columns, a new view is created with the **WBS Code** and **WBS Name** columns.

Use the following tabs for adding columns, filtering, grouping, and sorting:

- **Columns** tab
- **Filters** tab
- **Group By** tab
- **Sort By** tab

The **Available Columns** box displays all user-defined columns that you may need for your newly created view, including the **Linked Record**. The **Selected Columns** box displays all the columns that you select. You can move columns in and out of the **Selected Columns** box.

> **Note**: By default, the system includes the **WBS Code** and **WBS Name** columns in the **Selected Columns** box; therefore, these two options are not listed in the Available Columns box.

Use the following fields to set the position of the new view:

- **Left Lock after Column**

  Displays a list of all columns, except the last column from the selected columns list. By default, the "None" option is selected, which means that you have chosen no column to be locked, from the left of the sheet.

- **Right Lock after Column**

  The default value is "None," which means that you can select not to right-lock the column in the view. Other values in this field are based on the value that you have selected in the **Left Lock after Column**.

The **Filters** tab enables you to filter the rows by WBS Sheet column data, or by WBS Attributes. For WBS Sheets, there are two sections in this tab: WBS Attributes and Sheet Columns.

The **Search Parameters** block displays all the DEs from the WBS Attribute form that are added in uDesigner (this includes elements from WBS Attribute form that are added as columns). The list also includes the fixed 8 columns that will be seen in WBS Sheet.

When a filter is applied, the view shows all the WBS rows that match the filter criteria, with their Summary Codes.

Additional check box for filtering rows with Linked BP records is also available (WBS Codes with Linked BP Records). When you select this option, when filtering, only the WBS Codes that have linked records will be filtered.

The **Group By** tab has two columns:

- **Group By**

  Displays all the attributes that are added in the WBS form, which includes all the custom DEs. By default, "None" is selected, and you can select any field to set the Group By. All columns include linked records column.
- **Order**

  By default, the **Ascending Order** is selected, but you can select to show the contents of the column in **Descending Order**, when groups are displayed.

The **Sort By** tab has two columns:

- **Sort By**

  Displays all the columns that are added in the WBS Sheet. By default, "None" is selected, you can select any field and set **Sort By**.
- **Order**

  By default, the **Ascending Order** is selected, but you can select to show the contents of the column in **Descending Order**, for the data to be displayed in selected **Sort By** column.

To manage the view for the WBS Sheet worksheet window, click **Manage Views**, and select which of the available views (under the **View Name** block) you want to become visible to the user. The **Cancel** and **Save** options let you cancel your changes (no changes will be saved and window gets closed) or save any changes that you have made and close the window.

The **Edit View** option enables you to change the view of your WBS Sheet window. The function of the **Edit View** option is identical to **Create New View**.

WBS Sheet with User-Selected View

When you select a user-defined view in the WBS Sheet worksheet window, you will notice the following changes:

Toolbar options:

From the toolbar, the **Add Column** option is not available, but the following options are available:

- **Edit View**
- **Print**
- **Refresh**
- **Find on Page**
- **Collapse All Groups**
- **Expand All Groups**

Menu options (☰):

- **Row Coloring (Multiple Colors, Single Color)**
- **Variance Analysis Setup**

The row coloring changed in the view will be temporary.

Gear menu (⚙)*:*

The *gear menu* options available for each *WBS Code* enable you to expand or collapse the component.

The *gear menu* options available for each *WBS Code component* enable you to **Create Variance Analysis Record** in addition to expanding or collapsing the component.

Column menu options and cell properties:

The column menu actions are not available when you right-click the column header.

When you click in a cell, the right pane opens with the following editable tabs:

- **General** tab
- **Variance Analysis** tab
- **Linked Records** tab
- **Variance Analysis History** tab

You can use:

- The **Expand** icon to expand the right pane.
- The **Doc Bottom** icon to move the right pane under the WBS Sheet worksheet.

Drag and Drop columns option:

You can drag and drop columns to different locations on the WBS Sheet worksheet. When you do so, the user-defined view name (name is shown in the **View** field of the toolbar) will get the prefix: **(Modified)**.

Edit View toolbar option:

Use the **Edit View** toolbar option to modify the user-defined view. You can modify the list of available columns, apply filters, change grouping, or change sorting.

In the **Group By** tab, you have the option of grouping based on appropriate rows grouped within, in the view. After you set the first option for Group By, you can use the *gear menu* (⚙) to add the second option. The header of each group, with its appropriate rows, appears as an additional column before the WBS Code Column. After you set the Group By to the view, the group summary row displays the summary value based on the group by column **Properties** followed by **Total** option. The summary, sum of all rows, formula definition will be blank.

The data seen in the user-defined view will be based on the filters selected in the view.

For the numeric columns, the filter total will be shown along with the column total.

WBS Sheet views when you switch between P6 Projects

After applying a user-defined view, if you switch to another P6 Project, the data will be filtered based on the selected view. Also, when drag and drop a column in a user-defined view, the view name will be prefixed with: **(Modified)**. In this case, if you switch to a different P6 Project, still the **(Modified)** view name is displayed until you close the WBS Sheet. Position of the columns and sort order of the columns remain as is, when you shift between different P6 projects, for a user-defined view.

OBS Sheet Node

An Organization Breakdown Structure (OBS) sheet contains the following information:

- Full Name
- Short Name
- Unifier User
- Title
- Department
- Status
- WBS Name
- Contract No
- Weekly Capacity

The **OBS Sheet** node log displays the only available OBS sheet.

OBS Sheet Node Log

To access the OBS Sheet log:

1) Go to the project/shell tab and switch to **User** mode.
2) In the left Navigator, select **Activity Manager**, and then select **OBS Sheet**.

> **Note**: The location may differ in your implementation based on the Project/Shell **User Mode Navigator** configuration.

You can use the **OBS Sheet** log to:

- See the list of OBS sheets with corresponding general information.
- Access an OBS sheet.

The **OBS Sheet** log is divided into two panes:

- Grid or table (left)
- **General** tab (right)
- **Audit Log** tab (right)

When you click an OBS sheet on the grid, the **General** tab display the details about the OBS sheet. The **Audit Log** tab displays a list of events with details. In the **General** tab, the **Name** field will be editable if the OBS sheet is not used anywhere. The **Description** field will always be available for changes. If you have **View** and **Modify** permissions, you can export the **Audit Log** into a CSV file. A CSV export contains all the fields in the OBS sheet.

Accessing an OBS Sheet

To open an OBS sheet form the **OBS Sheet** log:

1) From the **OBS Sheet** log, click a row.
2) Click to open the *gear menu* (⚙).
3) Click **Open** to open the **OBS Sheet** log.

The **OBS Sheet** log has the following toolbar options:

- **Add Sibling**
  Enables you to select a record and add an associated member.
- **Add Child**
  Enables you to select a sibling and add an associated member.
- **Actions**
  Enables you to import or export data.
- **Find on Page**
  Enables you to search for an OBS sheet on the log.
- **Expand All Groups** or **Collapse All Groups**
  Enables you to expand or collapse an OBS sheet to see the subordinates. The tree- like structure displays the summarized OBS and corresponding values of the project selected in the Projects list. You can export the OBS structure from the sheet.

The **OBS Sheet** log displays the following required information about each OBS sheet:

- Full Name
- Short Name
- Status

The **OBS Sheet** log displays optional information about each OBS sheet such as:

- Unifier User
- Title
- Department
- WBS Name
- Contract No
- Weekly Capacity

You can click the **X** icon to close the OBS sheet, exit the **OBS Sheet** log, and return to the **OBS Sheet** log (in the left Navigator, select **Activity Manager**, and then select **OBS Sheet**).

Additional information

OBS structure can also be generated through CSV import. Template can be exported using the Export Data.

OBS Picker

The OBS picker will be available for assigning an OBS to WBS Sheet. The OBS Picker will display only the OBS records with Active status.

Note: The OBS picker supports both "And" and "Or" query conditions.

Creating an OBS Sheet

When there are no OBS sheet available, you can go to the **OBS Sheet** log and create one.

Note: After an OBS sheet is created, the **Create** option will no longer be available because a shell can only have one OBS sheet.

To create an OBS sheet, when there are none:

1) Go to the project/shell tab and switch to **User** mode.
2) In the left Navigator, select **Activity Manager**, and then select **OBS Sheet**.
3) From the toolbar, click **Create** and select one of the following options:
   - **New**

     To open the **Create OBS Sheet** window and complete the fields required for creating a new OBS sheet.

     When finished, click **Create**.
   - **From Template**

     To open the **Templates** window and select the required template for creating a new OBS sheet.

     When finished, click **Select**.
   - **From Project**

     To open the **Projects** window and select the required project for creating a new OBS sheet. You can only select one project.

     When finished, click **Select**.
4) Click **Save** to complete creating an OBS sheet.

About Unifier and Oracle Integration

You can use integrations from Oracle Integration to update:

- Manual Activity Sheets from Oracle Primavera Cloud
- System Activity Sheets from Oracle Primavera Cloud
- Master Rate Sheet from Oracle Primavera Cloud

Updating Manual Activity Sheets Using Oracle Integration

You can create custom integrations in Oracle Integration and then invoke these in Unifier to get data in activity sheets and/or send data from activity sheets.

Prerequisites

- The project/shell is configured to integrate with Oracle Integration.
- In the **Integration** node of the **Company Workspace**, the **Enable Integration** field is set to **Yes** in the **Connect** tab of the **Oracle Integration Cloud** window.

- An Oracle Integration configuration is setup with one or more integrations for manual activity sheets.
- Ensure that you have the necessary integration permissions.

Contact your Company Administrator if any of the above prerequisites are not enabled.

Procedure

To update data in manual activity sheets by using integrations from Oracle Integration:

1) Go to the project/shell tab and switch to **User** mode.
2) In the left Navigator, select **Activity Manager** and select the **Activity Sheets** node.
3) In the right pane of the **Activity Sheets** select a manual activity sheet that is set up to use the integration from Oracle Integration.
4) To get data into the manual activity sheet, click **Get data into Activity Sheet**.
   a. In the **Get Data** dialog box:
      1. Select any of the following options to get data:
         - Select **All Projects** to get data from all projects.
         - Enter a project ID to get data from a specific project.
      2. In the **Type** field, select **Baseline**.
      3. Perform any of the following actions:
         - Click **OK** to initiate the integration from Oracle Integration and bring the data into the manual activity sheet.
         - Click **Cancel** to discontinue.
5) To send data into the manual activity sheet, click **Send data from Activity Sheet**.
   a. In the **Send Data** dialog box:
      1. Select any of the following options to get data:
         - Select **All Projects** to send activity data from all projects.
         - Enter a project ID to send data from a specific project.
      2. In the **Type** field, select **Baseline**.
      3. Perform any of the following actions:
         - Click **OK** to initiate the integration from Oracle Integration and send data from the manual activity sheet.
         - Click **Cancel** to discontinue.
6) In the **History** tab of the manual activity sheet, review the job status.

Updating System Activity Sheets Using Oracle Integration

You can create custom integrations in Oracle Integration and then invoke these in Unifier to get data into System activity sheets and/or send data from System activity sheets.

Prerequisites

- The project/shell is configured to integrate with Oracle Integration.
- In the **Integration** node of the **Company Workspace**, the **Enable Integration** field is set to **Yes** in the **Connect** tab of the **Oracle Integration Cloud** window.

- An Oracle Primavera Cloud **Project ID** and **Primavera Cloud Workspace ID** is associated with the project/shell. For more information, see the *Unifier General Administration Guide.*
- The System activity sheet is set up with relevant integrations from Oracle Integration to get and/or send data into/from the activity sheet.
- Ensure that you have the necessary integration permissions.

Contact your Company Administrator if the above prerequisites are not set up or enabled.

Procedure

To update data in System activity sheets using integrations from Oracle Integration:

1) Go to the project/shell tab and switch to **User** mode.
2) In the left Navigator, select the **Activity Manager** and select the **Activity Sheets** node.
3) In the right pane of the **Activity Sheets** select a system activity sheet that is set up to use an integration from Oracle Integration.
4) To get data into the activity sheet, click **Get data into Activity Sheet**.
   a. In the **Get Data** dialog box:
      1. Select any of the following options to get data:
         - Select **All Projects** to get data from all projects.
         - Enter a project ID to get data from a specific project.
      2. In the **Type** field, select **Baseline**.
      3. Perform any of the following actions:
         - Click **OK** to initiate the integration from Oracle Integration and bring the data into the system activity sheet.
         - Click **Cancel** to discontinue.
5) To send data from the activity sheet, click **Send data from Activity Sheet**.
   a. In the **Send Data** dialog box:
      1. Select any of the following options to get data:
         - Select **All Projects** to send activity data from all projects.
         - Enter a project ID to send data from a specific project.
      2. In the **Type** field, select **Baseline**.
      3. Perform any of the following actions:
         - Click **OK** to initiate the integration from Oracle Integration and send data from the system activity sheet.
         - Click **Cancel** to discontinue.
6) In the **History** tab of the system activity sheet, review the job status.

Updating Master Rate Sheet Using Oracle Integration

You can use an integrations from Oracle Integration to update the Master Rate Sheet with all the workspaces, resources, and roles from Oracle Primavera Cloud.

You can use the **Oracle OPC Unifier Resources Roles Sync** integration delivered in the **Oracle Primavera Cloud - Primavera Unifier | Integrate Resources and Schedule** accelerator available in the Integration store in Oracle Integration.

Prerequisite

A connection between Unifier and Oracle Integration is established. For more details, see the topic, **Initial Oracle Integration Setup**, in the *Primavera Unifier General Administration Guide.*

Procedure

To update the Master Rate Sheet from within Unifier using an integration:

1) Go to the **Company Workspace** tab and switch to **User** mode.
2) In the left Navigator, select **Master Rate Sheet**.
3) From the toolbar of the Master Rate Sheet log, click **Get Data**
4) In the **Get Data** dialog box, select the name of the Oracle Integration you will use, and click **OK**.
5) In the **Confirmation** message, click **Yes** to continue.
6) To view the status of the job, select the **History** tab in the right pane.

   You can click **Refresh** to update the information until the **Status** displays COMPLETED. If the Status is FAILED, select the line to view more information about the error that occurred.

About Unifier and P6 Integration

You can integrate multiple P6 projects into one Unifier project.

- When you integrate (Project ID mapping) a P6 project into a Unifier project through the **General** tab of the **Shell Attribute** form, the application updates the **Schedule Type** field in **General** tab.

  The **General** tab is mostly used for one-to-one integration (one P6 project mapped to one Unifier project).
- When you integrate (Project ID mapping) multiple P6 projects into one Unifier project through the **Integration** tab of the **Shell Attribute** form, the application does not update the **Schedule Type** field in the **General** tab.

  In the **Integration** tab, the **Schedule Type** column is updated.

  The **Integration** tab is mostly used for many-to-one integration (many P6 projects mapped to one Unifier project).

Prior to the Unifier 20.7 release:

When you performed **Get Data** from the **Activity Sheets** log, if the P6 Project ID was not defined in the **Shell Attribute** form (**General** tab and **Integration** tab), the system would use the first import synchronization: **Select Synchronization to Exchange Activity Data**.

When you performed **Get Data** from the **Activity Sheets** log, if the P6 Project ID was defined in the **Shell Attribute** form (**General** tab and **Integration** tab), the system would use the second import synchronization: **Select Synchronization to Exchange Activity and Assignment Data**.

Starting with the Unifier 20.7 release:

When you performed **Get Data** from the **Activity Sheets** log, whether the P6 Project ID is defined, or the P6 Project ID is not defined, in the **Shell Attribute** form (**General** tab and **Integration** tab), the system uses a single import synchronization: **Select Synchronization to Exchange Activity Data**.

The drop-down field (**Select Synchronization to Exchange Activity Data**) displays all the import synchronizations defined in Gateway for Unifier deployment, including the import synchronizations to get activity and assignment data which is used for EVM.

The system refers to the drop-down field (**Select Synchronization to Exchange Activity Data**) for the import synchronization selected in all the following cases:

a. P6 Project ID is added in the **Integration** tab
b. P6 Project ID is added in the **Shell Attribute** form
c. When the project number in the **Shell Attribute** form matches with the P6 project number.

Update of CBS Codes from P6

You can get the latest CBS Codes updates assigned to activities from P6 into the activity sheet, using gateway integration.

The Get Data synchronization that creates the activity sheet populates the following data:

- Scheduling data (activities along with assignments and spread data) from the P6 projects mapped to the current shell in the Integration tab.
- CBS Codes assigned to the activities.
- CBS Codes assigned to the resource and role assignments.
- Roles and Resources along with rates assigned to the activities.

> **Note**: Subsequent updates of Role and Resource Rates in P6 will not trigger the updates in the Master Rate Sheet; however, subsequent updates of CBS Code for activities in P6 will trigger the updates in the Unifier Activity Sheet CBS assignments.

You can use P6 to capture duration as well as resource assignments (resource units, resource CBS assignment, resource units spread, actual resources consumed till date, and so forth). The Activity Sheet, in this case, can receive all the resource units, CBS assignments, and calculate costs using P6 data and rates.

> **Note**: The export of CBS Cost codes from Unifier remain as is.

You can receive the latest updated CBS assignments to Activities and Resources and Role assignments when P6 data is pulled into the Activity Sheet. After the latest Get Data, you will be able to see that the CBS assignments updated in the Activity Sheet and re-costing sums the costs, by the latest CBS assignments. This applies to the existing Activities and Resources and Role in the Activity Sheet.

> **Note**: All cost calculations will be updated based on the CBS assignment updates. In addition, any new earned value analysis (EVA) created will show the EVM data according to updated CBS Codes.

The following scenarios explain how to get the latest CBS codes updates assigned to activities from P6 into the activity sheet using gateway integration:

- CBS Code assigned to the activity are updated from P6, and the CBS Code received is inactive in project cost sheet

  If the CBS Codes that are assigned to the activities, and updated, in P6, and the CBS Codes are not active in Unifier Cost Sheet, the Earned Value Analysis will not show those CBS Codes even though they are updated in the activity sheet. In this case, you will not be able to create BP actuals as those codes will not be shown in the CBS Picker.

  If the CBS Codes updated for an Activity in P6 is no longer active in the Unifier Cost Sheet, do not update the current CBS assignment for the activity. There will be no change in cost calculations.

  The **History** tab log will show the following message: The CBS Code <CBS code1> received from the P6 in Resource < Resource Name> of Activity <Activity ID> is inactive in the Unifier Cost Sheet and cannot be updated. This indicates that the activities (where the CBS assignments are) have not been updated.

  For CBS Code assigned to the resources are updated from P6 and CBS Code received is inactive in project cost sheet:

If the CBS Code (updated for the resource in P6) is no longer active in the Unifier Cost Sheet, do not update current CBS assignment for the resources. There will be no change in the cost calculations.

In this case, the history log will show following message: The CBS Code <CBS code1> received from the P6 in Resource < Resource Name> of Activity <Activity ID>. This indicates that the activities where the CBS assignments are, have not been updated.

If the CBS Code is updated both at the activity and at the resource assignment level in P6, and the updated codes are inactive, the following two messages will be seen in the history log:

The CBS Code <CBS code1> received from the P6 in Resource < Resource Name> of Activity <Activity ID> is inactive in the Unifier Cost Sheet and cannot be updated.

The CBS Code <CBS Code1> received from the P6 in Resource < Resource Name> of Activity <Activity ID> is inactive in the Unifier Cost Sheet and cannot be updated.

Similarly, if the CBS Code that has been updated for the role in P6, and the CBS Code is no longer active in the Unifier Cost Sheet, do not update the current CBS assignment for roles. There will be no change in cost calculations.

The **History** tab log will show the following message: The CBS Code <CBS code1> received from the P6 in Role < Role Name> of Activity <Activity ID> is inactive in the Unifier Cost Sheet and cannot be updated. This indicates that the activities (where the CBS assignments are) have not been updated.

- CBS Code is removed for Activity or Resource assignment in P6:

  If the CBS Code assignment does exist for the activity in Unifier Activity Sheet, do not clear the CBS assignment (with the latest data from P6). This is the case where CBS Code assigned to an activity is removed in P6 projects, and you received the latest activity data from P6 using the Get Data option.

  The **History** tab log will not show any additional warning messages; however, the system ignores any cleared CBS assignments from P6.

- CBS Code is changed in Activity or Resource assignment in P6 and the activity sheet is updated with latest CBS assignments:

  The existing EVA will start to show the PV or AC, CV, and so forth for both the old CBS Codes and the new CBS Codes.

  The BP actual will no longer show the actuals that have line items with the old CBS Codes in the EVM Sheet (default view).

About Unifier and Oracle Primavera Cloud Integration

When Unifier and Oracle Primavera Cloud, are integrated, you can integrate Cash Flow and Schedule data between Unifier and Oracle Primavera Cloud. When Unifier, Oracle Primavera Cloud, and Oracle Integration are integrated, you can use Oracle Integration recipes to update the System Activity Sheet or the Master Rate Sheet (or both) in Unifier with information from Oracle Primavera Cloud.

In the **Activity Sheet** overlay page, you can use the **Open Project in <source name>** option to open the Oracle Primavera Cloud page and open the source URL either in P6 or Oracle Primavera Cloud, in a new tab. The **Activities** tab points to the relevant project data (the project that is selected in the drop-down provided there is an active login session).

The login on the new tab for P6 or Oracle Primavera Cloud will be displayed where you enter your login credentials to sign in and see the relevant project data.

> **Note:** You can see the project is opened even when that particular project is closed in the source server.

Selecting this icon will open the source application in a new tab provided there is a valid URL specified. If no URL is defined in the company properties page, this link will not be shown in the Activity Sheet.

Also, when you switch to Baseline, the link is not displayed.

Source Application Link in Activity Sheet

For the link to open a project in P6, from the Unifier Activity Sheet, you must manually add the mappings, as seen on the left side for project mapping template in the "Sync P6 and Unifier Projects."

Note: The mappings are not available in the project mapping template.

Parameters needed for the project mapping template in "Sync P6 and Unifier Projects:"

P6	Gateway	Unifier
WBSObjectId	p6_wbs_id	uuu_int_internal_WBSObjectId
ObjectId	InternalProjectId	uuu_int_internal_proj_id

Similarly, for the link to open a project in Oracle Primavera Cloud, from the Activity Sheet, you must manually add the mappings, as seen on the left side for project mapping template in the "Send Primavera Cloud Project data to Unifier."

Parameters needed for project mapping template in "Send Primavera Cloud Project data to Unifier :"

P6	Gateway	Unifier
projectId	InternalProjectId	uuu_int_internal_proj_id

Activity Sheet Created from P6 through Gateway

Activity sheets capture the project scheduling data that is coming from either:

a) P6 project, or
b) Oracle Primavera Cloud project.

The project data (both current and baseline projects) from P6 or Oracle Primavera Cloud that is brought over to Unifier by way of non-EVM synchronizations will be added to the activity sheet which can further be used in cash flow analysis.

The costs associated to the activities can be rolled up to the cost sheet. In general, you can assign a CBS code to the activities in the Activity Sheet when the activity sheet is created by using non-EVM synchronizations. This enables you to use the schedules, or costs, associated with the CBS code in your cash flow analysis. In particular, you can:

- Assign CBS Codes (cost codes) to the activities in the Activity Sheet created using non-EVM synchronizations.
- Assign CBS Codes (cost codes) to the activities in the Activity Sheet created using EVM synchronization for duration based schedules.
- Remove CBS assignments (assigned cost codes) to the activities, and resource assignments, in the Activity Sheet.
- View the planned, actual, at completion, remaining units, and costs associated with the CBS Codes (cost codes) in the cost sheet.

You can create an activity sheet, from the **Activity Manager**, by using the **Get Data** option, by way of P6 or Oracle Primavera Cloud integration with the following OOTB synchronizations available in Gateway Integration Settings:

a) Get Activity data from P6
b) Get Activity and Assignment data from P6 for EVM
c) Send Oracle Primavera Cloud Activity data to Unifier

When you create an activity sheet by using the "Get Activity data from P6" or the "Send Oracle Primavera Cloud Activity data to Unifier" synchronization, and using the "Get Activity and Assignment data from P6 for EVM" synchronization for duration-based project, you can assign CBS codes to the activities in the Activity Sheet regardless of the schedule type. This ability is applicable to Activity Sheet created with:

- Duration schedules.
- Resource-loaded schedules.
- Cost loaded schedules.

> **Note**: You can bring CBS codes from P6 using the "Get Activity data from P6" and "Get Activity and Assignment data from P6 for EVM" synchronizations for the resource-loaded and cost-loaded schedules.

In an existing activity sheet that has been created by using "**Get Activity and Assignment from P6 for EVM**" synchronization,

- The **Assign CBS** options in the **Actions** field changes to **Assign CBS Code**, and the **Assign CBS** window label changes to the **Assign CBS Code**.
- The **Assign CBS** option in the *gear menu* (⚙) changes to **Assign CBS Code**.

In an existing activity sheet that has been created by using any source-application (for all types of schedules: Duration-based, Resource-loaded, and Cost-loaded):

- The **Assign CBS Code** option, in the *gear menu* (⚙), allows you to add a CBS code to the activity sheet that uses the Duration-based schedule. You can select a CBS code from the cost code picker. The cost code picker enables you to select an active CBS code from the project cost sheet.
- In the **Assign CBS Code** window, the **General** tab displays the associated CBS codes.
- The **Assign CBS Code** option in the **Actions** field enables you to assign or update a single CBS code for multiple activities (in bulk), one at a time. In this case, the **General** tab of each activity sheet shows the updated CBS code.
- Any CBS code updates that have been made to an activity sheet will be audited and displayed in the **Audit** tab.
- Use the **Export CSV** option, in the **Actions** field, to export the CBS code assignments for the Resource-loaded and Cost-loaded schedules.
- The **Remove CBS Code** option, in the *gear menu* (⚙), enables you to remove the existing CBS assignment for the activity sheet. This option is only available if the activity sheet has a CBS code assigned to it.

  For Duration-based schedule, when you select the **Remove CBS Code** option:
  - If you select **Yes**, the system removes the CBS code assigned to the activity sheet. The audit log will have an entry for an assigned CBS code that has been removed for the activity sheet.
  - If you select **No**, the assigned CBS code remains as is.

  In an existing activity sheet that has been created by using Resource-loaded and Cost-loaded schedules, when you select the **Remove CBS Code** option:
  - If you select **Yes**, the system removes the CBS code assigned to both the activity sheet and the resource (Resource/Role). The audit log will have an entries for an assigned CBS code that has been removed for the activity sheet and the resource. Oracle recommends that you perform recost to calculate the costs (based on the CBS code update).
  - If you select **No**, the system informs you that you can *only* remove the CBS code assigned to the activity sheet. If you select **Yes**, Unifier removes the CBS code assigned to the activity sheet. The audit log will have an entry for an assigned CBS code that has been removed for the activity sheet. Oracle recommends that you perform recost to calculate the costs (based on the CBS code update).

  For Resource-loaded schedule, when you select the **Remove CBS Code** option:
  - If you select **Yes**, Unifier removes the CBS code assigned to the resource (Resource/Role). The audit log will have an entry for an assigned CBS code that has been removed for the resource (Resource/Role).
  - If you select **No**, the assigned CBS code remains as is.

To assign a CBS code or remove a CBS code for activities, in the Activity Sheet:

1) Go to the project/shell tab and switch to **User** mode.
2) In the left Navigator, select **Activity Manager**, and then select **Activity Sheet**.
3) In the **Activity Sheet** log, click to select the activity that you want.
4) Click the *gear menu* (⚙) and select one of the following options:
   - **Assign CBS Code**

     When you select **Assign CBS Code**, the **Assign CBS Code** window opens which enables you to use the cost code picker to select the cost code that you want to assign to the activity sheet. The cost code picker displays only the active CBS codes within the Cost Sheet.

     The CBS code that you select to assign will become *inactive* after you assign it to the activity sheet; however, the existing activity sheet data will roll up to the cost sheet and you can view the data, for the Resource-loaded and Cost-loaded schedules.

     For the *inactive* CBS codes, the new activity sheet data that is coming from P6 will not be rolled up to the cost sheet. The CBS code assignments to the activities are audited and the added or updated CBS codes are displayed in the audit log. This includes the CBS code updates coming from any source by way of **Get Data**.

     Using **Get Data** enables you to get the **Manage CBS Assignments** to the activities, from P6 by way of integration.

     You can update a CBS code by way of **Get Data** from the **Activity Sheet** log, and the Cost Sheet will be updated accordingly.

     If you do not have permission to update the **Activity Sheet**, the *gear menu* (⚙) and the **Actions** menu will not display the **Assign CBS Code**, or the **Remove CBS Code** options.
   - **Remove CBS Code**

Audit tab of the Activity Sheet

For every Activity Sheet, the Audit tab displays the audit log for each activity whenever the following CBS Code updates are done at the activity level:

- New CBS Code assigned to the activity.
- Updating a CBS code assigned to the activity.
- Removing the CBS code assigned to the activity.

The audit log columns display information such as:

Event

Displays "Assign CBS Code" or "Update CBS Code," corresponding to the events that resulted in adding or updating a CBS code. This column also displays "Remove CBS Code" in case of removing the CBS code assigned to an activity.

- **Field Name**

  Displays the activity ID.
- **Old Value**

  Displays the existing CBS code. When you remove an assigned CBS code, this column displays the existing CBS code.

- **New Value**

  Displays the assigned CBS code. When you remove an assigned CBS code, this column does not display any data.

Assigning a CBS code to multiple activities in the Activity Sheet created by using EVM synchronization for Resource-loaded and Cost-loaded schedules:

Similar to assigning or updating a CBS code for an activity sheet, you can use the **Assign CBS Code** option in the **Actions** field to assign or update a single CBS code to multiple activities (in bulk), one at a time. In this case, the **General** tab of each activity sheet shows the updated CBS code.

When you select the **Assign CBS Code** option, in the **Actions** field, for an activity sheet, the **Assign CBS Code** window opens. You can select a CBS code from the cost code picker. The cost code picker enables you to select an active CBS code, from the project cost sheet, and assign it to the selected activities. The audit log will have an entry for an added or updated CBS code.

Assigning a CBS code to multiple activities, in the Activity Sheet created by using Duration-based schedule, using the Export CSV option:

Use the **Export CSV** option in the **Actions** field to assign a CBS code to multiple activities (in bulk), one at a time. Unifier will automatically performs validations (valid CBS code and active or inactive CBS codes) regarding the assigned CBS code.

Removing a CBS Code from multiple activities in the Activity Sheet created by using Duration-based, Resource-loaded, and Cost-loaded schedules:

Use the **Remove CBS Code** option in the **Actions** field to remove a CBS code assigned to multiple activities (in bulk), one at a time. When you select the **Remove CBS Code** option:

- If you select **Yes**, the system removes the CBS code assigned to selected multiple activities (in bulk). The audit log will have an entry for an assigned CBS code that has been removed. For the Activity Sheet created by using Resource-loaded and Cost-loaded schedules, Unifier requires your confirmation. If you select **Yes**, the system removes the assigned CBS code for the selected activities and all the associated resources (Resource/Role). If you select **No**, Unifier only displays messages regarding the removal of the assigned CBS code for the selected activities for the activity sheet.
- If you select **No**, the assigned CBS code remains as is.

Using CSV import to assign CBS Code to multiple activities

In an Activity Sheet with all the schedule types, you have the option to import CSV to multiple activities, in bulk.

To import the CSV template to multiple activities:

1) Click **Actions**.
2) Click **Update Data**.
3) Click **Activities**.
4) Click **Import CSV**.

You can export the CSV template, using Export CSV, and bulk assign the CBS codes to multiple activities, in Duration-based schedules.

All validations (CBS codes, active, and inactive CBS codes) regarding the assigning of the CBS codes to multiple activities take place during the CBS code assignment.

Activity Sheet Created from Oracle Primavera Cloud Project through Gateway

When you create an Activity Sheet by way of integration with Oracle Primavera Cloud, you can assign CBS codes to the Activity Sheet.

In the Activity Sheet log, click and select the activity that you want.

Click the *gear menu* (⚙) and select one of the following options:

- **Assign CBS Code**
- **Remove CBS Code**

In the activity attribute form, the General tab displays the associated CBS code.

For details about the functionality for assigning, updating, and removing CBS code from an activity (in Activity Sheet) from P6 using both non-EVM and EVM synchronizations, see ***Activity Sheet Created from P6 Through Gateway*** (on page 127).

Using CSV import to assign CBS Code to multiple activities

In an Activity Sheet with all the schedule types, you have the option to import CSV to multiple activities, in bulk.

To import the CSV template to multiple activities:

1) Click **Actions**.
2) Click **Update Data**.
3) Click **Activities**.
4) Click **Import CSV**.

You can export the CSV template, using Export CSV, and bulk assign the CBS codes to multiple activities, in Duration-based schedules.

All validations (CBS codes, active, and inactive CBS codes) regarding the assigning of the CBS codes to multiple activities take place during the CBS code assignment.

Unifier Activity Manager for Oracle Primavera Cloud Schedules

You can also integrate multiple Oracle Primavera Cloud projects into multiple Unifier projects.

In Oracle Primavera Cloud, if two or more projects have the same **Project ID**, then when integrating those projects into a single project, Unifier will randomly select only one of the Oracle Primavera Cloud projects that have same Project ID and integrate that project into Unifier.

> **Note:** You can access the **Activity Manager** module for setting up Oracle Primavera Cloud schedules the same way as accessing the **Activity Manager** module in a shell. The **Activity Sheets** log components (for setting up Oracle Primavera Cloud schedules) are also the same as the **Activity Sheets** log in a shell.

The following explains the information specific the **Activity Sheets** log for Oracle Primavera Cloud schedules.

Options and Tabs	Description
Get Data	Use this option to: ▸ Create an activity sheet for the first time. ▸ Update an existing activity sheet with the most recent activity spread data from the Oracle Primavera Cloud project. Updating triggers a new OOTB import synchronizations if you have selected the **Select Synchronization to Exchange Activity Data** option in Gateway integration settings drop-down list. All the synchronized Oracle Primavera Cloud project activities, planned dates, actual, at completion dates, and associated WBS Code will be displayed in the activity sheet. If the shell is not active (inactive shell), Gateway integration will fail. When you select this option (Get Data), the system checks for the Oracle Primavera Cloud project that as defined in the **Integration** tab and then brings the Oracle Primavera Cloud project activity data and their schedules into the activity sheet: ▸ Based on the import synchronization defined in Gateway settings, and ▸ If Oracle Primavera Cloud and Unifier projects are linked. If you select this option and there is no **Project ID** added in the **Integration** tab, the system will display this message: *Valid Project ID is not specified in the Shell Integration Tab.* **Note**: Unifier does not bring the baseline (project data) from Oracle Primavera Cloud.

Options and Tabs	Description
Send Data	Use this option to run the export synchronization to send the updated activities and schedules from an Activity Sheet to the Oracle Primavera Cloud. The data elements in the business processes, or the shell attribute form, which have been set to reverse auto-populate (RAP) back to the Oracle Primavera Cloud Activity Sheet (using P6 Activity Picker) will get the latest updates into the Oracle Primavera Cloud Activity Sheet. You can send updated Activity Sheet data (such as: updated Actual Start Date or Finish Dates) to the Oracle Primavera Cloud project which is linked by way of the OOTB export synchronization option: Update Unifier Activity data in to Primavera Cloud. The **Schedule** tab, in the Activity Sheet log, shows this option, and you can set the scheduled send data based on frequency.

Options and Tabs	Description
Mapped Projects tab	The **Mapped Projects** tab has the following toolbar options: ▸ **Refresh:** To refresh the log items for both the **Mapped Projects** tab and the **History** tab. ▸ **Find on Page:** To conduct a search for items on the list. The **Mapped Projects** tab displays a list of all the mapped Oracle Primavera Cloud projects. The following columns are available in this tab: ▸ **Project ID**: Displays the linked Oracle Primavera Cloud Project ID. ▸ **Project Name**: Displays the project name. ▸ **Project Type**: Displays the value of either Current or Baseline. If you receive the current schedule information, the **Project Type** column shows: **Current**. ▸ **Project Start Date**: Displays the start date of the project. ▸ **Data Date**: Displays the last refreshed date from Oracle Primavera Cloud. ▸ **Schedule Type**: Displays **Duration** as schedule type.
Schedule tab	The **Schedule** tab enables you to set the frequency for **Get Data** along with a table that shows the schedules based on the frequency. This is applicable to all projects in the activity sheet. Other drop-down values for the **Set Frequency for** will be **Send Data**. You can select **Send Data**, but the OOTB synchronization option is not available for sending the updated activity data back to Oracle Primavera Cloud.
History tab	The **History** tab displays the history of all the events that are being performed across the Oracle Primavera Cloud projects that are present in the activity sheet.

When you open an activity from the **Activity Sheets** log, the **Activity Sheet** overlay page opens.

The **Activity Sheet** overlay page displays all the activities data, in columns, such as:

- **Activity ID**
- **Activity Name**
- **Activity % Complete**
- **Activity Status**
- **Activity Type**

The **Activity Sheet** overlay page displays the general information about an activity in the **General** tab (right pane), categorized by blocks, such as:

- **WBS Attributes**
  - WBS Code (uuu_P6WBSCode): WBS Code associated to each Activity.
  - WBS Name (uuu_P6WBSName): WBS Name associated to each Activity.
  - WBS Path (uuu_P6WBSPath): WBS Path associated to each Activity.
  - Work Package (uuu_P6WorkPackage): This is the leaf node for every WBS structure and will have the values Yes/No.
- **Activity Attributes (General)**
  - Activity ID (uuu_P6ActivityId)
  - Activity Name (uuu_P6ActivityName)
  - Status (uuu_P6ActivityStatus)
  - Type (uuu_P6ActivityType)
  - Performance % Complete (uuu_P6PercentComplete)
- **Activity Attributes (Scheduling)**
  - Planned Start (uuu_P6PlannedStart)
  - Planned Finish (uuu_P6ActualFinish)
  - Planned Duration (uuu_P6Planned)
  - Actual Start (uuu_P6ActualStart)
  - Actual Finish (uuu_P6ActualFinish)
  - Actual Duration (uuu_P6ActualDuration)
  - Remaining Duration (uuu_P6RemainingDuration)
  - At Completion Duration (uuu_P6AtCompletionDuration)

You can use this activity data in a business process using **Activity Picker**, and the updated dates can be reverse auto-populated into the activity sheet. The activity sheet data can be sent back to Oracle Primavera Cloud using the export synchronization selected in Gateway integration settings.

Activity Mappings in Gateway

The following activity attributes are displayed in the log:

Oracle Primavera Cloud	Gateway	Unifier
activityPercentComplete	PercentComplete	uuu_P6PercentComplete
actualDuration	ActualDuration	uuu_P6ActualDuration
actualFinishDate	ActualFinishDate	uuu_P6ActualFinish

Oracle Primavera Cloud	Gateway	Unifier
actualStartDate	ActualStartDate	uuu_P6ActualStart
atCompletionDuration	AtCompletionDuration	uuu_P6AtCompletionDuration
finishDate	FinishDate	uuu_P6Finish
activityCode	Id	uuu_P6ActivityId
activityName	Name	uuu_P6ActivityName
plannedDuration	PlannedDuration	uuu_P6PlannedDuration
plannedFinishDate	PlannedFinishDate	uuu_P6PlannedFinish
plannedStartDate	PlannedStartDate	uuu_P6PlannedStart
projectId	ProjectId	uuu_int_p6_project_id
remainingDuration	RemainingDuration	uuu_P6RemainingDuration
remainingFinishDate	RemainingFinishDate	uuu_P6RemainingEarlyFinish
remainingStartDate	RemainingStartDate	uuu_P6RemainingEarlyStart
startDate	StartDate	uuu_P6Start
activityStatus	Status	uuu_P6ActivityStatus
activityType	Type	uuu_P6Activitytype
wbsCode	WBSCode	uuu_P6WBSCode
wbsId	WBSObjectId	uuu_P6WBSElementId
wbsPath	WBSPath	uuu_P6WBSPath
wbsName	WBSName	uuu_P6WBSName

The **WBS Sheet** will be created if the **WBS Structure** field mapping template is defined in Gateway. The **WBS Sheet** shows the WBS hierarchy, or structure, associated with the activities.

> **Note:** OOTB synchronization does not provide field mappings for the **WBS Structure**. You must define the WBS structure mapping in Gateway for the WBS sheet that has been created in Unifier.

The **WBS Sheet** lists the WBS structure. All the cost and units columns will be zeros (0s) in Unifier 20.7. All the predefined eight columns are displayed by default, with cost and unit values as zeros (0s).

The **System Data Elements** that are available in the **WBS Attribute** form are not editable, but you can add additional data elements in the **WBS Attribute** form.

You can add additional columns based on type directly as a cell entry, formula, or from:

- WBS Custom Attributes
- Business Processes
- Activity Sheet

> **Note:** For duration based schedules, the **WBS Picker** does not show the associated **WBS Codes** in the business processes when the **EVA Sheet** is not created.

Activity Picker in Business Process or Shells

When an Activity Picker that is based on P6 Activity Picker data definition is placed on a business process upper form or detail form, or in the Shell attribute form in uDesigner, you can use that picker to select activities from the **Activity Sheet** located within that shell.

When you select an activity by way of a P6 Activity Picker, the system displays the **Activity Picker** log, as defined in uDesigner. The **Activity Picker** log lists all the Oracle Primavera Cloud Projects in the **Projects** drop-down, where you can select the current schedule and select the activity sheet. After selecting the activity sheet, the hierarchy (similar to the one used in the activity sheet) will be displayed.

The list of activities from the picker is filtered according to the query conditions defined within the Data Picker configuration, in Admin mode.

The data elements that can be set to auto-populate from a picker will be populated from the selected activity in the picker.

The data elements that have been set to reverse auto-populate (RAP) to Oracle Primavera Cloud will RAP according to the RAP conditions, in uDesigner. If no RAP conditions are defined, the data elements that have been set to reverse auto-populate (RAP) to Oracle Primavera Cloud will RAP when the record is moved to next step (for Workflow BPs) and when the record is marked as: Finish Edited' (for Non-Workflow BPs).

The linked data elements using an activity picker get updated when the activity gets updated by way of integration.

The auto-population will take place if the picker is set to auto-populate from another picker, and also is set as a source to auto-populate into other data elements.

If a picked activity is deleted, the system will remove the picker value, and the data elements that hold auto-populated from that activity (the deleted activity) continue to display their values. In such scenario, the system will remove the data elements that hold dynamically linked values.

P6 Activity Picker in Business Process or Shell Details

When you access a business process form, or a shell attribute form, with activity sheets (both system activity sheet or manual activity sheets) and create a new form, the **Create New <form>** window opens. In this window, you can go to the **P6 Activity Picker** field, click **Activity Sheets**, and open the **P6 Activity Picker** window.

In the **P6 Activity Picker** window, the **Activity Sheets** field drop-down displays a list of all the active activity sheets, in alphabetical order. In the case where the multiple source projects are integrated with System Activity Sheet, the Activity Sheets drop-down shows the source projects prefixed with "System Activity Sheet," for example: System Activity Sheet - <Source Project1>, System Activity Sheet - <Source Project2>, and so forth. You can switch between the activity sheets and select a specific activity sheet to populate the information on to the business process or attribute forms.

The activities are filtered according to the query conditions defined within the Data Picker configuration in uDesigner where **P6 Activity Picker** field is added.

To access the Data Picker configuration in uDesigner:

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) In the left Navigator, select **uDesigner**, and then select either **Business Processes** or **Shell Manager**.
3) Open the applicable BP or Shell Attribute form where the **P6 Activity Picker** field is added.

The form fields that have been set to auto-populate from **P6 Activity Picker** field will get auto-populate from the selected activity attributes.

The form fields that have been set to Reverse Auto-Populate (RAP) to the Activity Sheet will get Reverse auto-populated from the conditions specified in uDesigner or the latest data will be reverse auto-populated (updated) back to the Activity Sheet when "**Send**" in the Workflow, or "**Submit**" in the Non-workflow BP, is used. Similarly, when the user clicks "**Save**" in the shell properties, the updated date will be reverse auto-populated (RAP) back to the activity sheet.

The form data elements that are linked to the attributes form from a **P6 Activity Picker** field will get updated as the P6 activity data gets updated by way of integration.

Auto-population will complete if the **P6 Activity Picker** field is set to auto-populate from another picker, and the **P6 Activity Picker** field is also selected as a source to auto-populate other data elements on the form.

If you delete a selected (picked) activity sheet, Unifier clears the picker value for the existing records, but the auto-populated values will remain as they are. Similarly, the system clears the linked data elements if the selected (picked) activity sheet no longer exists.

Additional Information about P6 Activity Picker

- The P6 Activity Picker is supported when creating records through CSV import and RESTful services.
- When a P6/Oracle Primavera Cloud project is associated with the System Activity Sheet, the CSV template, or the RESTful call, accepts the following format for P6 Activity Picker value: <P6/Oracle Primavera Cloud Project ID> ~~ <Activity ID>

- If the project has manual activity sheets defined, the following format is allowed in the input CSV file and RESTful services to select an Activity: <Activity sheet Name> ~~ <Activity ID>

In This Section

Activity Picker

The activity picker in business process and attribute forms allows you to choose an activity from a selected project. The activity picker supports reverse auto-population for multiple P6 Projects.

Selecting a project:

1) In the **View** drop-down list, select a project. If there are a large number of projects, use **Search** or **Find on Page** to locate the project.
2) Highlight a project on the **Activity Picker** log and click **Select**.

WBS Picker in a Business Process

The **WBS Picker** field in a business process form has an additional toolbar option (Source) that shows the source value as either P6, Primavera Cloud, or Custom. The Source field drop-down will display "Custom" by default and all the WBS Codes from the Project WBS Sheet will be shown.

You can switch between different sources (P6 or Oracle Primavera Cloud and Custom) if your project has both Project WBS Sheet and System WBS Sheet. The WBS Codes created from the selected source will be shown in the Picker window.

To select the code, the WBS Code shows the entire path.

You can select a unique WBS Code to add a cost transaction.

Earned Value Manager

The **Earned Value Manager** enables you to do the following by using one of the nodes.

- Perform earned value analysis corresponding to the activity sheet (System or Manual) in a shell.
- Run the earned value analysis of cost loaded projects directly.
- Generate reports on EVA scenarios.

The **Earned Value Manager** module contains the following nodes:

- **Earned Value Analysis**
- **Earned Value Analysis Report**

To access the Earned Value Manager module:

1) Go to the project/shell tab and switch to **User** mode.
2) In the left Navigator, select **Earned Value Manager**.

The following provides details about each node.

In This Section

Earned Value Analysis

To access Earned Value Analysis:

1) Go to the project/shell tab and switch to **User** mode.
2) In the left Navigator, select **Earned Value Manager**, and then select **Earned Value Analysis**.

The **Earned Value Analysis** node is based on the scheduling set of data (activities and rates) imported from P6 through integration. The **Earned Value Analysis** node allows you to:

- Perform earned value analysis corresponding to the activity sheet (System or Manual) in a shell.
- Run the earned value analysis of cost loaded projects directly.

> **Note:** For resource-loaded projects, you must calculate resource and role rates before analyzing earned value and other matrices.

Planned Value (PV), Actual Value (AC), and Earned Value (EV) are required to calculate variances, indexes, and at completion project values. Unifier performs all calculations in the activity sheet (System or Manual) and rolls up the values to the Earned Value Analysis scenario. The values corresponding to each project, WBS (Work Breakdown Structure) or CBS (Cost Breakdown Structure) are used to plot different graphs, thus providing a visual way to determine the health of projects, and Forecast future outcomes based on the performance indexes.

Earned Value metrics can be categorized as under:

Group	Detail
Basic	▸ Planned Value (PV) ▸ Actual Cost (AC) ▸ Earned Value (EV)
Variances	▸ Cost Variance (CV) ▸ Schedule Variance (SV)
Indexes	▸ Schedule Performance Index (SPI) ▸ Cost Performance Index (CPI) ▸ Cost Schedule Index (CSI)
Forecast	▸ Estimate to Complete (ETC) ▸ Estimate at Completion (EAC) ▸ To Complete Performance Index (TCPI) by EAC or BAC

Earned Value Analysis Log

The **Earned Value Analysis** log lists the earned value analysis.

To access the **Earned Value Analysis** log:

1) Go to the project/shell tab and switch to **User** mode.
2) In the left Navigator, select **Earned Value Manager**, and then select **Earned Value Analysis**.

> **Note:** The location may differ in your implementation based on the Project/Shell **User Mode Navigator** configuration.

You can use the **Earned Value Analysis** log to:

- See a list of analysis.
- Review the following information (on the right pane of the log) about a selected analysis:
  - Preview
  - General

- Properties
- Schedule
- History

The **Earned Value Analysis** log has the following toolbar options:

- **Create** (see Creating an Earned Value Analysis Sheet for details)
- **Data Refresh**

  Use this option to manually update the summarized values retrieved from the shell activity sheet (System or Manual). The values in the scenario are not updated automatically if there are changes in the associated activity sheet (System or Manual).

  When you perform data refresh, the system updates the summary table spread data which will appear after the most recent data date for each project.

  The Historical data will not be refreshed when you click **Data Refresh** in an existing EVA Sheet.
- **Delete**

  Use this option to delete the analysis.

The **Earned Value Analysis** log has the following columns:

- **Name**
- **Description**
- **Activity Sheet**
- **Cost Sheet Column**
- **Graph Type**
- **Performance Measurement Technique**
- **Created By**
- **Created Date**
- **Last Refreshed**
- **Last Modified**

The **Earned Value Analysis** log lists the analysis and each analysis has a *gear menu* (⚙) that can be used to:

- **Open**

  To open and view the select EVA.
- **Open Grid Indicators**

  To open the **Grid Performance Indicators** window and color-code the grid values corresponding to the variances and indexes. Depending on the options that you have selected, you can define the range to color-code Project, WBS, or CBS performances. The settings will be applied to all the sheets in the log. Currently, there is only one EVA sheet and color-code settings apply only to the existing sheet.

  This option is available to all users who have the **Create** permission.

  The **Grid Performance Indicator** window has the following toolbar options:
  - **Add**: To add a new color indicator.
  - **Find on page**

- **Save**
- **Cancel**

The **Grid Performance Indicator** window has the following columns:

Error (indicator labeled with an **x** icon)

- **No.**
- **EV Metrics**: This is a value selected for the Select Metrics drop-down field. It allows you to select the metrics that you want to color-code. There are no restrictions on the number of scenarios that you can create. The following options are available when you double-click in the cell and activate the drop-down field:
  - **Schedule Variance**
  - **Cost Variance**
  - **Variance at Completion**
  - **Cost Performance Index**
  - **Schedule Performance Index**
  - **Index**
  - **Cost Schedule Index**
  - **TCPI (EAC)**
  - **TCPI (BAC)**
- **Condition**: This enables you to select the following conditions or values for users who can create criteria for color-coding (double-click in the cell to activate the drop-down field):
  - equals
  - greater than
  - greater than or equals
  - less than
  - less than or equals
  - between

  To prevent overlapping of conditions or values, the following priority order is used:

  Equals will override any other defined condition.

  Between will override any other defined condition, except equals.

  In case of less than and less than or equals, the lower value will override the higher value.

  In case of greater than and greater than or equals, the higher value will override the lower value.

  In case of conflict between a value which comes under less than/less than or equals and greater than or greater than or equals, the system displays the message: Overlap in the conditions defined.
- **Text box**: This field (Value 1 and Value 2) can be a single text box or two text boxes (condition = between), depending on the condition selected.
- **Color**: This is a drop-down field that allows you to select the color corresponding to the criteria that you have created. The following are the values (double-click in the cell to activate the drop-down field):

- Black
- Red
- Purple
- Orange
- Yellow
- Green
- Blue

The *gear menu* (⚙) **Delete** option enables you to delete the color indicators.

- **Open Performance % Completion**

  To open and view the historical performance percentage completion values of a project activities against data dates. The system uses the values to calculate earned value metrics.
- **Delete**

  To delete the analysis.

The **Earned Value Analysis** log displays the analysis properties on the right pane within the following tabs:

- **Preview**
- **General**
- **Properties**
- **Schedule**
- **History**

Tip: Click the expand icon, in the right pane, to better view the tab details.

The following explains each tab in detail.

Preview Tab

The **Preview** tab enables you to preview the earned value analysis for the P6 projects (cost loaded and resource loaded) in the activity sheet (System or Manual) without opening the Earned Value Analysis sheet.

- The upper section in the tab displays a graph with consolidated information of PV and AC across data dates. A vertical blue bar represents the last data date.
- The lower section shows the Summary Table with columns displaying EV metrics and derived values, for projects satisfying the last data date:
  - BAC, EAC, PV, EV, AC, ETC, RC, CV, SV, VAC, CPI, SPI, CSI, TCPI(EAC), TCPI(BAC).

  The lower section (**Cumulative Values and Indices**) is also referred to as the EV analysis sheet columns. When you click and open an EV analysis sheet from the Earned Value Analysis log window, the window that opens has both an upper and lower screens which display the information that you could see in the **Preview** tab.

General Tab

The **Preview** tab enables you to enter details, export details as template, and import data. To populate the fields in the **General** tab, you can export a template (use the export icon), enter the values in the exported template, ensuring that all columns, or conditions, are completed or met, save the template, and import the template back to Unifier.

Properties Tab

The **Properties** tab contains the following fields:

- **Name:** (Read-only) This field is populated with the value that you entered when you created the earned value scenario.
- **Description:** (Optional) Enter an applicable description.
- **Activity Sheet:** (Read-only) This field is populated with the value that you entered when you created the earned value scenario.
- **Graph Type:** (Required) Select the applicable graph to display, **Data Date Based** or **Period Based**.
- **Progress Measurement Technique:** (Read-only) This field is populated with the value that you entered when you created the earned value scenario.
- **Template ID:** (Required) Select the applicable ID, 1 through 6. The Template ID is a tag assigned by you when you add earned value analysis (EVA) data to the Cost or WBS sheet. It ensures that you can reference the selected EVA data elsewhere within the system.
- **Cost Sheet Column:** (Optional) Select the applicable Single or Logical Source. This field remains editable so that you can update the source for the Earned Value Analysis.

  In the EVA Sheet, the **Actuals** amount will be rolled up by associated WBS when you select a new Cost-type BP (CBS or WBS) column as the Cost Sheet Column source. You can use filter to see the **Actuals** associated with the selected WBS codes.

  The **Data Date** is important in calculations because the percentage of performance completed in earned value is calculated up to that date. If you have **Actuals** after that **Data Date** that show up in calculations, the Cost Performance Index (CPI) will be incorrect.

  > **Note:** The logical sources will show the entire cost data regardless of the data date.

  If a business process is configured and selected for the Cost Sheet Column field, the **Technique for computing estimate to complete (ETC)** block appears below the Cost Sheet Column field. This block lets you select the appropriate ETC calculation method.

Schedule Tab

The **Schedule** tab enables you to see the frequency for updating the data (**Data Refresh**). The **Schedule** tab is consistent with the **Schedule** tab in other EVM-related places.

In the **Frequency** drop-down list, select from **Daily**, **Weekly**, **Monthly**, or **Quarterly** options, select start and end dates and click **Save**.

Select **None** in the **Frequency** field to discontinue the automatic refresh of the earned value analysis sheet.

History Tab

The **History** tab enables you to see the following information about the past events related to the activity sheet (System or Manual):

- **Action**
- **Requestor**

- **Initiated On**
- **Start Date**
- **End Date**
- **Status**

The **History** tab is similar to the **History** tab in other EVM-related places.

- The grid displays the details of scheduled refreshes only.
- The columns list the action taken (data refresh only), the name of the user who initiated the scheduled refresh, date and time the scheduled job is initiated, start and end dates for each refresh job, and the status of the refresh process (**Completed**, **In Progress**, or **Failed**).
- Select an item to view details in the History Details section below. Click **Refresh** to refresh the status of an ongoing job.

Creating an Earned Value Analysis Sheet

In the **Earned Value Analysis** log, use the **Create** option to create an EVA sheet by following the details below:

1) Click **Create** to open the **New Earned Value Analysis** window.
2) In the **Name** field, enter a name.
3) In the **Description** field add a description (optional).
4) From the **Activity Sheet** drop-down select an activity sheet (System or Manual).
5) From the **Graph Type** drop-down select one of the following sources:
   - **Data Date Based**
   - **Period Based**
6) From the **Progress Measurement Technique** drop-down select one of the following sources:
   - **Cost Based**
   - **Unit Based**
7) From the **Template Id** drop-down select one of the Earned Value Analysis (1 through 6).
8) From the **Cost Sheet Column** drop-down select a cost sheet column.
9) Click **Save** to save the newly created EVA sheet.

You can create multiple EVA scenarios with different properties, performance indicator settings, and details in general tab. Each EVA will have a different PPC for the activities under the project. This will enable you to prepare reports, and see the trend depending on their preferences. You are also able to select the EVA sheet from the rolled up data in Cost Sheet.

> **Note**: Except the grid performance indicator, if you select any other action, the system displays the alert asking you to select 1 record.

Earned Value Analysis Sheet

To access the EVA sheet:

1) Go to the **Earned Value Analysis** log.

2) Select your sheet.

3) Click the *gear menu* (⚙) and select **Open**. The **Earned Value Analysis** sheet opens in new window. Alternatively, you can double-click the sheet to open the sheet window.

The upper section of the EVA sheet is fixed and viewed across all tabs. It includes the toolbar functions and a dynamic data table. The following explains the elements.

Option	Description
Filter ⛛	To adjust the view for particular information.
Print 🖶	To print the sheet.
Data Date	This field has a drop-down menu with historical dates. This is available for graph based on **Data Date**.
Projects	This field enables you to open the **Project Picker** window and select a project. The information is constrained with value in Data Date field. The **Project Picker** window enables you to **Find on Page**.
Period	The drop-down list with weekly, monthly, quarterly, half a year, yearly, and if applicable, financial period that has been selected in the shell. This is available for graph based on Period.
WBS or **CBS** drop-down	This toggle option is followed by the corresponding picker in the adjacent field (**WBS Code** or **CBS Code** drop-down). The picker user interface has **Expand**, **Collapse**, and **Find on Page**. the values are constrained by selections in the previous fields. Select the WBS graph and click WBS picker to filter by the OBS. The WBS picker will also display the WBS codes from the Unifier project, if the project is selected from the Projects Picker.
WBS Code or **CBS Code** drop-down	Click to open and select from **WBS Picker** or **CBS Picker** windows, respectively.

Option	Description
Cost & Rate Type	Displays all rate- and cost-type breakdowns available. It enables you to select a rate-type or a cost-type grouping. After you select the breakdown rows to filter, all the costs will be displayed based on breakdowns that you had selected.
Apply	Click to apply selections in the drop-down fields.
Reset	Click this to remove any zoom or filters applied via the curve picker.

The middle section of the EVA sheet contains a *Dynamic Data Table*.

The headings for the dynamic data table are as follows, depending on the graph type:

- **Project**
  - **All** is displayed when all projects have the same data date.
  - **All (Filtered)** is displayed when there are projects with differing data dates, and projects with the selected data date are filtered in the view.
- **WBS**

  Displays the calculated values for the point plotted in the graph.
- **Cost & Rate Type**

  Displays the cost and rate types in the graph.

The other headings may include:

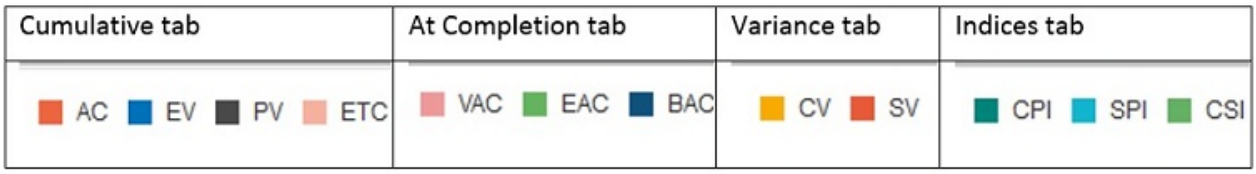
- **Date**
- Related EV metrics labels based on the tab. For example, in the Cumulative tab, the columns show PV, EV, AC, ETC, RC, CPI, and SPI.

The middle section of the EVA sheet contains the following tabs:

- **Cumulative**
- **Incremental** (only applicable to period based graph.)
- **At Completion**
- **Variance**
- **Indices**

Depending on the tab that you select, you get the pertinent graph.

Curve Picker: Filter curves you want to view by selecting or deselecting the colored boxes in the legend.



Unit Based

Earned Value Analysis - Graph

All the **Planned Units** and **Actual Units** will be rolled-up for **Project**, **WBS**, and **CBS** from the **Activity Sheet**. The EV value will be calculated using the following formula:

```
EV Units = BAC Units* PPC
```

Earned Value Analysis - Grid

For the Graph Type Unit based, the Grid will display units instead of costs (Planned units, Actuals Units, and so forth). The Variances, Indices, and At Completion values will also be updated based on the values.

Earned Value Analysis - Top bar

For the Graph Type Unit based, the bar will display units instead of costs (Planned units, Actuals Units, and so forth). he Variances, Indices, and At Completion values will also be updated based on the values.

Remaining Cost which includes Remaining Cost/Units

Cost Sheet

After you create multiple EVA graphs, the cost sheet drop-down menu displays all the cost-based graphs.

Roll up Actuals to EVA

The **Amount** and the **uuu_quantity** fields are going to roll up to the WBS Sheet. They will be used to feed into the **Actuals** in the EVM sheet. Unlike the existing column in the Cost Sheet that creates a new row in the EVM sheet, the new BP will roll up to the WBS and CBS for a P6 project. Since Unifier captures units in the EVM, you can add uuu_quantity and have the units roll up to the EVM sheet.

Note: The Unifier Actuals that have been assigned to any completed activity (with the **Effective Date** before **Activity Finish Date**) will not roll up to the EVA Sheet because those Unifier Actuals are considered **Historical** data.

Cost Based EVA Scenario

In the EVA Sheet, the **Actuals** amount will be rolled up by associated WBS when you select a new Cost-type BP (CBS or WBS) column as the Cost Sheet column source. You can see the **Actuals** associated with the selected WBS codes by using filtering.

When you filter by WBS codes in the EVA, the **Actuals** data will be in two separate rows (both Unifier and P6 Actuals).

By default, in the **Project** view, all the **Actuals** (including the actuals from cost sheet column source) are displayed.

The **Actuals** amount will be rolled up by associated CBS when filtered by CBS codes, in Cost-based EVA scenario. When selected filter by CBS or by P6 Projects, you can see the **Actuals** for Unifier and P6 for the filtered CBS codes, separately.

Filtering by CBS codes in EVA Sheet

The Rolled up Actual cost will be displayed in the EVA Sheet for the selected CBS codes only when there is a valid CBS-WBS combination allocated for the line item. That is to state, the Rolled up Actual cost will be displayed in the EVA Sheet for selecting any CBS assigned to receptive Activity and selecting WBS code from the same p6 project.

Filtering by WBS codes in EVA Sheet

The Rolled up Actual cost will be displayed in the EVA Sheet for the selected WBS codes even when there is an invalid CBS-WBS combination allocated for the line item. That is to state, the Rolled up Actual cost will be displayed in the EVA Sheet for selecting any CBS assigned to receptive Activity and selecting WBS code from the same, or different, p6 project.

Units Based EVA Scenario

The WBS Sheet column field is available in unit based EVA scenario as the Actual source. The list of sources available are all WBS Sheet columns which are of type SYS BP Decimal Amount. You can select any of the new CBS- or WBS-type BP columns (which are of SYS BP Decimal Amount added in WBS Sheet as WBS Sheet column source).

The Formula columns, which are based on CBS- or WBS-type BP of SYS BP Decimal Amount, are available to select.

By default, the Actual Units (per project) include the quantity (rolled up from new Cost-type BP) when the Actual Units are selected as WBS Sheet column source.

The Actual Units (uuu_quantity) by associated WBS codes are displayed when you filter the WBS codes.

Similarly, when CBS codes are filtered, the associated Actual Units are displayed. The same is applicable when other Cost-type BPs are also selected as the Cost Sheet column source. The graph includes the Actual Units from WBS Sheet column source.

Cumulative Tab

Like the **Preview** tab in the log, the **Cumulative** tab displays an upper graph and a bottom summarized table in the **Cumulative Values and Indices** section. It shows data as of the last **Data Date**.

> **Note:** All other tabs display a graph only.

As you move the cursor across the curves in the graph, a flagged indicator displays the curves, dates and values at the selected point in a curve. The indicator is color-coded for specific curves as per the legend. The tooltips provide the expanded form of acronyms. The last data date is represented by a vertical blue bar. If available, data dates preceding the last data date are displayed. After the last data date, weekly intervals are indicated along the X-axis for the duration of a year.

The zoom control is enabled by using the mouse wheel; values on X- and Y-axes remain static. You can also drag the zoomed area along the X-axis; the X-axis intervals remain constant.

The **Cumulative Values and Indices** section toolbar has **Export**, **Find on Page**, and a toggle **Expand** or **Collapse** buttons. While the columns present values for earned value metrics and derivatives, the rows list the projects for the selected data date in separate rows.

Depending on the selection that you have made in the filter, the grid that is displayed follows these scenarios:

Scenario One:

If you select Project with CBS filter:

The Summary (filtered) shows the actuals in the activity sheet (System or Manual) that corresponds to the P6 project and the CBS selected from the filter.

The Summary (P6) displays the actuals that corresponds to CBS across all the P6 projects (from the activity sheet (System or Manual)) until the Data Date that has been set or selected in the filter.

The Summary (Unifier & P6) displays consolidated amount from actuals (summary p6) and the sum of cost sheet actuals for CBS corresponding to the column selected during the EV creation until the data date selected in the filter.

Scenario Two:

If you select Project with WBS filter:

No additional summary row.

Period based graph

EVA Graph (Cumulative, At Completion, Indices & Variance)

If a user selects Graph Type as "Period based" for a particular Earned Value analysis scenario then:

The data date drop-down does not appear in the graph. Instead, a new drop-down is displayed (Periods) with the following options:

- Weekly
- Monthly
- Quarterly
- Yearly
- <Financial period name> selected in shell details tab (if applicable)

If the graph type is Periods, you can select multiple projects with same or different data date. Any Actual value of other projects, after the least data date among the projects, will be presented as Forecast.

For the existing users, when plotting the graph based on periods, the old financial period data, using the current baseline, is displayed.

> **Note**: The data for each project is locked until the project data date.

Also, the data which is being displayed in the graph will be updated according to the financial period that is selected.

> **Note**: The graph shows weekly data points on x-axis and filters the project with same data date.

If you have selected the period type as financial period, the data for all, or filtered, projects will be consolidated and plotted in the graph. The Data points on the x-axis will be the period end date.

The following two scenarios explain the results of your selections:

Scenario One:

If the user selected weekly, monthly, quarterly, or yearly from the drop-down menu, the start date of the first sub period will be the least project start date across all projects. The last sub period will be determined based on the last data date across all projects. In other words, the end date of last sub period should be greater than the last data date across all projects.

Scenario Two:

If the user has selected a financial period defined under Standards & Libraries, the graph will only display the data between the first sub period and the last sub period. Everything else will be filtered out of the graph.

EV analysis sheet (Cumulative Values and Indices section) columns

- Budget at Completion (**BAC**)
- Estimate at Completion (**EAC**)
- Planned Value (**PV**)
- Earned Value (**EV**)
- Actual Costs/Actual Units (**AC/AU**)

- Estimated Time to Complete (**ETC**)
- Real Costs/Real Units (**RC/RU**)
- Cost Variance (**CV**)
- Schedule Variance (**SV**)
- Variance At Completion (**VAC**)
- Cost Performance Index (**CPI**)
- Schedule Performance Index (**SPI**)
- Cost Schedule Performance Index (**CSI**)
- To Complete Performance Index (TCPI) - Estimate at Completion (EAC) (**TCPI(EAC)**)
- To Complete Performance Index (TCPI) - Budget at Completion (BAC) (**TCPI(BAC)**)

Incremental Tab

In Unifier, you can generate the earned value analysis graph based on the data date corresponding to a P6 Project. The graph shows the EV and Actuals data from project start date until the most recent data date, and every data date which lies in between.

You can also plot the graph based on periods.

EVA Graph (Incremental)

If you select Graph Type as "Period based" (for a particular Earned Value analysis scenario), an additional tab for incremental graph will be displayed along with other graphs. The tab for Incremental graph will show the incremental curves for planned value, earned value, actual cost, and forecast for the filters selected in the pickers. In other words, each X-axis data point shows the consolidate data since last data point. The Y-axis displays the amount (in hundreds, thousands, millions, and so on), and the value is determined by the graph dynamically showing the best possible representation based on the data available. The maximum and minimum values are determined by the maximum or minimum values as explained above.

Pre-requisites

You must have at least one Financial Period defined under Standards & Libraries (go to the Company Workspace tab and switch to Admin mode; in the left Navigator, select Standards & Libraries, and then select Period Structure).

You must have selected the relevant financial period in the shell options (go to the project/shell page; in the left Navigator, select Home; click My Dashboard, select Details, select the Options tab, update the Financial Period).

After you have performed the steps above, you will be able to select the Financial Period from a newly created drop down “Period” in EVA graph if they select graph type as "Period based" screen as follows:

Create

Click Create and select the Graph type.

Properties

In the Properties tab, click the Graph Type drop-down menu and select your option:

- Data Date Based

  Enables you to continue using the data date to filter projects.

- Period Based

  Enables you to see the graph in Earned Value Analysis based on the financial period selected in the shell details tab (weekly, monthly, quarterly, or yearly).

EVA Graph (Cumulative, At Completion, Indices & Variance)

If you select the Graph Type as "Period based" for a particular Earned Value Analysis scenario, then:

- Except a custom financial period, the x-axis points for any period will be the period start date.
  - The start point will be the earliest project start date.
  - The end point will be the farthest project end date.
- For custom financial period, the start and end points are period start and end points.
- Data date drop-down menu will not appear in the graph. Instead, the Periods drop-down menu is displayed that contains the following options:
  - Weekly
  - Monthly
  - Quarterly
  - Yearly
  - <Financial period name> selected in shell details tab (if applicable)
- If the graph type is Periods, you can select multiple projects with the same or different data date. The Actual value of other projects (after the least data date among the projects) will be treated as Forecast.
- For existing users, when plotting the graph based on periods. The old financial period data is generated through using the current baseline. The system freezes the data for each project until the project data date. Also, the data which is being displayed in the graph will be updated according to the financial period selected. The graph shows weekly data points on x-axis, and the graph filters the project with same data date.

If you select the period type as financial period, the data for all or filtered projects will be consolidated and plotted in the graph. Data points on the x-axis will be the period end date. The following two scenarios explain your selections:

Scenario one

If you have selected weekly, monthly, quarterly, or yearly from the drop-down menu, the start date of the first sub period will be the least project start date across all projects. Last sub period will be determined based on the last data date across all projects. In other words, the end date of last sub period should be greater than the last data date across all projects.

Scenario two

If you have selected a financial period define under Standards & Libraries, the graph will only display the data between the first sub period and last sub period. Everything else will be filtered out of the graph.

EVA Graph (Incremental)

If you select the Graph Type as "Period based" for a particular Earned Value Analysis scenario, an additional tab for Incremental graph is displayed along with the other graphs. A new tab for Incremental graph displays the incremental curves for planned value, earned value, actual cost, and forecast for the filters selected in the pickers. In other words, each x-axis data point displays the consolidate data since last data point. The y-axis displays the amount (in hundreds, thousands, millions, and so on), and the amount is determined by the graph dynamically to show the best possible representation based on the data available. The maximum and minimum value is determined by the maximum or minimum values as explained above.

At Completion Tab

View VAC, EAC, and BAC curves in the graph. Use the graph features as in the **Cumulative** tab.

Variance Tab

View CV and SV curves in the graph. Use the graph features as in the **Cumulative** tab.

Indices Tab

View CPI, SPI, and CSI curves in the graph. Use the graph features as in the **Cumulative** tab.

Performance Percentage Completion Sheet

Click the corresponding button to open the **Performance Percentage Completion** sheet overlay in the EV Analysis log.

During each synchronization, the performance percentage completion value of an activity gets updated from P6. Unifier stores the values against corresponding data dates, which are then used to calculate earned value metrics.

> **Note**: The functionality is only applicable to the current schedule of a project.

Similar to performing Earned Value (EV) analysis on a System Activity Sheet, you can select active manual activity sheets and perform Earned Value analysis on those sheets; however, the following exception will apply when performing Earned Value analysis on the active manual activity sheets:

- The Performance % Complete option is not required, or available, for EV analysis of active manual activity sheets.
- The Cost Sheet columns for CBS type of BPs are not required, or available, for EV analysis of active manual activity sheets.
- After you create an EV analysis sheet (see the ***Preview Tab*** (on page 149)) for active manual activity sheets, if you change the status of any of the activity sheets to inactive, you still can update the data through data refresh function, in the Schedule tab.
- The Name column, in the Project picker window, displays the name of the manual activity sheets.
- The WBS codes for the manual activity sheets appear in the WBS picker window, and the codes are not suffixed with any text.

When performing Earned Value analysis on the active manual activity sheets, you can get information about the:

- Actuals within a created cost-based graph, where the costs that correspond to all of the EV metrices are included.
- Actuals from the WBS sheet within a created unit-based graph, where the units that correspond to all the EV metrices are included.
- WBS codes in the WBS sheet for the respective Manual Activity Sheet in the EV analysis graph, in the WBS code picker.

Performance Percentage Completion Sheet - Toolbar

The following explains the toolbar options, columns, and rows:

- **Actions**
  - **Export CSV**
  - **Update Data**

    To update historical performance percent completion for the activity against any date, excluding Data Date coming through P6.
    - **Export CSV Template**
    - **Import CSV**

      Columns imported through **Import CSV** will be marked with an "*" icon.
- **Refresh**: Click **Refresh** to update the performance percentage completion values from the latest synchronization.
- **Find on Page**
- **Projects** drop-down: Select a project to view the performance percentage completion for each activity against data dates.

Columns

The left pane of the grid displays **Activity Id**, and **Activity Name**. The right pane displays a series of data dates based on the frequency of updates in P6.

Rows

The left pane of the grid displays the activities of the project selected in the **Projects** drop-down. The right pane displays % values against data dates for each activity.

Roll Up Earned Value Analysis to Cost Sheet

The **Column Properties** window enables you to select your cost sheets.

The following table explains the fields and options in the **Column Properties** window:

Field	Description
Name	Sheet name.
Datasource	The name of the source.

Field	Description
Element	To select the data element.
Entry Method	The options and sub-options are: **Manual Entry** ▸ **Direct entry into cell** ▸ **Line item content** **Sheet** ▸ **Type** (See below for details) ▸ **Name** (See below for details) ▸ **Column** (See below for details) **Formula**
Data Format	The options are: ▸ **Currency** ▸ **Percentage** ▸ **Decimal**
Display Mode	The options are: ▸ **Show** ▸ **Hide**
Total	The options are: ▸ **Blank** ▸ **Sum of All Rows** ▸ **Use Formula Definition**
Column Position After	To indicate where the column must be positioned
Delete	To delete the column properties.
OK	To accept changes.
Cancel	To cancel changes.

The **Type** field enables you to select the following:

- Worksheet
- Earned Value Analysis (EVA)
- Activity Sheet

The **Name** field displays the name of the Earned Value Analysis (1 to 6).

If there is no data or sheet for that **Name** field, the value will be zero in the Cost Sheet for that column. After you refresh the EVA Sheet, the data will be rolled up to the Cost Sheet as a column.

The **Column** field enables you to select the currency and decimal fields from the Earned Value Analysis that are available to be rolled up into the Cost Sheet as a column.

Earned Value Management (EVM)

- pv (Planned Value - cost)
- ev (Earned Value - cost)
- ac (Actual Cost - cost)
- cv (Cost Variance - cost)
- sv (Schedule Variance - cost)
- bac (Budget At Completion - cost)
- eac (Estimate at Completion - cost)
- vac (Variance at Completion - cost)
- etc (Estimate to Complete - cost)
- forecast (Forecast - cost)
- remaining_cost (Remaining Cost - cost)

> **Note:** The decimal type Data Element (DE) is available in the cost formula.

The **Column Name** field, in the **Cell Details** window, displays the DE field label in the respective Earned Value Analysis.

> **Note:** You can have from 1 to 100 predefined cost DEs created in the Cost Sheet.

Earned Value Analysis User Defined Report (UDR)

You can create User Defined Reports (UDRs) from the data present in your Earned Value Analysis.

The Create User-defined Report window enables you to define the following fields for your UDR (template or individual reports):

- **Data Type**
- **Element**
- **Report Type**
  - **Tabular**
  - **Cross Tab**
  - **Summary**
  - **Alert**
- **Access Type**

> **Note**: The same fields will be available for permission-based data sources.

The elements (Currency/Decimal), in OOTB Earned Value Analysis along with any user-defined column will be available as DEs for your report.

> **Note**: Only the data elements available in the Earned Value Analysis

Sheet will be available in the respective UDR.

Earned Value Analysis Report

The **Earned Value Analysis Report** sub-node enables you to access and work with the EVA reports.

To access Earned Value Analysis Report:

1) Go to the project/shell tab and switch to **User** mode.
2) In the left Navigator, select **Earned Value Manager**, and then select **Earned Value Analysis Report**.

Earned Value Analysis Reports Log

The **Earned Value Analysis Reports** log enables you to create and run reports. The log contains the following toolbar options:

Field	Description
Create	This option is available for users with Create permission, at the node level. See the ***Creating an Earned Value Analysis Report*** for details.
Delete	This option is available for users with Create permission, at the node level.
View	This option enables you to view all, create a new view, and manage views. By default, the **All** view is selected. To define new views, click **Create New View**. You can use the **Manage Views** option to manage the user-defined views. **Note**: Oracle recommends that you do not define a view with no columns selected.
Edit View	To change the view of the log.
Refresh	This option enables you to refresh the report log and view the latest report definitions that have been added.
Print	This option enables you to print the report log information using the options available.
Find on Page	Enables you to conduct a text-based search for each column in the log.

The **Earned Value Analysis Reports** log contains the following columns which correspond to the fields that you have included in the report when you created one, in addition to several more fields:

- **Name**
- **Description**
- **Earned Value Analysis Scenario**
- **Report Template**
- **Owner**
- **Last Run**

The **Earned Value Analysis Reports** log contains the following tabs:

Tab	Description
General	Enables you to both view and change some of the fields in the report. When you alter report detail in the **General** tab, you must save or save and run the report to ensure that your changes have been applied.

Tab	Description
Schedule	Enables you to: ▸ **Set Frequency for Scheduled Report Runs** ▸ Determine the **Output Information** The day value will reset to one, if you enter a numeric value that is out of range. The report will run on day twentieth of the first month of every quarter, if: ▸ You select a day between the first and thirty-first. ▸ You select the twentieth day of each quarter. The email subscription option enables you to control the type of email notifications that you want to receive. In the user **Preferences** window (in the upper-right corner, click your name, select **Preferences**, and then select the **Email Subscription** tab) you can subscribe to receive emails when reports are scheduled in the EVM reports (**Results from scheduled EVA reports**). This option will be available only when the **Earned Value Manager** module is loaded in the company. When you select the option and have a valid email address, you will receive email notification with the report attached. The format of the report is according to the format selected when the scheduled report was set to run. The email received contains the report (as an attachment, in Excel format) with the following information: ▸ Source Name: Displays the shell name. ▸ Report Name: Displays the EVA report name. ▸ Description: Description provided in the EVA report properties. ▸ Unifier Login: To go to the login page. The **User Preferences Template** window, **Preferences** tab, displays the option related to the Earned Value Report scheduled runs (**Results from scheduled EVA reports** option). The system uses the active user's preferences template when creating new users, as default. The other templates can be used to update preference settings for existing users.

Tab	Description
History	Enables you to see the following information: ▸ **Run Date** (the date the report was generated) ▸ **Run By** (who generated the report) ▸ **Status** (if the report is generated successfully)

Each report row has a *gear menu* (⚙) that enables you to run a report or delete a report:

- **Run Report:** You must have View permission to run the report, using the *gear menu*. This option is shown when you select one report at a time. The report will be displayed using the format saved in the properties.
- **Delete:** You must have Full Access and Create permissions to use the delete option. You can select one or more reports to delete.

Creating an Earned Value Analysis Report

Click **Create** in the **Earned Value Analysis Reports** log to open the **Earned Value Analysis Report** window.

1) In the **Name** field, enter a descriptive name.
2) In the **Description** field, enter description.
3) From the **Earned Value Analysis Scenario** field, select a scenario. The drop-down menu lists all the earned value scenarios that have been defined in the project. You can only select one scenario. Also:
   - For format1 to format3, the cost-based earned value scenarios are available to select.
   - For format4 you can select a unit-based earned value scenario.
4) From the **Report Template** field, select a template from the drop-down lists all available templates:
   a. CONTRACT PERFORMANCE REPORT - FORMAT 1 (Based on WBS)

      Format 1 defines cost and schedule performance data by product-oriented Work Breakdown Structure (WBS).
   b. CONTRACT PERFORMANCE REPORT - FORMAT 2 (Based on OBS)

      Format 2 defines cost and schedule performance data by the contractor's organizational structure.
   c. CONTRACT PERFORMANCE REPORT - FORMAT 3 (Baseline Changes)

      Format 3 defines changes to the Performance Measurement.

      Baseline (PMB).
   d. CONTRACT PERFORMANCE REPORT - FORMAT 4 (Staffing Forecasts)
   e. Format 4 provides staffing forecasts for correlation with the budget plans, cost, and schedule estimates.
   f. CONTRACT PERFORMANCE REPORT - FORMAT 5 (Analysis report)

Format 5 is a narrative report used to provide the required analysis of data contained in Formats 1-4

5) If you want to include additional parameters in your report, select the **Set Parameters** field and proceed to select additional parameters from the options provided. When you select a period type, the system displays the last 10 periods, starting from the current period, for you to select.
6) When finished, click one of these options:
   a. **Create** to create the report and run it later.
   b. **Create & Run Report** to create the report and run it immediately after.

> **Note**: The staffing numbers are rounded to the closest decimal; however, the total is calculated per actual value (the numbers before being rounded).

Record-level Permissions

The following explains the record-level permissions for Earned Value Analysis Reports.

To see the record-level permission:

1) Go to the project/shell tab and switch to **User** mode.
2) In the left Navigator, select **Earned Value Manager**, and then select **Earned Value Analysis Report**.
3) In the **Earned Value Analysis Reports** log, select a record.
4) On the right pane, click **Permissions** tab.

The **Permissions** tab displays all the participants and their permission details.

To assign permissions:

1) Go to the project/shell tab and switch to **User** mode.
2) In the left Navigator, select **Earned Value Manager**, and then select **Earned Value Analysis Report**.
3) In the **Earned Value Analysis Reports** log, select a record.
4) Click **Actions** drop-down menu and click **Permissions**. The **Permissions** window opens.

   Alternatively, you can click the *gear menu* (⚙) of the selected record and click **Permissions**.

In the **Permissions** window, click the select icon of the **Add** field to open **User and Group Picker** window (if you know the name, you can enter the name in the field—type ahead). This enables you to select the user or a group of users who need permission. In this window, use the **View** field to find users or groups and follow the prompts. When finished, ensure that you click **Done**.

In the **Permissions** window, you will see the following columns:

- **Name** (locked column)
- **Company** (locked column)
- **Select All**

To select all the permission options.

- **Modify Permissions**

  If selected, the **Edit Report** and **View and Run** options would also be selected.
- **Edit Report**
- **View and Run**
- **Remove**

  You must save your changes before you can use the **Remove** option. The **Remove** option is not available if you are the owner of the selected record.

Assigning permissions to a single report can be done by a user who is the report owner or has full access permission.

Assigning permissions to multiple users or groups is allowed if you are the report owner, or have the required permissions, at the module level. Similar to assigning permissions on a single record, you can select multiple records from the **Earned Value Analysis Reports** log, click **Actions** drop-down menu and click **Permissions**.

Additional information about record-level permissions:

When you assign permissions to multiple reports, you are adding new permissions.

When you select multiple reports to assign permissions, you must be the reports owner, or have full access permission for all the selected reports.

If you have view permission at module level, or can only run permissions, selecting the **Permissions** option (from the toolbar, click **Actions**, and select **Permissions**) opens the view only permission window. In this case, the columns are disabled and the **Remove** option is not available.

If you highlight, for example, the first three rows but select a permission option on the fifth row, the fifth row option will get selected and highlighted.

Earned Value Management Permissions

For Earned Value Management permissions, refer to the *Unifier Modules Setup Administration Guide* (Administration Help).

Earned Value Management Attributes

The following explains the Earned Value Management Attributes. For details about the data elements, refer to the *Unifier Data Reference Guide*.

In This Section

Recost - Activity Attributes

By default, the **Master Rate Sheet** in the Company Workspace will be used to do the costing. You can assign a custom rate sheet at the activity sheet (System or Manual) level, or a project sheet level, and then do the re-costing. Accordingly, the price/unit from the respective sheet is used to do the re-costing.

The following logic is used to do the re-costing:

- If no rate (Price/Unit) is defined in the activity sheet (System or Manual) and no rate is defined for the resource/role, the user will see a warning included in the history and a default value of 0.
- If a rate is defined for the individual resource on an activity, the system selects the project currency and multiplies that number by the number of units to get the cost.

Only the following fields will be re-costed for baseline schedule:

Activity Attributes

- Planned Total Cost (uuu_P6PlannedTotalCost)
- Actual Total Cost (uuu_P6ActualTotalCost)
- At Completion Total Cost (uuu_P6AtCompletionTotalCost)
- Remaining Total Cost (uuu_P6RemainingTotalCost)

Assignment Attributes

- Planned Cost (uuu_P6PlannedCost)*
- Actual Cost (uuu_P6ActualCost)*
- Remaining Cost (uuu_P6RemainingCost)*
- At Completion Cost (uuu_P6AtCompletionCost)*

As part of baseline re-costing, the new planned total cost in current schedule has been updated and recalculated for all the fields that are impacted by change in baseline planned cost.

- **Spread Costing**: Applying the correct cost-applicable on that day.
- **CBS**: Unifier uses the Estimate to Completion (ETC) calculation from Project ETC Formula.
- **PV Cost**: Planned Value (PV) cost of activity in Current Schedule is Planned Cost of the same activity in baseline.

For cumulative calculation the system applies the formula on cumulative data, and similarly, does the same for incremental data.

If a project does not have a baseline schedule, the system uses the corresponding baseline values from the current schedule.

Activity Attribute	Date Element	Calculation
Planned Total Cost	`uuu_P6PlannedTotalCost`	Planned Total Cost is calculated by consolidating the planned cost across all assignments under an activity.
Actual Total Cost	`uuu_P6ActualTotalCost`	The actual total cost incurred for the activity as of the project data date. Calculated by consolidating Actual Total Cost across all assignments under an activity.
At Completion Total Cost	`uuu_P6AtCompletionTotalCost`	At Completion Total Cost is calculated by consolidating the at completion costs across all assignments under an activity.
Remaining Total Cost	`uuu_P6RemainingTotalCost`	Remaining Total Cost is calculated by consolidating the remaining costs across all assignments under an activity.
Planned Value	`uuu_P6PVCost`	The portion of the baseline total cost of the activity or project that is scheduled to be completed as of the project data date. Calculated as Planned Total Cost multiplied by Planned Completion of the activity at the data date.

Activity Attribute	Date Element	Calculation
		Planned Total Cost and Planned completion of the activity are calculated from project baseline.
Earned Value	uuu_P6EVCost	The portion of the project baseline total cost of an activity actually completed as of the project data date. Calculated as Planned Total Cost multiplied by Performance Percent Complete. The method for computing performance percent complete depends on the Earned Value technique selected for the activity's WBS. Planned Total Cost of the activity is calculated from the project baseline.
Estimate to Complete	uuu_P6ETC	The estimated cost to complete the activity is calculated as Remaining Total Cost for the activity or the Performance Factor multiplied by (Planned Total Cost minus Earned Value), depending on the Earned Value technique selected for the activity's WBS (calculated from the primary baseline). Planned Total cost is calculated from the project baseline. For CBS, project level earned value technique is used for data roll up.

Activity Attribute	Date Element	Calculation
Schedule Performance Index	uuu_P6SPIndex	A measure of the work accomplished as a percentage of the work scheduled. Schedule Performance Index indicates whether you are meeting earned and planned values within your schedule. A value less than 1 indicates that less work was performed than was scheduled. Schedule Performance Index = Earned Value/Planned Value. A value less than 1 indicates that the project is behind schedule. For not started activities, SPI is 1.
Cost Performance Index	uuu_P6CPIndex	A measure of the work accomplished as a percentage of the actual costs. Cost Performance Index (CPI) indicates whether you have spent money over the budget to date. Cost Performance Index = Earned Value/Actual Cost. A value less than 1 indicates that the actual cost has exceeded the planned value. For not started activities, CPI is 1.
Cost Schedule Index	uuu_CSIndex	A measure to check the overall status by combining cost & schedule. Cost Schedule Index = Schedule Performance Index * Cost Performance Index. For not started activities,

Activity Attribute	Date Element	Calculation
		CSI is 1.
Schedule Variance	`uuu_P6ScheduleVariance`	The measure of schedule performance on a project. A negative value indicates that less work was actually performed than was scheduled and conversely. Schedule Variance = Earned Value - Planned Value. For not started activities, SV is 0.
Cost Variance	`uuu_P6CostVariance`	A measure of cost performance on an activity, WBS, or project. A negative value indicates that the actual cost has exceeded the planned value. Cost Variance = Earned Value - Actual Cost. For not started activities, CV is 0.
To Complete Performance Index	`uuu_P6TCPIndex`	A measure of the value of the project work that is remaining. *To Complete Performance Index* (TCPI) is essentially a ratio of the remaining work to the remaining funds. It helps determine the level of performance that must be achieved on the remaining work to meet recognized business goals, such as the Budget at Completion (BAC) or the Estimate at Completion (EAC). You can set performance thresholds for calculated TCPI values to display

Activity Attribute	Date Element	Calculation
		visual indicators that help you determine whether you need to take corrective action. To Complete Performance Index = (Remaining Work) / (Remaining Funds) where the Remaining Work = Budget at Completion - Earned Value. If *under* budget, then: Remaining Funds = Budget at Completion - Actual Cost If *over* budget, then: Remaining Funds = Estimate at Completion - Actual Cost
Estimate at Completion	`uuu_P6EACCost`	The expected total cost of a schedule activity when the defined scope of work will be completed. Calculated as Actual Cost (14) + Estimate to Complete Cost (24). The method for calculating estimate to complete depends on the earned value technique selected for the activity's WBS. The estimate at completion (EAC) will help you find a new, realistic, budget to complete the project. It tells you how much you may have to spend to complete the project. The EAC can be calculated in three cases depending on the situation.
Budget at Completion	`uuu_P6BAC`	The planned total cost through activity completion calculated by consolidating costs across all

Activity Attribute	Date Element	Calculation
		assignments.
Variance at Completion	uuu_P6VAC	The difference between the baseline total cost and the current estimate of total cost. A negative value indicates an estimated cost overrun. Budget At Completion is calculated from the current baseline. Variance at Completion = Budget At Completion - Estimate At Completion.

Recost - Assignment Attributes

Assignment Attribute	Data Element	Calculation
Planned Cost	uuu_P6PlannedCost	Calculated at spread level. Unifier Planned Units X Price/Unit. If the rate source is Override, the system uses the rate present in the activity sheet (System or Manual) corresponding to that assignment.
Actual Cost	uuu_P6ActualCost	Calculated at spread level. Unifier Actual Units X Price/Unit. If the rate source is Override, the system uses the rate present in the activity sheet (System or Manual) corresponding to that assignment.
Remaining Cost	uuu_P6RemainingCost	Calculated at spread level. Unifier Remaining Units X Price/Unit.

Assignment Attribute	Data Element	Calculation
		If the rate source is Override, the system uses the rate present in the activity sheet (System or Manual) corresponding to that assignment.
At Completion Cost	`uuu_P6AtCompletionCost`	Calculated at spread level. Unifier At Completion Cost is the sum of actual cost and remaining cost for that assignment.

WBS Attributes

Assignment Attribute	Data Element	Calculation
WBS Code	`uuu_P6WBSCode`	The unique identifier of the WBS for the associated activity.
WBS Name	`uuu_P6WBSName`	The name of the WBS Code for the associated activity.
WBS Path	`uuu_P6WBSPath`	The location of the activity on the WBS hierarchy.
WBS Type	REVIEWER: Need info	REVIEWER: Need info

Assignment Attribute	Data Element	Calculation
ETC Technique	uuu_P6ETC	The field is populated with the formula used for the ETC calculation. ETC is the estimated cost to complete the activity, WBS, or project. Calculated as Remaining Total Cost for the activity or the Performance Factor multiplied by (Budget At Completion minus Earned Value), depending on the Earned Value technique selected for the activity's WBS (calculated from the primary baseline). Budget at Completion is calculated from the project baseline.

Activity Attributes (General)

Assignment Attribute	Data Element	Calculation
Activity ID	uuu_P6ActivityId	The unique identifier of the activity. To identify and track activities, P6 assigns each activity a unique Activity ID that is the result of joining the Activity ID Prefix with the Activity ID Suffix and then adding an Increment value. For example, a prefix of PROJ-A# combined with a suffix of 2500 and an Increment of 5 will yield the following activity IDs: PROJ-A#2500, PROJ-A#2505, and so on.
Activity Name	uuu_P6ActivityName	The name of the activity.
Activity Status	uuu_P6ActivityStatus	The current condition of the activity. Valid values are Not Started; In Progress;

Assignment Attribute	Data Element	Calculation
		and Completed.
Activity Type	uuu_P6ActivityType	Determines how duration and schedule dates are calculated for an activity. Options are: Task Dependent: Activities are scheduled using the activity calendar rather than the calendars of assigned resources. Resource Dependent: Activities are scheduled using the calendars of assigned resources. Level of Effort: Activities have a duration that is determined by its dependent activities and are typically administration type. Start or Finish Milestone: Indicates if the activity marks the beginning or end of a major stage in the project. Milestones have zero duration and no resources. WBS Summary: Activities that are used to aggregate date, duration, and percent complete values for a group of activities that share a common WBS code level.
Activity % Complete	uuu_P6PercentComplete	An activity level setting in P6 used to update the amount of work completed on an activity. Use one of 3 options for identifying Activity Percent Complete: Duration % Complete: Used to report progress based on Remaining Duration: [(Original Duration - Remaining Duration)/Original

Assignment Attribute	Data Element	Calculation
		Duration]*100. Units % Complete: Used to report progress based upon actual work performed and remaining units to complete: (Actual Units/At Completion Units) * 100. Physical % Complete: Used to progress based on personal judgment.
CBS Code	`bitemID`	The cost code in Unifier to which you can link an activity, assignment, or expense.
Performance % Complete	`uuu_P6Performance%Complete`	The percentage of the activity or project planned work that is currently complete. Performance % Complete is used to calculate earned value. It can be based on the technique for computing earned-value percent complete for the activity's WBS - for example, the activity percent complete, 0/100 rule, 50/50 rule, and so on.

Activity Attributes (Scheduling)

Assignment Attribute	Data Element	Calculation
Planned Start	`uuu_P6PlannedStart`	The date the activity is scheduled to start.
Planned Finish	`uuu_P6PlannedFinish`	The date the activity is scheduled to finish if the activity has not started.
Planned Duration	`uuu_P6PlannedDuration`	The expected amount of time required to complete an activity. The planned working time is calculated in

Assignment Attribute	Data Element	Calculation
		P6 using the activity's calendar. The duration is measured from the activity's planned start date to its planned finish date.
Start	uuu_P6Start	Start date is equal to the early start when an activity has no progress. When the activity is in progress or complete, start is equal to the actual start.
Finish	uuu_P6Finish	Finish date is equal to the early finish when an activity has no progress. When the activity is in progress, finish will remain equal to early finish. When the activity is complete, finish date is equal to the actual finish date.
Actual Start	uuu_P6ActualStart	If work has started, the date on which the activity, WBS, project, or EPS began. If resources (labor, non-labor, or material) or roles are assigned to the activity, the actual start date is the earliest among all the resource or role assignments. For a WBS, project, or EPS, the actual start date is the earliest actual start date among all activities within the WBS, project, or EPS. When P6 is integrated with Unifier, the Actual Start date might have been imported from Unifier rather than calculated by P6.
Actual Finish	uuu_P6ActualFinish	The date on which the item, such as an activity, assignment, or project, is complete. When P6 is

Assignment Attribute	Data Element	Calculation
		integrated with Unifier, the Actual Finish date might have been imported from Unifier rather than calculated by P6.
Actual Duration	uuu_P6ActualDuration	The total working time from the Actual Start date to the Actual Finish date for completed activities, or the total working time from the Actual Start date to the data date for in-progress activities. The actual working time is computed using the activity's calendar.
Remaining Early Start	uuu_P6RemainingEarlyStart	Remaining early start date is basically the earliest date the activity can start or continue after the data date. If the Activity has no progress then remaining early dates are set equal to the early dates. If progress follows as expected, the remaining early start is equal to the data date. After the activity is complete, remaining early start is blanked out.
Remaining Early Finish	uuu_P6RemainingEarlyFinish	Remaining early finish is calculated by adding the remaining duration to remaining early start. After the activity is complete, remaining early finish is blanked out.
Remaining Duration	uuu_P6RemainingDuration	The total working time from the activity remaining start date to the remaining finish date. The remaining working time is calculated using the activity's calendar. Before the activity is started, the remaining duration is the same as the

Assignment Attribute	Data Element	Calculation
		planned duration. After the activity is completed the remaining duration is zero.
At Completion Duration	`uuu_P6AtCompletionDuration`	The total working time from the activity's current start date to the current finish date. The current start date is the planned start date until the activity is started, and then it is the actual start date. The current finish date is the activity planned finish date while the activity is not started, the remaining finish date while the activity is in progress, and the actual finish date after the activity is completed. The total working time is calculated using the activity's calendar.
Primary Constraint	`uuu_P6PrimaryConstraint`	A user-imposed date restriction can be applied to an activity that impacts the scheduling of dependent activities. For example, use the Start On or After constraint to specify the earliest date on which an activity can begin.
Secondary Constraint	`uuu_P6SecondaryConstraint`	A maximum of two constraints - a primary and a secondary can be applied to an activity. To specify a secondary constraint, a valid primary constraint must first be applied to the activity.

Activity Attributes (Units)

Assignment Attribute	Data Element	Calculation
Planned Total Units	`uuu_P6PlannedTotalUnits`	The planned units of work for the activity.
Actual Total Units	`uuu_P6ActualTotalUnits`	The exact number of units that have been expended on the selected activity.
Remaining Total Units	`uuu_P6RemainingTotalUnits`	The remaining units of work to be performed by the resource on the activity. Calculated as Planned Units minus Actual Units.
At Completion Total Units	`uuu_P6AtCompletionTotalUnits`	The sum of the actual units and remaining units for the resource assignment on the activity. Calculated as Actual Units plus Remaining Units.

Activity Attributes (Cost)

Assignment Attribute	Data Element	Calculation
Planned Total Cost	`uuu_P6PlannedTotalCost`	The expected total cost of the activity, consolidating costs of all assignments.
Actual Total Cost	`uuu_P6ActualTotalCost`	The actual non-overtime plus overtime cost for all the resource assignments of the activity.
Remaining Total Cost	`uuu_P6RemainingTotalCost`	The remaining cost of all the resource assignments for the activity.
At Completion Total Cost	`uuu_P6AtCompletionTotalCost`	The sum of the actual costs plus remaining costs for the resource assignment on the activity. Calculated as Actual Costs plus Remaining Costs.

Activity Attributes - Earned Value

Assignment Attribute	Data Element	Calculation
Planned Value (PV)	uuu_P6PVCost	The portion of the baseline total cost of the activity or project that is scheduled to be completed as of the project data date.
Earned Value (EV)	uuu_P6EVCost	The portion of the project baseline total cost of an activity or all activities in the project that are actually completed as of the project data date. Budget at completion is calculated from the project baseline. Calculated as Budget At Completion multiplied by Performance Percent Complete.
Estimate to Complete (ETC)	uuu_P6ETC	The estimated cost to complete the activity, WBS, or project. Calculated as Remaining Total Cost for the activity or the Performance Factor multiplied by (Budget At Completion minus Earned Value), depending on the Earned Value technique selected for the activity's WBS (calculated from the primary baseline). Budget at completion is calculated from the project baseline.
Schedule Performance Index (SPI)	uuu_P6SPIndex	A measure of the work accomplished as a percentage of the work scheduled. Schedule Performance Index indicates whether you are meeting earned and planned values within your schedule. A value less than 1 indicates that less work was performed than was

Assignment Attribute	Data Element	Calculation
		scheduled. Calculated as Earned Value divided by Planned Value.
Cost Performance Index (CPI)	uuu_P6CPIndex	A measure of the value of work accomplished as a percentage of the actual costs. Cost Performance Index (CPI) indicates whether you have spent money over the budget to date. On the My Preferences page in P6, you can set performance thresholds for CPI calculated values to determine whether you need to take corrective action. Calculated as Earned Value Cost divided by Actual Cost. A value less than 1 indicates that the actual cost has exceeded the planned value.
Cost Schedule Index (CSI)	uuu_P6CSIndex	Product of Schedule Performance Index and Cost Schedule Index.
Schedule Variance	uuu_P6ScheduleVariance	The measure of schedule performance on a project. A negative value indicates that less work was actually performed than was scheduled. Calculated as Earned Value minus Planned Value.
Cost Variance	uuu_P6CostVariance	A measure of cost performance on an activity, WBS, or project. A negative value indicates that the actual cost has exceeded the planned value. Calculated as Earned Value minus Actual Cost.
To Complete Performance Index	uuu_P6TCPIndex	The ratio of the remaining work to the remaining

Assignment Attribute	Data Element	Calculation
		funds. Calculated as (Budget at Completion minus Earned Value) divided by (Estimate at Completion minus Actual Units or Cost).
Estimate at Completion	uuu_P6EACCost	The expected total cost of a schedule activity, a work breakdown structure component, or the project when the defined scope of work will be completed. Calculated as Actual Cost plus Estimate to Complete Cost. The method for calculating estimate to complete depends on the earned value technique selected for the activity's WBS.
Budget at Completion	uuu_P6BAC	The planned total cost through activity or project completion. Calculated as Planned Labor Cost plus Planned Non-labor Cost plus Planned Expense Cost plus Planned Material Cost.
Variance at Completion	uuu_P6VAC	The difference between the baseline total cost and the current estimate of total cost. A negative value indicates an estimated cost overrun. Budget At Completion is calculated from the current baseline. Calculated as Budget At Completion minus Estimate At Completion.

Resource Attributes

Assignment Attribute	Data Element	Calculation
ID	uuu_P6ResourceID	Resource code from P6.
Name	uuu_P6ResourceName	Resource name from P6; It can be a team name or resource name depending on the rate assigned to that level.
Status	uuu_P6ResourceStatus	Status of the resource - Active/Inactive.
Currency	uuu_P6RateCurrency	Currency for the rate.

Role Attributes

Assignment Attribute	Data Element	Calculation
ID	uuu_P6RoleID	Role code from P6
Name	uuu_P6RoleName	Role name from P6; It can be a team name or role name depending on the rate assigned to that level.
Status	uuu_P6RoleStatus	Status of the role - Active/Inactive
Currency	uuu_P6RateCurrency	Currency for the rate

Rate Sheet - Rate Tab

Assignment Attribute	Data Element	Calculation
Effective Date	uuu_P6RateEffectiveFrom	Date from which the rate is applicable.
Price/Unit	uuu_P6priceperunit	Rate or price per unit.

Earned Value Management Templates

The following templates are available for the Earned Value Management:

- OBS Templates
- WBS Templates

In This Section

OBS Templates

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) In the left Navigator, select **Templates**, and then select **OBS Sheets**.
3) In the **OBS Sheets** log, click **Create** to open the **Create OBS Sheet** window.
4) Enter a name in the **Name** field.
5) Enter a description in the **Description** field.
6) Click **Create**. The **OBS Sheets** log displays the newly created OBS sheet.
7) Click the *gear menu* (⚙) on the new OBS sheet and select **Open**.
8) Proceed to create an OBS structure, under **Templates**. This can be used when creating the OBS in a shell (for more information, see ***Creating an OBS Sheet***).

WBS Templates

No templates are needed for WBS sheet as the WBS sheet is created directly by way of P6 and Unifier Integration.

Earned Value Management Configuration Package

The following configuration packages are available for Earned Value Management:

- OBS Configuration Package
- WBS Configuration Package

In This Section

OBS Configuration Package

To access the package:

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) In the left Navigator, select **Configuration Package Management**, and then select **Component Lists**.
3) From the toolbar, click **Create**.
4) In the **New Component List**, locate the **Activity Manager** section, and then locate **OBS Attributes**.

WBS Configuration Package

If you have access to the Schedule Manager feature and you select the Schedule Manager in uDesigner, the WBS Sheet design is also available as an option when you create a configuration package.