Oracle
Primavera
Unifier General Administration Guide

Version 20
October 2021

Contents

Getting Started with Unifier General Administration Guide

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.

Access to Unifier functionality is granted through permissions. The ability to utilize a specific function in Unifier depends on permissions settings (accessed in **Admin** mode).

The *Unifier General Administration Guide* explains how to use the general options that are available in the *administration* mode of operation.

The Primavera Unifier has two modes of operation:

- ▶ **Admin** (Administration) **mode**

  Company administrators work in **Admin** mode to set up, for example, company, program, and project or shell properties, user permissions, templates for major Unifier features, data structures, and configure and set up business process (BP) workflows.

- ▶ **User mode**

  Users spend most of their time in the **User** mode. The User mode allows users perform the day-to-day activities, collaborate through business processes and Mailbox, maintain, for example, the Cost Manager, Schedule Manager, and Document Manager, and run reports.

  The *Unifier User Guide* explains how to use the options that are available in the *user* mode of operation.

You can switch between modes using the mode icons ( ).

> **Note**: This option is not available in **Home** page because Home page does not support the Admin mode.

Security Considerations in Unifier

For any company that deals with sensitive data, keeping it secure is crucial to success. While hosting Unifier data on the Oracle Cloud provides security measures, it cannot do everything. For example, it cannot prevent phishing attempts or other attacks that exploit gaps in its users' security awareness. That is why it is important for everyone who works with Oracle Primavera Unifier, whether hosted on-premises or on the Oracle Cloud, to understand what they can do to keep data secure.

Who this information is for

This guide (the *Unifier Administration Guide*) and the *Unifier Integration Interface Guide* contain comprehensive information on administrative features, including those related to security.

This chapter is for anyone who uses, manages, or is just interested in Unifier. If you are a security expert or administrator, this is a good place to start. It should help you see the big security picture and understand the most important guidelines related to security in Unifier.

For further information on configuring your on-premises Unifier environment securely, refer to the *Unifier Security Guide for On-Premises*.

Some Security Basics

We use the term administrator to refer to anyone who is responsible for managing a company's data and who can access that data. For our purposes, administrators includes a wide variety of IT professionals, from those who define roles in the Primavera Unifier application to those who manage company servers.

An end user is anyone who uses Primavera Unifier to do their job. This includes project managers, subcontractors, general contractors, and everyone else who logs into Primavera Unifier from an office or jobsite to get their work done.

Administrators

▶ Set up Single Sign-On (SSO) and enable multi-factor authentication to minimize the number of passwords that users have to remember and to consolidate risk.
▶ Educate users on how they can avoid unwittingly helping hackers. One of the best ways application administrators and security advocates can help users is by helping them to prevent security breaches.
▶ Use a VPN to encrypt data being sent over the internet.
▶ Stay up-to-date about security trends and best practices.

End users

▶ Follow security guidelines created by their companies and the administrators of any network applications they use.
▶ Use strong passwords. The more random-looking the better, and avoid reusing passwords.

▶ Learn to recognize phishing. Phishing is when someone disguises an email or some other transmission as a legitimate message in an attempt to get a user to reveal sensitive information. For example, a hacker may send you an email disguised to look like an email from your employer requesting login information. These attacks are becoming more sophisticated, but you can still protect yourself by making sure any emails you receive or websites you visit are legitimate before using them to share sensitive information.

In This Section

Authentication: How Users Sign On

Authentication refers to the way users sign on. If Primavera Unifier is configured to use Oracle Identity Cloud Service (IDCS), administrators can—and should—implement Single Sign-On (SSO). SSO reduces the number of passwords users have to remember. It can also be used to enable multi-factor login, which is when users are asked to provide some verification in addition to their passwords, like a code that they receive via text or email.

If your Unifier Cloud environment is provisioned in Oracle Cloud Infrastructure (OCI), it comes with IDCS. Otherwise, you can configure some authentication settings on the Application Settings page.

> **Note**: Unifier does not support integration with IDCS for Unifier On-Premises customers.

To learn how to change the authentication settings, refer to the "Authentication Options for Primavera Unifier" section of the *Unifier Security Guide for On-Premises*.

Authorization: What Users Can Access

Authorization refers to what users can access. Authorization to use the Unifier application is based on permissions. You also have super-user, the Administrator. Grant authorization carefully to all appropriate Primavera Unifier users.

Administrators: There are different types, or levels, of Administrators in Unifier, their responsibility vary from (but not limited to) end-to-end administration of the Unifier to administration the company functions. See *Administrators in Unifier* (on page 21).

Permissions: Unifier offers a flexible yet powerful permission-based security system, as opposed to role-based security. Role-based security by definition limits the user to a fixed set of functions or tasks. With permission-based security, access to all modules, functions and tasks in Unifier is controlled by granting each user any combination of permissions. These permissions consist of the ability to access specific Unifier tasks, and to perform specific actions within those tasks, such as create, modify, and view. See Permission-Based Security in Unifier and Managing permissions and access control. See ***Permission-Based Security in Unifier*** (on page 23) and Managing Permissions and Access Control.

Groups: Security groups make it easier for administrators to assign permission sets to multiple users at the same time. User groups can be used to group users who will be using the same functionality in Primavera Unifier and assigned the same Permissions. Anytime a new person comes onto the project or shell, administrator can assign them to the appropriate groups and their permissions will be set automatically. See User Administration.

For more information on user authorization, refer to the *Unifier Security Guide for On-Premises*.

Endpoint Security

From laptops to cellphones, organizations have to keep track of data on more devices than ever, and more devices means more risk. It is important to implement Enterprise Mobility Management (EMM) tools and policies.

Inherent Risks and Practical Policies

No automated security system or protocol can make a system fully secure if those with legitimate access exploit it for illegitimate purposes or if a device falls into the wrong hands. Here are some general "common sense" guidelines you should follow when it comes to endpoint security:

Use good mobile device management (MDM) software.

> MDM systems can help your organization secure the devices where its sensitive data might end up.

Grant security permission conservatively.

> Do not give everyone permission to everything just to avoid perceived complexity. Remember, one breach can be many times more costly and time consuming than setting and following standard security protocols.

Organize permission sets and credentials so they can be edited quickly.

> Keep user groups and their permissions organized and easy to manage. Use descriptive names for permission sets, and organize them logically to make it easier for you or anyone else to manage them quickly and confidently.

Keep up with organizational changes.

> If a user no longer needs access to a part of the app, for whatever reason, update that user's permissions accordingly.

Use timeout settings.

Administrators can limit how long mobile apps and APIs remain connected to the server after a user signs in. For more information:

See **Unifier Mobile Application** (on page 307).

Refer to the *Unifier Security Guide for On-Premises*.

Confidentiality for Primavera Unifier

Confidentiality ensures that only the authorized users see the stored and transmitted information. In addition to the documentation included with other applications and hardware components, follow the Primavera Unifier-specific guidance below.

▶ For data in transit, use SSL/TLS to protect network connections among modules. If you use SSO authentication, ensure that you use LDAPS to connect to the directory server.

▶ For data at rest, refer to the documentation included with the database server for instructions on securing the database.

See **Managing Personal Information in Unifier** (on page 289).

Integration with Other Applications

The ability to connect and exchange information with other apps is powerful, but it also presents some potential security issues that administrators must manage. It is important to understand which data flows between applications to ensure compliance with policies and regulations related to security and privacy.

For more information on integration, refer to the *Unifier Integration Interface Guide*.

Security for Developers - API Security

With APIs, developers can use some of the data and functionality of Primavera Unifier outside of the limitations—and relative safety—of the Primavera Unifier environment. This opens many possibilities. But as with any situation where data can move in potentially unpredictable ways, it presents risk. For more information on integration, refer to the *Unifier Integration Interface Guide*.

Establishing Security Contacts

While the apps used by your organization may have some security features of their own, most security issues ultimately come down to the people who use them. When your company establishes its security procedures, it's important to also establish in-house security experts to whom other members can turn when they have security questions. Security points of contact should be continuously learning about security trends and how they can educate users to keep their data and network secure. Security contacts should also routinely update and maintain protocols that suit the security needs of their organizations.

Companies in Unifier

The following is a list, and description of, company types in Unifier:

- Owner Company (also referred to as the Sponsor Company)
- Partner Company
- Member Company

The following explains each company type in detail.

Owner Company (Sponsor Company)

The entity that engages in business and has the complete control (or ownership) of the Unifier application with all its rights and privileges. An Owner Company (Sponsor Company), commissions projects or shells. Projects and shells are created in Unifier under the Owner Company, as projects and shells.

> **Note**: Projects and shells are a collaboration space allowing users to collaborate and coordinate efforts during the execution of a project.

A Sponsor Company may have one, many, or no partners.

Partner Company

A Partner Company is a consultant, a contractor, or a vendor company which is associated with a Sponsor Company. A Partner Company may work with the Sponsor Company on all, or only some, of the Sponsor Company projects or shells.

Member Company

When a Partner Company participates in a project or shell, the Partner Company becomes a Member Company in that project or shell, and the Partner Company users that are added to the project or shell become the Member Company users.

> **Note**: Project and shell access is limited to Unifier users (including Sponsor Company users or Member Company users) who are chosen for the project or shell and permissions are configurable for each company.

Unifier allows adding Partner Company/ Member Company to enable project users to collaborate on (and coordinate) the execution of a project.

To access the **User Administration** node, go to **Company Workspace** > **Admin** mode > **User Administration**. The following explains each sub-node in details.

Administrators in Unifier

Note: The following information is based on the default settings and typical use of Unifier.

There are different types, or levels, of Administrators in Unifier and they include:

▶ Site Administrator (also referred to as the System Administrator)
▶ Company Administrator
▶ Project Administrator or Shell Administrator (Project/Shell Administrator)

The following explains each administrator type in detail.

Site Administrator (also referred to as the System Administrator)

A Site Administrator is responsible for the end-to-end administration of the Unifier.

Note: For cloud customers, the Oracle Primavera Technical Team performs the Site Administrator function. For on-premises customers, the customer performs the Site Administrator function.

The Site Administrator's tasks include:

▶ Loading modules.
▶ Loading certain system reports.
▶ Managing the License Manager.
▶ Performing basic system administration tasks, including unlocking locked user accounts.
▶ Performing Company Administrator and Project/Shell Administrator functions, if requested.
▶ Changing the Authentication Key.

Company Administrator

Generally, a Company Administrators administers the Owner Company (Sponsor Company) functions. The Company Administrator can perform user tasks, also.

Note: Except where noted, the Company Administrator cannot perform tasks designated for the Site Administrator.

Depending on the permission a Company Administrator typically performs the following tasks:

▶ Creating multiple partner companies in the Owner Company.
▶ Creating users for each partner companies in the Owner Company.
▶ Modifying the company properties, including Company Workspace
▶ Managing company details such as contact information.
▶ Managing company-level users, groups, and granting permissions.
▶ Managing Partner Company (or Member Company) status.
▶ Managing Partner Company (or Member Company) users.
▶ Creating cross-project or cross-Shell reports.

- Creating, and maintaining, Data Definitions (DDs) and Data Elements (DEs).
- Activating a Business Process schema.
- Defining record numbering scheme.
- Defining the company exchange rate and currencies.
- Creating programs, projects, and shells.
- Managing project organization (categories) and shell organization (types).
- Setting up templates.
- Setting up and managing data structure.
- Configuring the User mode Navigator (the setup of the left-hand Navigator in User mode: **Company Workspace** > **Admin** mode > **Configuration** > **User Mode Navigator**).

In Unifier, you can have multiple company administrators.

The Company Administrator group, which can contain multiple company administrators, is automatically created when the Owner Company (Sponsor Company) is created in Unifier, by the Site Administrator.

This Company Administrator group has preset permissions. These permissions can be changed as needed.

Examples

- If new business processes are added.
- If new modules are added.
- If the Company Administrator assists in administration of other modules such as projects or shells.

Project Administrator or Shell Administrator (Project/Shell Administrator)

Project/Shell Administrators manage project-level or shell-level administration tasks, and may also administer programs for projects. A project or shell administrator will add existing Unifier users to projects and/or project/shell groups, restrict access within specific projects, set up the project or shell cost/funding/Schedule of Value (SOV)/schedule sheets, and set up business processes. Project or Shell Administrators typically:

- Administer projects or shells they are a member of
- Add Project or Shell Users, create Groups and grant Permissions
- Create and modify the Cost Sheet
- Create Business Process Setups and define workflows
- May also manage programs as a Program Administrator (for projects only)

To access company administration functions see *Company Landing Page (Admin)* (on page 25).

Permission-Based Security in Unifier

Unifier offers a flexible yet powerful permission-based security system, as opposed to role-based security. Role-based security by definition limits the user to a fixed set of functions or tasks. With permission-based security, access to all modules, functions and tasks in Unifier is controlled by granting each user any combination of permissions. These permissions consist of the ability to access specific Unifier tasks, and to perform specific actions within those tasks, such as create, modify, and view.

For ease of use, permissions can be set for both individuals and for groups of users. You can even copy permissions from one user to another, and then make modifications.

A user may belong to any (or all) of the administration groups and perform functions as a company, program, or project or shell administrator. Company Administrators generally have program and project or shell permissions, and may or may not work within the specific projects or shells. You may want a project, shell, or program administrator to have the ability to perform some company administrator functions, such as creating a project or shell. Creating different types of user permission templates will help you to more easily grant access to different staff members, whether they are administrative staff, engineers or architects, managers, vendors or subcontractors, IT personnel, etc.

Use default permissions as a guideline, but your users' actual permission settings will depend on your organizations needs.

Company Landing Page (Admin)

When you (a user or an administrator) sign in to Unifier, the system is in the user mode, by default.

You can switch between modes using the mode icon (User mode Admin mode).

> **Note**: This option is not available in the **Home** page because **Home** page does not support the **Admin** mode.

To access your company landing page (Admin):

1) Click your company tab (**Company Workspace**) to open it.
2) Switch to **Admin** mode.
3) From the left-hand Navigator, on the very top, click your company name (for example:).

The company landing page has the following elements:

Left-hand Navigator	Right-hand Pane
▶ Company name ▶ Announcements ▶ License Manager ▶ Consent Notice ▶ Partner Companies ▶ uDesigner ▶ Data Structure Setup ▶ Access Control ▶ User Administration ▶ Gateway ▶ Configuration ▶ Standards & Libraries ▶ Company Workspace ▶ Templates ▶ Programs ▶ Company Sponsored Projects (Standard) ▶ Company Sponsored Shells ▶ Analytics ▶ Custom Dashboard ▶ Background Jobs ▶ Event Notifications ▶ System Reports ▶ Configuration Package Management	On the top: ▶ Tab name: Company Workspace ▶ Menu options (File, Edit, View, and Help) ▶ Toolbar options (New, Open, and Find) Below the top, on the left, company general information: ▶ Company name ▶ Description ▶ Administrator (click on the link to view contact details for the company administrator contact.) ▶ Home Page URL (links to the company web site, which opens in another browser window. This optional link is defined by the Company Administrator.) ▶ Help URL (links to an internal source of supporting information, such as a company intranet site. This optional link is defined by the Company Administrator.) Below the top, on the right: ▶ Company Addresses: the right side of the window displays a list of all addresses that have been entered in the system for the company, such as the main office, billing and shipping address, etc. ▶ Partner Companies: any consultants, contractors or vendors that are associated with projects or shells that the Sponsor Company commissions.

On the right-hand pane, on top, click the **Open** toolbar option to open the **Edit Company** window. See *Access Company Details* (on page 61) for information about the tabs in the **Edit Company** window.

Program Landing Page (Admin)

To access your program landing page (Admin):

1) Click your program tab to open it.
2) Switch to **Admin** mode.
3) From the left-hand Navigator, on the very top, click your program name (for example: 👤 Program 5).

The program landing page has the following elements:

▶ Left-hand pane (Navigator) which contains the following nodes (modules):
  ▸ Program name
  ▸ Summary
  ▸ Other nodes (such as Cost Manager, Schedule Manager, etc.)
  ▸ Reports
▶ Right-hand pane which contains:
  ▸ On the top:
    ▪ Tab name
    ▪ Menu options (File, Edit, View, and Help)
    ▪ Toolbar options (New, Open, and Find)
  ▸ Below the top, on the left, program general information:
    ▪ Program name
    ▪ Program Number
    ▪ Location
    ▪ Email Address
    ▪ Description
  ▸ Below the top, on the right:
    ▪ Links

Shell Landing Page (Admin)

Once you create a shell, it is available for use. To access your shell landing page:

1) Click the shell tab to open it.
2) Switch to **Admin** mode.
3) From the left-hand Navigator, click your shell name (for example: ![Properties]) on top.

The top section of the landing page contains the Shell Dashboard.

By default, the shell dashboard contains the following blocks:

▶ **Tasks**
▶ **Notifications**
▶ **Mail**
▶ **Image**
▶ **Details**
▶ **Links**

The bottom section of the shell landing page displays a log of all sub-shells that have been created under the currently selected shell. For example, if you select the sub-shell South Bay, and then the further sub-shell Mathilda Northwest, this landing page displays.

By default, the following two tabs are displayed.

▶ **Summary**
▶ **Workspaces**

You can change the layout of the tabs, in My Dashboard or other custom dashboard.

> Example
> Block Length: 2 units
> Block Height: 2 units

The following explains the various informational blocks in the Summary tab:

▶ **Tasks**

This block lists the total tasks belonging to the shell. When you click on Tasks you go to the Task log directly. You will be able to add this block in all tabs (in all dashboards) by using the data-source "Items Requiring Attention" in the Standard block. Also, you can remove the block from My Dashboard.

▶ **Notifications**

This block lists the total notifications belonging to the shell. When you click on Notifications you go to the Notifications log directly. You will be able to add this block in all tabs (in all dashboards) by using the data-source "Items Requiring Attention" in the Standard block. Also, you can remove the block from My Dashboard.

▶ **Mails**

This block lists the total mails belonging to the shell. When you click on Mails you go to the Inbox log directly. You will be able to add this block in all tabs (in all dashboards) by using the data-source "Items Requiring Attention" in the Standard block. Also, you can remove the block from My Dashboard.

▶ **Project Image**

This block displays an image, if available; otherwise, the block will be blank.

▶ **Details**

This block is displayed with either custom fields or default fields based on the configuration of the details block that is designed in uDesigner, shell manager. In the latest version of Unifier, the shell home landing page displays the custom fields; otherwise, the shell home landing page displays the default fields, only.

You can edit the details block using the pen icon or through Edit dashboard option. This capability applies to block information, or to the fields that must be displayed in the block.

▶ **Links**

If links have been added to the shell details, then those links are displayed in this block.

▶ **Sub-shell log**

This block displays the sub-shells of parent shell, based on the view that you have selected. You can hide Workspaces in other dashboards.

The user-created dashboards support all of the existing functionalities, except the sub-shell log.

You cannot delete Workspaces tab in any Dashboard.

You cannot hide the Workspaces tab in My Dashboard. As a result, you cannot deselect the Show checkbox for Workspaces.

14. User will be able to hide Workspaces Tab in all user-defined Dashboards and will be able to un-check the 'Show' checkbox for Workspaces.

Important Information

The **Tasks**, **Notification**, and **Mails** can be added or removed. Individual tiles cannot be added/removed.

The block will get displayed back, post removal, by navigating to Add Block > Standard and selecting Data Type as "Items Requiring Your Attention." When you save the Standard Block, the block will be added automatically to the dashboard.

The following explains the various informational blocks in the **Workspaces** tab:

The **Workspaces** tab is available when geo-code server details are configured in Unifier, only.

▶ If there are no geo-location present in the sub-shells, Unifier displays a map without location markers.

▶ If there is a geo-location present in the sub-shells, Unifier displays a map with location markers.

When you hover over the location markers on the map, you can see the details for the location marker based on available information.

When you right-click on the location marker, you can open the shell (for that location) in a new tab, in Unifier.

The **My Dashboard** sub-menu (the three dots) enables you to:

▸ Access additional dashboards for the shell, if available.

▸ Edit Dashboard

   To open the editing mode of the current dashboard.

▸ Details

   To view the shell details, as overlay. The details include: Shell Name, Shell Number, and the following tabs:

   ▸ General

   ▸ Currency

   ▸ Options

   ▸ Links

   ▸ Calendar

   ▸ Integration

▸ Audit Log

   To open the audit log, as overlay.

The **Workspaces** tab has the following toolbar options:

▸ View

   For example, Buildings, Cities, Shells, Projects, Regions.

▸ Actions

   ▸ Get Activity Sheet Data

      All Shells

      Selected Shells

      Filtered Shells

      History

   ▸ Send Activity Sheet Data

      All Shells

      Selected Shells

      Filtered Shells

      History

▸ Search

▸ Find on page

▸ Expand All Groups

The columns the Workspaces tab sub-shell log are not hard-coded. The fields defined in Shell Detail form (in uDesigner) are added as columns in the Sub-shell log.

▸ Name

▸ Shell Number

▸ Shell Name

▸ Description

▸ Status

- ▸ Administrator
- ▸ Location
- ▸ User-Defined Text

The right-hand pane displays the map that shows the regions.

Project Landing Page (Admin)

To access your project landing page (Admin):

1) Click your project tab to open it.
2) Switch to **Admin** mode.
3) From the left-hand Navigator, on the very top, click your project name (for example: 👥 Proj)

The project landing page has the following elements:

▶ Left-hand pane (Navigator) which contains the following nodes (modules):
   ▸ Project name
   ▸ Member Companies
   ▸ Access Control
   ▸ User Administration
   ▸ Setup
   ▸ Rules
▶ Right-hand pane which contains:
   ▸ On the top:
      ▪ Tab name: Company Workspace
      ▪ Menu options (File, Edit, View, and Help)
      ▪ Toolbar options (New, Open, and Find)
   ▸ Below the top, on the left, project general information:
      ▪ Project name
      ▪ Description
      ▪ Number
      ▪ Address
      ▪ City
      ▪ State
      ▪ Country
      ▪ Phone
      ▪ Fax
      ▪ Email Address
   ▸ Below the top, on the right:
      ▪ Progress
      ▪ Links

Queries

You will be using queries to extract data from the database for reports and data pickers, and to set up auto-creation with creator elements.

A query is a data mining tool—a method for retrieving information from a database. A query filters the information returned from the database according to restrictions or conditions you specify. The Unifier queries can:

▸ Filter or narrow the data being retrieved for use in reports and manager sheets
▸ Set up conditions or triggers to make something happen automatically in Unifier
▸ Filter or narrow the data being retrieved for use in a data picker element

In This Section

How Queries Work

The way queries work in Unifier is as follows:

▸ You mine down to the information you want by choosing an element (field) in the database on which to base the query.
▸ You test the data against conditions and values you specify.

A condition is a state or restriction the value in the data element (field) must meet. A condition of the value might be that it must be equal to a certain number (maybe 10) or that it must contain a certain string of letters (such as "due date of").

▶ When (or if) the data meets the condition you specify, Unifier retrieves if from the database for use in a report, manager sheet, auto-creation, data picker, etc.
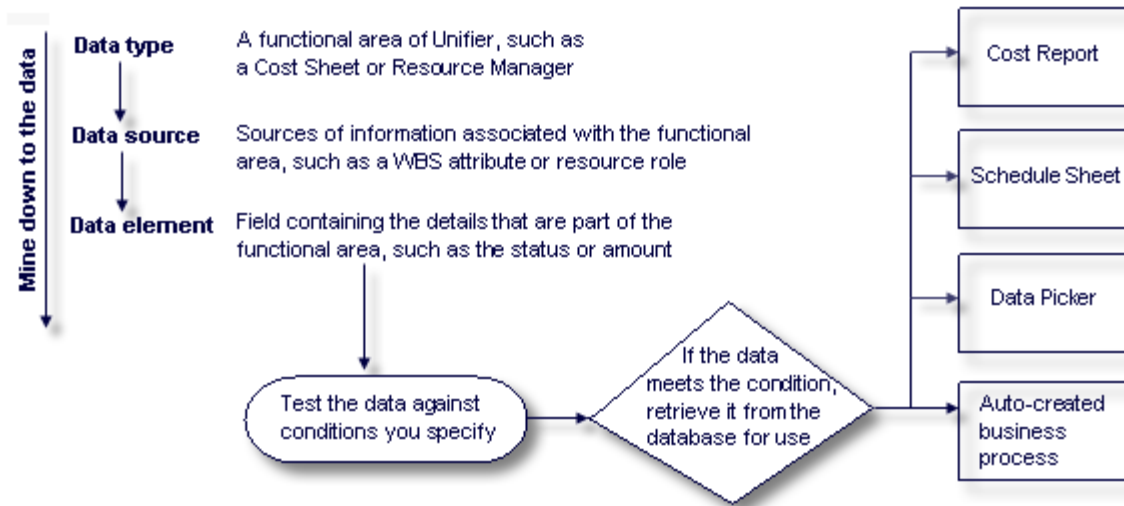
Using Formulas or Conditions in Queries

For queries, you can evaluate the data before retrieving it from the database to determine whether or not to include the value in the report, manager sheet, or data picker, or to spawn an auto-creation. To evaluate the data, you can use a formula or a condition.

In formulas, multiple fields can be calculated to arrive at a certain value that the data must meet before it will be used. The value can be one that you enter, or a value from another field.

You can include formulas in conditions.

In the **Condition** field, select the condition the value in the field must meet.

The following explains the formulas you can use in a query.

Field Value Comparison

The formula for field value comparison produces data that meets a field value (string or numeric) from the form of a business process or a shell in a hierarchy, or a constant. Used to populate a data picker.

Date Plus or Minus

The formula for date adds or subtracts a value to or from a date.

Date Difference

The formula for date difference subtracts one date from another to give you the number of days between the dates.
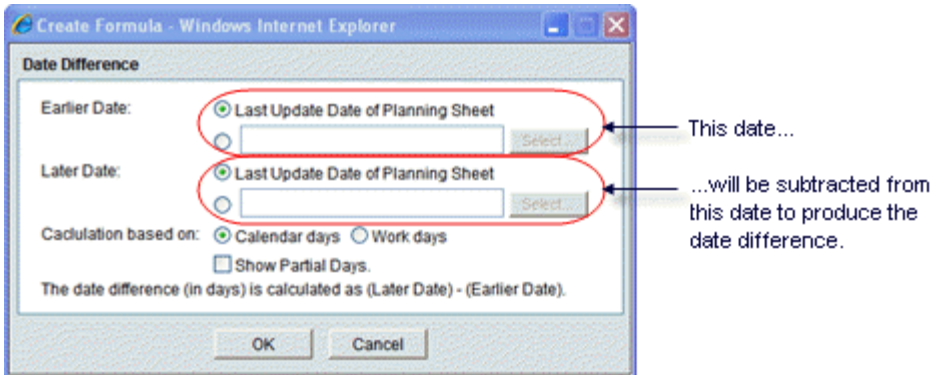
Compare Date Fields

You can also compare date fields as part of a query.
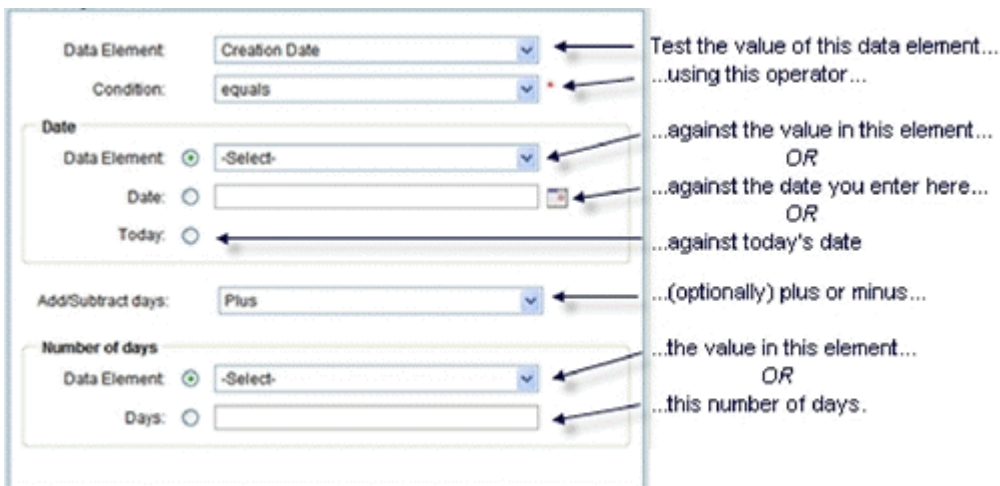
Dynamic Date Value

You can compare a date field value with a date field from the form of a business process or a shell in a hierarchy, a specific date, or today's date, and also add or subtract days to the result. Used to populate a data picker.

Between Dates

You can compare a date field value to see if it falls between two dates. Used to populate a data picker.

Assignee Filter Query Condition

When you are setting up a business process, you can filter the condition for the *assignee* according to:

▶ Contains
▶ Does not contain
▶ Exists in
▶ Does not exist in
▶ Equals
▶ Does not equal
▶ is empty
▶ is not empty

The following is an example of query evaluation. The workflow setup follows these policies for selecting users.

Assignee	Query Field (Role as defined in the User Attribute Form)
A	Approver

Assignee	Query Field (Role as defined in the User Attribute Form)
B	Reviewer
C	Controller-Approver
D	Controller
E	Reviewer-Submitter
F	Submitter
G	Approver

The following shows examples with condition/operator:

Condition/Operator	Business Process Form (Field value) Example of the data source used.	Filtered List of Assignees
exists in	Controller-Approver	A, C, D, G
	Reviewer	B
does not exist in	Controller	A, B, C, E, F, G

> **Note**: If the workflow setup has any of the new operators, the list of *assignees* that the user sees at runtime honors the stated query parameters.

The following shows examples with value, condition/operator, and result:

Value 1	Condition/Operator	Value 2	Result
ABC	exists in	ABC, BCD, CDE	True
XYZ	exists in	ABC, BCD, CDE	False
ABC	does not exist in	ABC, BCD, CDE	False
XYZ	does not exist in	ABC, BCD, CDE	True
ABC, BCD, CDE	contains	ABC	True
ABC, BCD, CDE	contains	XYZ	False
ABC, BCD, CDE	does not contain	ABC	False
ABC, BCD, CDE	does not contain	XYZ	True

Query Based Data Element (QBDE)

In Unifier, a Query Based Data Element (QBDE) enables you to view data from the Upper Form or Detail form of a Business Process. QBDE also enables you to view data from:

▶ Other Business Processes
▶ Sheets
▶ Cash Flow

The QBDEs are based on the "SYS Numeric Query Based" Data Definition (DD), and the query for these QBDEs is set in the Business Process Configuration setup. See the "Configure a Query for a Query Based Data Element on a BP" for additional details.

In addition to the Web interface (Unifier Application in the browser), the system evaluates QBDE in the following areas:

▶ CSV import for record creation
▶ CSV import for Line Item creation
▶ Web Service methods for record creation along with Line items
▶ Web Service methods for Line Item creation
▶ Web Service methods for record updates
▶ Bulk Edit
▶ Bulk Update
▶ Creating BP records using BP Template

Evaluating Query Setups of Data Picker Data Elements

Unifier supports many types of Data Picker DEs. The Administrator can set up Query conditions on these Data Picker DEs to filter the results. When a Data Picker DE is launched in the Web interface (Unifier Application in the browser), the system runs the query and displays the records based on the queries defined in uDesigner. The system evaluates the data picker query conditions in the following areas, as well:

▶ CSV import for record creation
▶ CSV import for Line Item creation
▶ Web Service methods for record creation along with Line items
▶ Web Service methods for Line Item creation
▶ Web Service methods for record updates

The following is a list of the supported Data Pickers:

▶ BP Data Picker
▶ Shell Data Picker
▶ User Data Picker
▶ CM Data Picker
▶ Role Data Picker

See the "Importing Configuration Packages" section for more information about importing data.

Creating a Record from the Query Based Tab

When creating a record from the Query Based tab of another BP (that auto-populates data to the record being created), the Data Element (DE) of type "SYS Numeric Query Based" Data Definition (any DE of this type) *is not updated*, unless the user manually changes the trigger element.

Defining the Format of the Currency for QBDE

You can use the QBDE to get the count of records. As a result, you can format the DEs that are query-based to hide the currency symbol. That is to say, you have the option to hide the currency symbol, at the data element level. As a result, when viewing the value in a query-based DE, Unifier displays the correct format so that the number makes meaningful sense.

Example

A Budget Change BP may have the 'Count of Change orders' QBDE (defined as a DE of SYS Numeric Query type) associated with the BP. On the same BP, there may be another QBDE 'Sum of All Change Orders' which needs the formatting of a Currency DE. You can choose whether or not to display the currency symbol for these DEs at runtime.

In the **Admin** mode, you define the Data Element (DE) that is query-based, add it to the BP form, and set up the query. In the **User** mode, you can see the results in the run-time (for example, displaying or not displaying the currency symbol).

The Data Element properties tab of SYS Numeric Query Based Data definition contains a checkbox option for hiding currency symbol in Cost type BP. By default, this option will be unchecked.

> **Note**: When the same DE is placed in non-Cost BPs, this option will be ignored since these BPs do not display currency symbol for data definition with Input type of Currency Amount at runtime.

Go to: **Company Workspace** (**Admin** mode) > **Data Structure Setup** > **Data Elements** to find the DEs that are query-based.

Click **Find** and enter "qbde" in the Search for field box to find the DEs.

When you open a query-based DE (**Modify Data Element** window), you have the option to select, or deselect, the Hide Currency Symbol in Cost type Business Process option.

Depending on your selection, Unifier displays, or hides, the currency symbol for the query-based DE.

Configuration Package

The format set in the Data element must be included in the bundle.

Dashboards in Unifier

In Unifier, the following types of dashboards are available.

My Dashboard (end user-defined dashboard): By default, all shells have a dashboard that the end user can configure if they have configure permissions. The dashboard is the user's personal dashboard, with their personally configured view of shell data. My Dashboard can be configured by end users in User Mode using the Edit Dashboard window, but is often configured for each user by the Administrator. Users can select this type of dashboard to view from the View Dashboard drop-down list on each shell. This dashboard is recommended if the user wants a personalized dashboard to view data that they specifically need to see regarding the shell.

Shell dashboards: These dashboards allow users to view information specific to the shell for which the dashboard was created. This differs from My Dashboard in that it is a shell view of the shell for all users to use. My Dashboard is a personalized view for a specific user, therefore displaying only the information that the user wants to see. The shell instance dashboard is a general view of specific shell data, and is not specific to any one user view of data. Administrators can create multiple shell instance dashboards per shell instance. Users can select this type of dashboard to view from the View Dashboard drop-down list on each shell. These dashboards are maintained at the shell level and are available to any user to view (but not edit) provided the user has permissions.

Custom Dashboard. This is a dashboard someone created externally using a dashboard creation software that generates SWF (Small Web Format) files. An Administrator can upload a SWF file into the Custom Dashboard for use within Unifier. Users cannot modify these dashboards. You can use this dashboard as your default dashboard.

Self-Service Portal

The Self-Service Portal enables users to sign in and work with specifically-enabled business processes. For example, Oracle Primavera customers use Unifier for corrective work order management. These work requests are usually generated from project participants who do not use Unifier. These participants can use the Self-Service Portal, which allows request submittals through a web-based tool. Users can use the Self-Service Portal to submit requests and to view the status of these requests, and to collaborate on submitted requests.

In uDesigner, you can enable certain business processes to be accessed through the Self-Service Portal. The business processes that you can enable to be accessed through the Self-Service Portal must have the following characteristics:

- Simple
- Company level
- Non-workflow
- Multi-record

The actions users can take through the Self-Service Portal are:

- Create a business process
- Modify a business process
- Add or remove business process attachments
- Add General Comments to a business process

Before you begin, design the Landing Page in terms of the text and graphics that you want it to contain. Then:

Step 1: Set Landing Page permission.

Step 2: Configure and activate the Landing Page.

Step 3: Specify users that receive portal-specific notifications. See Setting Up a Non-Workflow Business Process for details.

Setting Up a Self-Service Portal Landing Page

> **Note:** You must have Configure permission to be able to configure a Portal Landing page.

To set Landing Page permissions:

1) Go to the Company Workspace tab and switch to Admin mode.
2) Click **Access Control** in the left Navigator.
3) On the right pane, select **Administration Mode Access > Configuration > All > Landing Page**.
4) Set the permission as needed: **Configure:** Administrators can configure Self-Service Portal Landing Pages.

Configuring and Activating a Portal Landing page

If you have the Configure permission for the Self-Service Portal Landing Page, you can use an HTML editor to set up a Landing Page. After you configure and activate the Portal Landing Page, users signing in to the Self-Service Portal will see this landing page. You can configure one Landing Page, and activate this page for use.

> **Note**: If no Landing Page is configured, a user sign in to the Self-Service Portal will see the Unifier **Announcement** page.

To configure and activate a Portal Landing page:

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Configuration > Landing Page** in the left Navigator.
3) Click **New**.
4) Enter the **Setup Name** of the Landing Page, and an optional **Description** of the page. The default initial status of the page is **Inactive.** You can change this status after you complete the page.
5) Click the **Layout** tab.
6) Use the **HTML** editor to add text, and perform other editing functions.
7) Click the **Insert Image** button (second button from the right in the toolbar) to insert an image into your Landing Page. Browse for the image, and click **OK**, and **Close** after the upload is complete.
8) Click **OK**.

To activate a Portal Landing page:

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Configuration > Landing Page** in the left Navigator.
3) Select the Landing Page in the log.
4) Choose **Status > Active**. You can inactivate the Landing Page by choosing **Status > Inactive**. When a Landing Page is inactive, the user who signs in the Self-Service Portal sees the Unifier **Announcement** page. If no active Landing Page is set up, the portal user sees a default Landing Page.

Access Control and AutoVue Stamps

The following permissions are available:

▸ Create

The user will be able to perform all the operations on a stamp (Import, Download, Create, Delete, and Edit) along with changing the Stamp data elements selection.

▸ Modify or Delete

The user will not be able to create or import stamps into Unifier, but the user will be able to perform the rest of the operations on the stamp.

▸ View

The user will not be able to edit or delete stamps, but the user will be able to open and download the stamp.

Managing Public Searches

A public search is any set of criteria a user has specified to search a log for specific records and has saved for future use as a search. Users can specify search criteria, give the criteria a name, and save it. The search then becomes available on their Tasks and business process log pages under the **Filtered By** button. In addition, users can make searches available to other users by making them public. Administrators with "Manage Public Searches" permissions can delete, change status, and transfer ownership of public searches created by any user.

In This Section

Setting Public Search Permissions

To set public search permissions:

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) Click **Access Control** in the left Navigator.
3) On the right pane, select **Administration Mode Access** > **Data Structure Setup** > **Public Searches** to open the **Module Permission Settings** window.
4) Set the permissions as needed:
   ▸ To modify the Manage Public Searches permission for an existing user/group, click to select the user/group, click **Modify**, and under **Permission Settings** click to select **Manage Public Searches** option.
   ▸ To permit a user/group to have access to public search, click **Add** to open the **Permission/Access Control** window. Click **Add Users/Groups** and follow the prompts to add the new user/group. When finished, under **Permission Settings**, click to select **Manage Public Searches** option.

Managing Public Searches

The Company Administrator can delete, change status, and transfer ownership of public searches.

To delete public searches

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) Click **Data Structure Setup** > **Public Searches** in the left Navigator to open the **Public Searches** log. This log lists only searches that have the status of "public."
3) Click to select a public search from the log.
4) Click **Delete**. The search is deleted from all **Filtered by** lists on **Tasks** logs and business process logs, and is no longer available to any users to use for searches.

To change the status of a public search

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) Click **Data Structure Setup** > **Public Searches** in the left Navigator. The Public Searches log opens.
3) Click to select a public search from the log.
4) Choose or **Status** > **Private**.

> **Note**: When you change the status of a public search to private, it no longer appears on the Public Searches log.

To transfer the ownership of a public search

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) Click **Data Structure Setup** > **Public Searches** in the left Navigator. The Public Searches log opens.
3) Click to select a public search from the log.
4) Click **Transfer Ownership**.
5) Select a user to whom you want to transfer ownership and click **OK.**

Adding & Managing Partner Companies

A sponsor company may work with one or many partner companies (for example, subcontractors, vendors, etc.) to work on projects, shells, or company level activities. Company Administrators can manage partner companies and users. The Site administrator will first add the potential partner company to the list of available companies, from which you can select the companies to activate. Partner company users can be granted access to specific company level and project-level or shell-level features.

> **Note**: Contact your Site Administrator to add a company to the list of available companies.

To access partner companies

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click the **Partner Companies** node in the left Navigator. The Partner Companies log opens. The log will display any current partner companies.

In This Section

Add a partner company

Adding a partner company to the list allows you to work with partner company users within Unifier.

To add a partner company

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Partner Companies** in the left Navigator. The Partner Companies log opens.
3) Click the **Add** button. The Add Partner Companies window opens, listing available potential partner companies. (This list is maintained by the Site Administrator.)
4) To search for a particular company, click the **Find** button. The Find box opens at the top of the window. Click the Search By drop down and choose **Company Name** or **Contact Name**. Enter the search criteria in the **Search for** field and click the **Search** button.
5) Select one or more companies from the list and click the **Add** button.
6) When the confirmation window opens, click **Yes**. The company is added to the log. Users from the company are now available to be added to company, project, or shell functions.

Remove a partner company

If you no longer want users in a partner company to participate in your company, project, or shell Unifier areas, you can remove the company from the list. If you remove a partner company:

▸ The partner company users that have been added as users either under your company (Partner Users node) or in any projects or shells will be inactivated automatically.

▸ If the partner company being removed has previously been added to a project or shell as a project or shell "member company," the company will remain in the Member Company log for the project or shell, but users will be inactivated.

▸ These inactivated users cannot be reactivated unless the partner company is added back to Partner Companies node.

To remove a partner company

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Partner Companies** in the left Navigator. The Partner Companies log opens.
3) Select a partner company from the list and click **Remove**.
4) At the confirmation window, click **Yes**.

View partner company profile

Partner company details are managed by the company administrator for the company, or the Site Administrator. You can view the details.

To view the company profile of a partner company

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Partner Companies** in the left Navigator. The Partner Companies log opens.
3) Select a partner company from the list and click **Open** (or double-click). The Company Profile window opens. The information in this window is read-only, and is maintained by the partner company's administrator.
4) Click the **General** tab to view general information, or the **Address** tab to view address and other contact information for the company.

Manage Support and e-Learning contact information (Contact tab)

In the Contact tab of the Edit Company window, you can provide your users with an email address and/or phone number of your internal support staff. This information will be displayed in error messages users may encounter if their accounts become locked, on the Support window Contact tab, and at the bottom of email notifications. The information included for email notification can contain a hyperlink to your local support. For information about translating Email Notifications, see the *Internationalization (Email Notifications)* section.

In addition, if your company is part of the eLearning suite of interactive tutorials, you can provide access information to your users in this tab. This space can also be used for any location (such as an internal website) where you have provided Unifier training materials.

To manage user support contact information

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) In the right pane, click the **Open** button. The Edit Company window opens.
3) Open the Edit Company window and click the **Contact** tab.
4) Under Support Contact Info and eLearning Access, you can add or modify the contact information as needed. See the following table for details.
5) Click **Apply** to save changes, or **OK** to save and exit the Edit Company window.

To complete this section:	Enter this information:
Support Contact Info	Email: Email address for company internal support.
	Phone: Phone number for company internal support.
	Instructions: Information that appears in the Support window Contact tab, as well as the Email and Phone from above. This provides information to your users on how the use the support information.
	Email Notifications: Information that appears at the bottom of email notifications. This field supports simple html formatting, and can include a hyperlink. For example:
	For YourCompany support, contact support@your company.com or 1-800-555-1212.
	which will display in the bottom of record email notifications as:
	For YourCompany support, contact support@yourcompany or 1-800-555-1212.
eLearning Access	URL: Enter the URL for eLearning access. It is best to include the entire address

	Label: This is the label for the URL above. The label can display the actual URL, or you can a different label. This will appear as a hyperlink to users.
	Contact email: Enter an email address that you would like users to use if they need to contact someone. Enter a valid email format, e.g., elearn@yourcompany.com.
	Instructions: You can enter instructions or other information such as a contact phone number. This field does not support html formatting.

Manage Company Password Policy (Security tab)
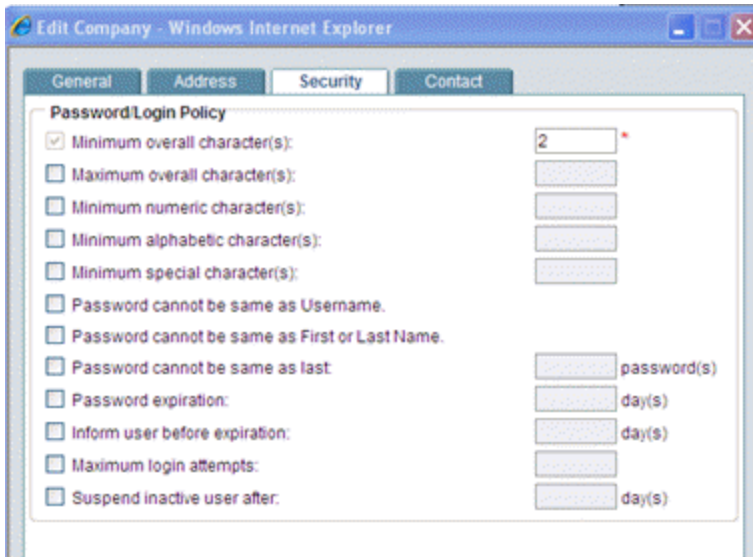
Sponsor company administrators can specify password security policies in the Security tab of the Edit Company window. By default, the minimum password requirement is set at one (1) character, meaning that the user is required to create a password with a minimum of one character. If a value is not entered in a field, the option is ignored.

> **Notes**:
>
> - These settings apply to Sponsor/Owner company users only. They will not apply to Partner Company users, where the default settings apply.
> - If your company is using Oracle Identity Management (OIM) to provision your company users, the password policy specified on this tab will not be used. OIM has its own password policy which will supersede the policy on this Security tab.

To manage user password criteria

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) In the right pane, click the **Open** button. The Edit Company window opens.
3) Open the Edit Company window and click the **Security** tab.

4) Select the password criteria that you want to configure, then enter the value in the text box. See the following table for details on each option.
5) Click **Apply** to save changes, or **OK** to save and exit the Edit Company window.

Select this option:	To specify:
Minimum overall character(s)	Minimum number of characters that a password must contain; default is one (1)

Maximum overall character(s)	Maximum number of characters that a password must contain
Minimum numeric character(s)	Password must contain a minimum amount of numbers
Minimum alphabetic character(s)	Password must contain a minimum amount of letters
Minimum special character(s)	Special characters are [{~!@#$%^&*()-_=+;:'",<.>/?]}
Password cannot be same as user name	Users cannot use their user name as their password
Password cannot be same as first or last name	Users cannot use their name as their password
Password cannot be same as last	A newly changed password must be different from previously used ones (indicated the number here)
Password expiration	If password expires, users will be prompted to change it when attempting to log on
Inform user before expiration	Upon signing in, users are warned that their passwords are about to expire and given the option of changing it
Maximum login attempts	If user does not successfully log on after this number of attempts, the account will become locked
Suspend inactive user after	Sets the number of days of inactivity before a user's account is locked
Password recovery secret questions required	If selected, users will be prompted to set up security questions for password reset upon first login. Existing users will be prompted to set up security questions upon the next login. Note: This option is available for Owner, Partner, and Hosting companies. When selected, it makes it mandatory for users to set up the password recovery secret questions. This is applicable to all users in the respective companies including Company Administrators and site Administrator.

Manage Company Addresses (Address tab)

At a minimum, a Headquarters address must be entered in the Edit Company window. The Headquarters address will be the default company address. The default address displays on the Company Home page and is used to generate an online company location map. You can add up to six additional company addresses.

To manage company addresses

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) In the right pane, click **Open**. The **Edit Company** window opens.
3) Click the **Address** tab.
4) Complete all fields marked as mandatory (red asterisk *). To enter additional addresses, click **Address Type** and choose another address to enter. See the table below for details.
5) Click **Apply** to save changes, or **OK** to save and close the Edit Company window.

In this field:	Do this:
Address Type	Click the field and select from the drop-down list. At a minimum, an address for Headquarters is required, which is used as the default company address in Unifier. You can enter up to seven company addresses (for example, billing).
Attention	Click the Select button and select a user from the picker.
Address and phone fields	These are text fields. No validation will be performed on these fields. All fields with a red asterisk are required. Select the Country/Region from the drop-down list.

Access Company Details (Edit Company Window)

Company detail information is managed in the **Edit Company** window. To access the **Edit Company** window:

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) In the right pane, from the toolbar, click **Open**. The **Edit Company** window opens. The **Edit Company** window has the following tabs:

   ▶ **General**: In this tab, you can manage several company features. See the table below for details. The fields with red asterisks are required.

   ▶ **Address**: You can enter up to seven company addresses. There must be at one address entered for the company headquarters.

   ▶ **Security**: In this tab, you can set up file security policy and password/login policy that your users must follow after they signed in to Unifier.

   > **Note**: If your company is using Oracle Identity Management (OIM) to provision your company users, the password policy specified on this tab will not be used. OIM has its own password policy which will supersede the policy on this tab.

   ▶ **Contact**: Maintains support contact and e-Learning access information for your users. The information entered here appears in the Support window (Contact tab). To access the Support window, click **Help**, from the upper right-corner of the Unifier window, and select **Contact Support** from the menu.

   ▶ **E-Signatures**: In this tab you can manage the default e-signature type, DocuSign setup, and AdobeSign setup to use these digital E-signature solutions within Unifier documents.

   ▶ **Outgoing E-mails**: In this tab

The following explains each tab in details.

In This Section

Edit Company (General Tab)

To complete the **General** tab:

In this field:	Do this:
Name	Enter a company name, up to 64 characters. It can include alphanumeric characters, spaces and punctuation.
Short Name	Enter a one-word short name, up to 60 characters. The **Short Name** is a unique, one-word abbreviated form of your company name, and is used throughout Unifier in place of the company name. (For example, uDesigner-created business processes and on logs that identify partner companies.)
Description	Enter a company description. This is displayed on the Administration Mode home page. This can be especially useful for identifying partner companies, such as subcontractors or vendors.
Contact Name	Click **Select**, then select a user from the User/Group picker. This name is displayed on the Company Home Page in Administration and User Modes. The list is generated from the list of active users in the Company Users log.
DUNS	Enter the nine-digit Dunn & Bradstreet business identification number.
Home Page URL	Enter the URL of your company's web site, displayed on the Company Home Page as a hyperlink.
Help URL	Enter an additional URL that to point to internal documentation regarding company policies or practices, an intranet site, or other internal information that you choose. This is displayed on the Company Home Page as a hyperlink.
Status (read-only)	Company status is controlled by the Site Administrator.
Image	Similar to the Image field in the Shell properties, this field allows you to include a picture that represents the company.

In this field:	Do this:
Authentication Key or Re-Enter Authentication Key **Note**: This field is available for the Site Administrator, only, and the Site Administrator is the only person who can change the value.	The Authentication Key provides a means of gaining access to the company that you are signing in to. This key was set up at the time the company was configured. For Unifier Cloud customers, the Cloud Administrators will need to enter a unique key to manage the cloud administration services. The current key is stored in an encrypted format and can be changed as needed. If a key has already been assigned to the company, it will not be displayed in the field; the field will appear blank. Re-enter the key in the following field to confirm it. This field is not available on the General tab, for the company administrator. The company administrator must access the Integration Users sub-node to access the authentication key. Read "Additional information about the Authentication Key" below for more details.
Bid Access URL	Used with Request for Bid (RFB) feature. This is the URL that will be used by bidders to access bids (system-assigned). When a bidder is invited to bid for the first time, the system sends two emails simultaneously: ▶ Invitation email, which contains the Bid Access URL. ▶ Credential email, which contains the username and system-generated password. **Note**: Oracle recommends that the bidders change the password at the very first log in.
Bid Management Account	Enter the account name of the user who will be managing the bids that your company receives. This is the account that will contain the bidder's preferences you specify when you create the bid management account. See the instructions under "Set Up a Bid Management Account in Primavera Unifier" in the Primavera Unifier Administration Help.
Owner	Selecting this option allows a company to sponsor projects or shells, and is controlled by the Site Administrator. The checkbox will not be selected if the company is a partner company that is not authorized to sponsor projects or shells.
Enable Custom Dashboards	Selecting this option allows the creation of custom dashboards that provide an accurate and dynamic view of company and project performance indicators.

In this field:	Do this:
Maximum Limit for UDR records	The company administrator will be able to set the maximum number of records to be retrieved for the company. By default the maximum number will be set to 1 million. The company administrator will have multiple options to choose from and the set the maximum limit.
Display element for Project/Shell	By default, the "Name" option is selected. Based on the setting in this field, the labels change in the following areas: Top navigation tabs Breadcrumbs The first (top) left menu node (Home node) for the Shell/Project Bookmarks: Add new bookmark (editable label of bookmark) If the user selects the "Name" option to display the Shell name, the default string will appear as "{Shell Name} - {Location}" when adding a new bookmark. If the user selects the "Number" option to display the Shell number, the default string will appear as "{Shell Number} - {Location}" when adding a new bookmark. The tool-tips will be seen in format: {Shell Number} - {Shell Name}
Hide Tabs in Company Dashboard	When checked: ▶ No tabs will be displayed on the company dashboard and only the company workspace information is displayed. ▶ The **Summary** and other tabs created will be hidden and only the General tab will be visible. There will be no **General** tab heading, since there is only one (1) tab on the dashboard. The user will only see the **General** tab along with the logged in user's information. ▶ The **Edit Dashboard** option will be hidden. By default, this option will be unchecked. So all users will be able to view and modify the **Summary** tab of the dashboard, and the **Edit Dashboard** option is enabled.
Source for Activity Sheet data	Users who have the edit permissions to company properties should be able to modify or add the P6 and Oracle Primavera Cloud URLs. This block enables you to provide a link to a source (for Activity Sheet) application, P6 or Oracle Primavera Cloud: ▶ **P6 URL** (format: `https://site_url/p6/...`) ▶ **Primavera Cloud URL** (format: `https://site_url/web/...`) By default, the URL fields will be empty with a place holder text to show the format. There will be no link shown in a project activity sheet when a user does not enter any URL in company properties.

Changing the Authentication Key

For integration users, the company administrator can access the authentication key value by way of the **Integration Users** sub-node (**Company Workspace** > **Admin** mode > **User Administration** node > **Integration Users**).

For users who are using Unifier 19.x:

> You (the company administrator) need to create a new integration user in order to change the authentication key.
>
> You need to use the following format to create the integration user:
>
> User Name - $${shortname}
>
> Password - {Desired authentication Key}
>
> If you have upgraded to Unifier 19.7, Unifier will not create $${shortname} integration, by default. In such case, Oracle recommends that you use new token-based REST APIs, instead of legacy SOAP and old REST APIs.
>
> If you have not upgraded to Unifier 19.7, but you have upgraded to Unifier 19.6, Unifier creates $${companyshortname} automatically, by way of the migration process, with the password that is the same as the original authentication code.
>
> To access the authentication value:
>
> 1. In the **Integration Users** log click on a customer row to open the **Update User** page.
> 2. In the **Update User** page, scroll to see the **Security** block.
> 3. In the **Security** block, the value in the **User Name** field shows the company name (for example: $$company short name).
> 4. In the **Security** block, the value in the **Password** field shows the existing authentication key.
>
> > **Note**: The Site Administration can change the authentication key, also.

For users who are upgrading to Unifier 19.x:

> As a part of upgrading process, Unifier will automatically create an integration user by:
>
> Using the company short name as the integration user.
>
> Using the existing authentication key as the password.
>
> That is to state:
>
> User Name - $${shortname}
>
> First Name - $${shortname}
>
> Last Name - $${shortname}
>
> Time Zone - Company timezone as seen in the Background Jobs
>
> Language - Company language as seen in the Internationalization node
>
> If a company does not have an authentication key, then the integration user will not be created.
>
> If a customer already has an integration user $${shortname}, then Unifier will leave it unchanged.
>
> The legacy SOAP and old REST APIs do not access the integration permissions.

For this created integration user, all legacy permissions will be checked.

Edit Company (Address Tab)

Enter the company address information in the fields.

Edit Company (Security Tab)

The **Security** tab has the following blocks:

▸ **File Security Policy**
  ▸ **File Upload Restrictions**
▸ **Virus Scan Alerts**
▸ **Cost Sheet Restrictions Policy**
▸ **User Attributes Policy**
▸ **Password/Login Policy**

To complete the **Security** tab:

File Security Policy

In this field:	Do this:
Size Limit per File in MB:	Enter the number.

File Upload Restrictions

In this field:	Do this:
Allow File Extensions	Enter the file extensions separated with comma. Example Allow File Extensions: Selected Allow: .png, .pdf, .jpg Block: Blank Files that the user can upload: .png, .pdf, .jpg Or Allow File Extensions: Selected Allow: Blank Block: Blank Files that the user can upload: No file can be uploaded as nothing specified in Allow.

In this field:	Do this:
Block File Extensions	Block File Extensions : Selected
	Allow: Blank
	Block: .mov
	Files that the user can upload: All file types except .exe and .mov
	Or
	Block File Extensions: Selected
	Allow: Blank
	Block: Blank
	Files that the user can upload: No restrictions, but the user cannot upload .exe files since the system prevents it.

Virus Scan Alerts

In this field:	Do this:
Do not alert the user when a file that is pending scan for threats is being downloaded.	By default, this option is selected.
	When this option is selected, Unifier does not display an alert when a file is pending scan.
	When this option is not selected, Unifier displays a confirmation-request message asking whether the user wants to view a file that is pending scan, or not. In this scenario, the user is not prevented from viewing the file when the viewing of files occurs through Outside-In converted files or through AutoVue.
	The same conditions are applied for downloading files.
	Note: If any threats are detected post-scan, then Unifier sends an email notification to the user who uploaded the file, as well as the Company Contact (in the Company Properties page).

Cost Sheet Restrictions Policy

In this field:	Do this:
Override column restrictions	View or edit a cost sheet column if any of the restricted groups, or the individual user, is allowed to view or edit the column.
	By default, this option is not selected.

User Attributes Policy

In this field:	Do this:
Hide User Profile	Select this box to hide the basic information of the user associated with the field.

IP Filtering Policy

In this field:	Do this:
Allow IP Addresses for REST WebServices	Enter IP addresses to allow in the IPv4 or IPv6 fields by using separators ',' (comma) or ';' (semicolon). You may enter IP addresses in CIDR notation to allow IPs in a particular range. The maximum number of characters allowed for the IPv4 or IPv6 fields is 1000, and duplicate IP addresses will be removed. This Allow IP list filtering can be bypassed if 'EXTERNAL_REQUEST' header parameter is not provided in the request or 'EXTERNAL_REQUEST' header parameter is set to false.

Password/Login Policy

Select the necessary options and enter values.

Edit Company (Contact Tab)

The **Contact** tab has the following blocks:

▸ **Support Contact Info**

Enter values in each field.

▸ **eLearning Access**

Enter values in each field.

Edit Company (E-Signatures Tab)

The **E-Signatures** tab contains the following field and blocks:

▸ **Default E-Signature Type**
▸ **DocuSign**
▸ **AdobeSign**

The following provides details:

Default E-Signature Type	(Mandatory field) To select the default technology that provides electronic signature solution for the company.

DocuSign	This block contains the following fields and options:
	▶ **Url**
	The API URL which the customer or Oracle attains after acquiring the license.
	▶ **Account Id**
	The ID for the DocuSign account
	▶ **Client ID**
	To enter the user identification needed to log into AdobeSign.
	▶ **Client Secret**
	This field is needed to set up integration between Unifier and DocuSign.
	▶ **Token**
	This field is needed to set up integration between Unifier and DocuSign.
	▶ **Status**
	Inactive by default. When you click **Active**, Unifier tests the connection. If the connection is successful, then you will be able to lock the status as **Active**. If the connection is not successful, then you will be receiving pertinent messages, and the status will remain as **Inactive**. If you successfully change the **Status** as **Active** and then change any of the fields, the Status changes to **Inactive**, and you must select Active to run the test connection.
	▶ **Generate Token**
	▶ **Test Connection**
	To establish a connection between Unifier and DocuSign:
	1. Click **Generate Token**. Unifier inspects the integrator key and the client secret and directs the end-user to DocuSign URL to enable them to log in to their Demo or Production DocuSign account.
	2. Once the end-user logs in to their DocuSign account, the token will be generated automatically in the **Token** field.
	3. Click **Test Connection** to ensure that the connection has been made successfully. This option is available after you successfully entered in, and selected values for, all the fields. If the testing the connection fails, then Unifier displays the error message: Integrator key / Client Secret / Token combination is not correct.
	4. Follow the prompts to complete the work.
	1)
	1.
	2.
	3.

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AdobeSign	This block contains the following fields and options: ▸ **Url** The API URL which the customer or Oracle attains after acquiring the license. ▸ **Client ID** To enter the user identification needed to log into AdobeSign. ▸ **Client Secret** This field is needed to set up integration between Unifier and AdobeSign. ▸ **Token** This field is needed to set up integration between Unifier and AdobeSign. ▸ **Status** Inactive by default. When you click **Active**, Unifier tests the connection. If the connection is successful, then you will be able to lock the status as **Active**. If the connection is not successful, then you will be receiving pertinent messages, and the status will remain as **Inactive**. If you successfully change the **Status** as **Active** and then change any of the fields, the Status changes to **Inactive**, and you must select Active to run the test connection. ▸ **Generate Token** ▸ **Test Connection** To establish a connection between Unifier and **AdobeSign**: 1) Click **Generate Token**. The token will be generated automatically in the **Token** field. 2) Click **Test Connection** to ensure that the connection has been made successfully. This option is available after you successfully entered in, and selected values for, all the fields. 3) Follow the prompts.
OK	Click when you are finished.
Cancel	Click to exit the tab.

Edit Company (Outgoing E-mails Tab)

The **Outgoing E-mails** tab enables you to set the maximum file size for each of your outgoing emails, in megabyte (MB), by entering a numeric value in the **Maximum Size for Each Outgoing E-mail** field.

To set the maximum file size for each of your outgoing emails to your system default specification, either click the **Set to System Default** option or enter zero (0) in the **Maximum Size for Each Outgoing E-mail** field.

If the size of your email (from Unifier) is larger than the limit set for the recipient's server, then Unifier truncates *all of the attachments* in the email body to reduce the email size. Unifier also appends a custom-defined text in the email body informing the recipient that the email attachments have been deleted, and informs the recipient to can login to sign in to Unifier in order to view the email.

Background Jobs

Unifier uses system jobs to perform various:

- Operations (such auto creation)
- Scheduled jobs (such as UDR runs)
- Record creations (from WF templates)
- Analytics data pushes (to staging table)

The node called "**Background Jobs**" (**Company Workspace** > **Admin** mode > **Background Jobs**) enables certain users and groups (Company Administrators) access the jobs data and can choose to set the time zone for the recurring jobs.

The visibility of, and access to, the **Background Jobs** node is controlled by permissions set in the **Access Control** node. The following shows how to determine access by way of the **Access Control** node.

Go to **Company Workspace** > **Admin** mode > **Access Control** > **Administration Mode Access** > **Background Jobs** to set the permissions. The permission settings contain the "Modify" and "View" options, and permissions can be assigned to both Users and Groups. Users/Groups with View permission are able to view the log without having the ability to edit the time zone. Users/Groups with Modify permission are able to view the log content and edit the time zone.

The **Background Jobs** node log page has the following toolbar options:

- Reload ( ): Enables the user to reload the contents of the page. When the action is complete, the list may vary from before reload.

- Find on Page ( ): Enables the user to conduct a quick find (on the contents of the page) for any of the log columns.

- On the far right-corner of the log page, the field labeled "**Time Zone for Recurring Job:**" is displayed. By default, this field shows the "(Default) <Time Zone Name>". The Edit icon

  ( ), next to the field, is displayed if the user has Modify permission, only.

  The system uses the set time zone to calculate the next start time for time-based jobs.

The **Background Jobs** node log page content:

- **High Priority Jobs**: Example - Auto Creation job
- **Background Jobs**

The lower-end of the page displays the total count of the jobs and log pagination number.

The **Background Jobs** node log page has the following columns:

- **Name**: The name of the job. Examples - system:collect action emails, alert:Hourly Trigger etc.
- **Status**: The possible values are: Running and Waiting.

  Refer to the *Unifier Reference Guide* for the default time zones and the possible values.

‣ **Next Start Time**: The time that the scheduler runs the job. The value seen here will be per User Preferences. Example: If the User preference is set, then the format of the next run will be according to this time.

‣ **Type**: The possible values are: Simple and Recurring. Simple is a type of job that was done once, at a specific time. Recurring is a type of job that is done based on a calendar schedule.

‣ **Priority**: The job priority. Only high priority jobs will have this column populated with the value of "High." The values for other jobs will be blank.

‣ **Workspace**

Displays the name or number of the shell for the job (listed under the Name column).

‣ **Time Zone**

Displays the time zone for the job.

All current jobs (scheduled UDR, scheduled refresh of the attach flow, BP record creation using templates) across the shells are run based on the time zone that you set up in the company **Background Jobs** module (company-level time zone).

In cases where the project time zone is different from the company time zone (for example facilities based on a certain geographical location), you can go to the shell details (**Details** > **Options** tab) and from the **Time Zone for Background Jobs** drop-down list select the desired time zone for all the shell. After saving your changes, all the jobs within the shell will use your selected time zone.

Event Notifications

The **Event Notifications** log displays events that happen within the Workflow, or Non-workflow, BPs according to the conditions defined by the designer, in uDesigner.

> **Note**: Unifier runs automatic purge every day in order to delete the notification records that are older that one month.

By design, the event notifications are generated for all active (Active) BPs (within the project or shell).

If you do not want to generate event notifications for certain WF BPs (within the project or shell), then Oracle recommends that you use a new WF that does not have the notification setup.

> **Note**: If it has been set up in uDesigner, you cannot avoid generating even notifications for Non-WF BPs. Unifier generates notifications for all of the records that meet the setup conditions.

If any BP record moves to the step which is set up to generate event notifications by way of web service or CSV, then the event notifications is generated and recorded in the events log, also. This applies to WF and Non-WF BPs.

Event Notifications toolbar options:

View	Similar to the **View** option in BP log (**Logs** node), Standard View, it enables to use one of the following system-defined default views:
	▶ **All Notifications**
	This is the default view in this log and available to all users.
	By default, all rows in this log (sorted by event date and in descending order) are visible to the users.
	▶ **Group by Object Name**
	This means grouping the rows in the grid by the "Object Name" parameter.
	As in the BP log view, the user has the ability to Create New View, Manage Views.
	Any view created by any user who has permissions to this log will be available to all other users who have permissions to this log. Similarly, any view edited or deleted by one user will be edited or deleted for all other users using this log.

Edit View	Similar to the **Edit View** option in BP log (**Logs** node), Standard View, it enables you to edit the: ▶ Columns tab: To remove, add, or reorder any column in the view that uses this tab. ▶ Filters tab: To create filters using any columns in the grid of this log. ▶ Group By or Sort By: To group or sort any columns within the grid of this log.
Refresh	Similar to the **Refresh** option in BP log (**Logs** node).
Print	Similar to the **Print** option in BP log (Logs node).
Search	Similar to the **Search** option in BP log (Logs node).
Find on Page	Similar to the **Find on Page** option in BP log (Logs node).

Event Notifications grid (Workflow BPs):

For the Workflow BPs, the grid displays a record of all of the workflow actions that are taken within the BP records, and which are set with the **Generate event notification** option as checked, in uDesigner.

A Workflow BP step completion policy does not impact the creation of the notification row. Regardless of the completion policy, if an action (which is setup to generate an event notification) is taken in the Workflow BP record, then the notification row is inserted in the log.

If there are multiple assignees on a step, then the final action on the Workflow BP record, which moves the record to the next step, determines what will be included as an event notification row in the grid, not each action taken by an assignee.

If a task is reassigned and the new assignee takes an action that moves the record to the next step, and the record is configured to generate a notification, then Unifier inserts an event notification row in the grid, also.

Unifier populates the grid columns within the newly inserted notification row with the values of the Workflow BP records.

Event Notifications grid (Non-workflow BPs):

For the Non-workflow BPs, the grid displays all workflow actions that are set with the **Event Notification** status (BP status) as "Yes", in uDesigner. When the Non-workflow BP record reaches a status, as set in uDesigner, then Unifier inserts a notification row in the grid.

> **Note**: If a user clicks **Edit** on a Non-workflow BP record and proceeds to click **Finish Edits** without making any changes, but the status change is set to generate notifications per the design in uDesigner, then Unifier inserts a notification row in the grid, also.

Unifier populates the grid columns with the values of the newly inserted notification row from the values of the Non-workflow BP records.

Event Notifications grid columns:

Column Name	Description	Applies to WF BPs	Applies to Non-WF BPs
Shell Number	Populates with the project or shell number where the event was triggered.	Yes	Yes
Shell Name	Populates with the name of the project or shell where the event was triggered	Yes	Yes
Object Type	Populated as, "Business Process."	Yes	Yes
Object Sub-Type	When the Object Type = Business Process, then the Object Sub-Type is populated as Workflow or Non-workflow, based on the type of the BP.	No	Yes
Object Name	Populated with the name of the Business Process in which the event was triggered	Yes	Yes
Record Number	Populated with the "record_no" value of the BP record that triggered the event.	Yes	Yes
Event Date	Populates with the date and time, when the event was triggered. The content of this column is in descending order, which is the default sort format.	Yes	Yes
WF Step From	Populates when the event notification is for a *WF BP*. This column is populated with the name of the *starting step* of the record that have triggered the notification generation.	No	Yes
WF Step To	Populates when the event notification is for a *Non-WF BP*. This column is populated with the name of the *final step* of the record that have triggered the notification generation.	No	Yes

WF Action Name	Populates with the WF action name that was taken for the BP record that triggered the notification. **Note**: The same BP could go through several events which trigger the notification generation. Each such event inserts a corresponding row in this log.	No	Yes
Old Status	The original status of the BP record (before the event got triggered).	Yes	Yes
New Status	The final status of the BP record which satisfies the event trigger condition.	Yes	Yes

To set the **Event Notifications** node permissions:

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) Click **Access Control** in the left Navigator.
3) On the right pane, select **Administration Mode Access** > **Event Notifications** to open the **Permission Settings for Event Notifications** window.
4) Set the **View** permission to users and groups as needed.

Users or groups with the **View** permission have the ability to:

a) See the **Event Notifications** node in the left Navigator.
b) Take actions using available options in the log toolbar.
c) View all notifications records within the log.

uDesigner Overview

uDesigner is a functional module of Unifier and is enabled automatically when Unifier is installed.

The uDesigner module is used to create:

▸ Business Process (BP)
▸ Managers (Asset - Cost - Document - Planning - Portfolio - Resource - Schedule - Space - Shell)
▸ Configurable Modules
▸ Attribute Forms (Users, Shells, Document Manager, Cost)

Collapse by Default Option in Block Properties

In the Block Properties window of both a BP form and a manager attribute form, there is a new checkbox called **Collapse by Default**. If the checkbox is checked, the block is collapsed by default. If the checkbox is unchecked, the block is expanded by default.

With the **Collapse by Default** option, you can avoid scrolling through irrelevant information.

Under the **Collapse by Default** checkbox, the following note is displayed: "The block will be collapsed in User Mode, only if the block has a label and the Show Border and Show Label options are checked. This option is applicable only for Standard View of forms."

Collapse by Default is applicable to the following forms: Action form, View form, Detail form, and various attribute forms.

Additional uDesigner Options

You can use the uDesigner module to:

▸ Create a design in the **Development** environment.
▸ Configure, setup, and test your designs in both the **Development** environment and **Test** environment.

After this point you can import your designs to the Production environment by way of **Configuration Package**.

Oracle recommends that you:

▸ Create your Configuration Package in the **Development** environment and import your Configuration Package to the **Test** environment for additional testing.
▸ Import your Configuration Package from the **Development** environment onto the **Production** environment for use.

You can select the Unifier environment in the **Unifier Configurator**.

▸ The Unifier **Development** environment is a Unifier server deployed by selecting the server type as "Development" in the the **Unifier Configurator**.
▸ The Unifier **Test** environment is a Unifier server deployed by selecting the server type as "Test" in the the **Unifier Configurator**.

▶ The Unifier **Production** environment is a Unifier server deployed by selecting the server type as "Production" in the the **Unifier Configurator**.

The **Development/Test** environment is an environment that replicates the Unifier **Production** environment.

An object (for example a BP) can be deployed multiple times in the **Development** environment, only.

> **Note**: In **Development** environment, all uDesigner functionalities are available, but in the **Test**/**Production** environment the uDesigner functionalities are not available.

In the **Test** environment, you *can*:

Import an unpublished Configuration Package.

In the **Test** environment, you *cannot*:

Publish your Configuration Package. You can only publish your Configuration Package from the **Development** environment.

The Test server is equipped with usable uDesigner and Data Structure Setup nodes so users can create or modify BP designs and include them in configuration packages and export them to another Test or Development server.

When deploying your designs using Design Bundles, it is important to note the version numbers:

▶ A *deployed* version indicates that the design has been tested in the **Development/Test** environment.

▶ A *published* version indicates that the design has been imported, or the design has been imported into the **Production** environment for the first time.

Custom Dashboards

Custom dashboards present data in a graphical format. Using data mined from data views and data cubes, you can create custom dashboards that provide an accurate and dynamic view of company and project performance indicators. You can have multiple custom dashboards in Unifier.

> **Note**: Before you begin creating a company or shell custom dashboard, ensure your company has enabled custom dashboards. Consult with your site administrator for details.

In This Section

Creating Company or Shell Custom Dashboards

You cannot create **Company** or **Shell** SWF-based (small web format) custom dashboards.

> **Note**: Existing custom dashboards can be modified.

The SWF file should be configured to point to a data cube in Unifier. You can only use **Company Data Cubes** with **Company Dashboards** and **Shell Data Cubes** with **Shell Dashboards** (See the "Data Cubes" topic).

When you create the SWF file, be sure to include a URL that includes the custom dashboard name. This will ensure there is a link between the SWF file and the custom dashboard's data cubes, and that the custom dashboard data will refresh when the data changes.

Users can print the custom dashboard if the print capability is resident in the imported SWF file used to display the dashboard.

Granting Custom Dashboard Permissions

Ensure you have permission to create company and shell dashboards. These two types of dashboards use the same Module Permission Settings for Company Dashboard and Shell Dashboard.

▶ *To grant Custom Dashboard permissions*

1) Navigate to the **Company Workspace** tab and switch to Administration Mode.

2) In the left Navigator, select the **Access Control** node. The Access Control log opens and lists all available functions in Unifier.

3) Select **Administration Mode Access** > **Custom Dashboard** in the Access Control log. The Permission Settings for: Workspace window opens.

4) Click the **Add** button. Another Permission Settings for: Workspace window opens.

   In the Select Users/Groups pane:

   a. Click the **Add Users/Groups** button. The User/Group Picker window opens.

   b. Select users and/or groups and click the **Add** button. The user or group name appears in the Selected Users/Group pane.

   c. Click the **OK** button.

   In the Permission Settings: pane, located in the bottom section of the window, select the desired permissions. The permissions cascade, in other words, if you have a permission, you have all the permissions below that selection.

   ▸ **Create:** Users can create a Custom Dashboard; they can use the custom dashboard toolbar buttons **New**, **Open**, **Delete**, **Find**, **Permissions**, **Download XML**, **Refresh Cache**.

   ▸ **Modify:** Users can modify Custom Dashboard properties and edit the dashboard; they can use the custom dashboard toolbar buttons **Open**, **Delete**, **Find**, **Permissions**, **Download XML**, **Refresh Cache**.

   ▸ **Modify Permissions:** Users can assign permissions but cannot edit properties unless they have the **Modify** permission. They can use the custom dashboard toolbar buttons **Open**, **Find**, **Permissions**, and **Download XML**.

   ▸ **View:** Users can view existing custom dashboards. They can use the custom dashboard toolbar buttons **Open**, **Find**, and **Download XML**.

5) Click the **OK** button.

Configuring a Company Custom Dashboard

Configuring a **Company Dashboard** entails modifying the dashboard properties and assigning permission for users.

The Company Dashboard properties include:

▸ A **General** tab, where you can name the dashboard and upload the SWF file

▸ A **Query** tab, where you can add multiple queries, select the data cube, and define grouping, summary, output, and reporting options

▸ A **Cache** tab, where you can enable the XML caching option (instead of using real-time data)

Modify the General Properties of a Company Dashboard

You cannot define the general properties of Company Dashboard.

> **Note**: Existing custom dashboards can be modified.

To modify the General properties of a Company dashboard, do the following:

1) Navigate to the **Company Workspace** tab and switch to Administration Mode.
2) **Select** the **Custom Dashboard** node. The Custom Dashboard log window opens.
3) In the **General** tab complete the fields as shown in the table below.

In this field:	Do this:
Name	Enter a name for the dashboard.
Title	Enter a title. The title appears in the list of available custom dashboards that a user can view.
Description	Enter a description
SWF File	Browse for the SWF (Small Web Format) file to use with the dashboard.
Type	Unifier displays the dashboard type as a read-only field.

Next, select data sources in the **Query** tab, as described in the following procedure.

Define queries for Company Dashboard data cubes

▶ *To define queries for data cubes*

1) Click the **Query** tab.
2) Click **Add**. The Query window opens. Complete the fields in the **Query** window as described in the table below.

In this field:	Do this:
Name	Enter the name of the query.
Data Cube	Choose a data cube to use as a data source for the custom dashboard. ▶ For a company-level custom dashboard, the data cube must be defined as **Company Data Cube**. ▶ For a shell-level custom dashboard, the data cube must be defined as **Shell Data Cube**.
Source Grouped By	Choose a column from Data Cube definition by which to group data. This drop-down list lists those data elements that are marked Group By in Data Cube definition. Changing the value under this drop-down should always reset values under Report

	On and Summary Type.
Output Type	Choose the output type, which determines the output after grouping data based on Source Grouped By column. Following are the options ▶ Record Count ▶ Summary Value
Report On	Choose a column defined in the data cube from among those designated as Summary.
Summary Type	This drop-down shows a list of possible summary types. Values shown under this drop-down are based on the type of Report On data element: ▶ For Numeric type of data element: Summary, Min, Max, Average ▶ For Date type of data element: Min/Max

Next, specify cache details in the **Cache** tab, as described in the following procedure.

Specify cache details

This tab is only available on a company-level dashboard. You must enable the cache before data can be cached. Enabling the cache allows you to schedule the refresh of dashboard data at a preset frequency. With every successful run, the XML data file associated with the dashboard is refreshed.

> **Note**: The Enable Cache option controls the Refresh Cache ability on the log. If Cache is not Enabled, Refresh Cache will not work.

The XML data is created only during a scheduled run or when the refresh cache option is selected. If Enable Cache is disabled, the XML is deleted. Until the scheduler refreshes the cache, or a manual refresh of the cache is not done, XML is not created. If **Cache** is not enabled in the custom dashboard properties, the dashboard query will result in real-time XML data.

▶ *To enable the cache and specify refresh and recurrence*

Click the **Cache** tab. Complete the cache fields as described in the table below.

In this field:	Do this:
Enable Cache	Mark this check box if you want to use the caching function. This selection enables the other options on the form.

Cache Refresh Frequency	Select cache refresh frequency.
	▸ Daily.
	▸ Weekly, end of day. Select which day of the week you want the cache to refresh.
	▸ Monthly. Select which day of the month for the cache to refresh.
	▸ Yearly.
Range of Recurrence	▸ Start on. Select a date to begin the refreshing the cache. This is a required field.
	▸ No end date.
	▸ End by. Select a date to end refreshing the cache.

Grant Company Dashboard View permission

▸ *To grant Company Dashboard View permission*

1) Navigate to the **Company Workspace** tab and switch to Administration Mode.

2) **Select** the **Custom Dashboard** node. The Custom Dashboard log window opens.

> **Note**: Although the log lists both Company and Shell custom dashboards, you cannot grant Shell custom dashboard View permission in this log. Shell custom dashboard view permission is set at the individual shell level; that is, if you have access to a shell you will see its dashboard.

3) Select a Company dashboard from the log and click the **Permission** button. The Edit Permission window opens.

4) Click the **Add** button. The User/Group Picker window opens.

5) Select the users and or groups to add and click the **Add** button. The selected users or groups populate the Selected User/Groups pane.

6) Click the **OK** button to close the User/Group Picker.

7) In the User/group Name pane select the user or group and in the Permissions pane select View.

8) Click the User/Group Picker button to save the selection.

Configuring a Shell Dashboard

Configuring a **Shell Dashboard** entails modifying the dashboard properties, which include:

▸ A General tab, where you can name the dashboard and upload the SWF file

▶ A Query tab, where you can add multiple queries, select the data cube, and define grouping, summary, output, and reporting options

Caching is not available for the shell dashboard.

If you are a member of a shell, you can see its dashboard.

Modify the General Properties of a Shell Custom Dashboard

You cannot define the general properties of Shell Dashboard.

Note: Existing custom dashboards can be modified.

To modify the General properties of a Shell custom dashboard, do the following:

1) Navigate to the **Company Workspace** tab and switch to Administration Mode.
2) Navigate to the **Company Workspace** tab and switch to Administration Mode.
3) **Select** the **Custom Dashboard** node. The Custom Dashboard log window opens.
4) In the **General** tab complete the fields as shown in the table below.

In this field:	Do this:
Name	Enter a name for the dashboard.
Title	Enter a title. The title appears in the list of available custom dashboards that a user can view.
Description	Enter a description
SWF File	Browse for the SWF (Small Web Format) file to use with the dashboard.
Type	Unifier displays the dashboard type as a read-only field.

Next, select data sources in the **Query** tab.

Define queries for shell dashboard data cubes

▶ *To define queries for shell dashboard data cubes*

1) Click the **Query** tab.
2) Click **Add**. The Query window opens. Complete the fields on the **Query** tab.

In this field:	Do this:
Name	Enter the name of the query.

Data Cube	Choose a data cube to use as a data source for the custom dashboard.
	▶ For a company-level custom dashboard, the data cube must be defined as **Company Data Cube**.
	▶ For a shell-level custom dashboard, the data cube must be defined as **Shell Data Cube**.
Show Data From	Determine the level from which the data cube should pull information.
	▶ Current Shell Only
	▶ Subshells Only
	▶ Current Shells and sub-shells
Source Grouped By	Choose a column from Data Cube definition by which to group data. This drop-down list lists those data elements that are marked Group By in Data Cube definition. Changing the value under this drop-down should always reset values under Report On and Summary Type.
Output Type	Choose the output type, which determines the output after grouping data based on Source Grouped By column. Following are the options
	▶ Record Count
	▶ Summary Value
Report On	Choose a column defined in the data cube from among those designated as Summary.
Summary Type	This drop-down shows a list of possible summary types. Values shown under this drop-down are based on the type of Report On data element:
	▶ For Numeric type of data element: Summary, Min, Max, Average
	▶ For Date type of data element: Min/Max

Modifying a custom dashboard

With the exception of refreshing a company dashboard cache, modification procedures pertain to both **Company** and **Shell** dashboards.

▶ *To modify a custom dashboard*

1) Navigate to the **Company Workspace** tab and switch to Administration Mode.
2) **Select** the **Custom Dashboard** node. The Custom Dashboard log window opens.

3) Select a company dashboard.
4) Click the **Open** button.
5) Modify the dashboard as needed and click **OK**.

See these dashboard modification topics:

▶ Delete a custom dashboard
▶ Find a custom dashboard
▶ Download XML Company or Shell dashboard data
▶ Refresh the Company Dashboard cache

Delete a custom dashboard

Only users with **Create/Modify** permissions can delete a custom dashboard.

The **Delete** procedure pertains to both Company and Shell Dashboards.

▶ *To delete a custom dashboard*
1) Navigate to the **Company Workspace** tab and switch to Administration Mode.
2) **Select** the **Custom Dashboard** node. The Custom Dashboard log window opens.
3) Select a company dashboard.
4) Click the **Delete** button.
5) You will receive a confirmation message. Click **OK**.

Find a custom dashboard

This procedure is germane to both Company and Shell Dashboards.

▶ *To find a custom dashboard*
1) Navigate to the **Company Workspace** tab and switch to Administration Mode.
2) **Select** the **Custom Dashboard** node. The Custom Dashboard log window opens.
3) Click the **Find** button.
4) You can search for custom dashboards using **Name** or **Type**.
5) Enter the search criteria and click **Search** (or press **Enter**).

Primavera Unifier displays all the dashboards that met the search criteria you entered.

Download XML data associated with a custom dashboard

You can download the data associated with the custom Company or Shell Dashboard.

> **Note**: For Company Dashboard, if you enabled the cache when you defined the dashboard properties, then Unifier will download the last stored XML data.

▶ *To download XML data associated with a custom dashboard*

1) Navigate to the **Company Workspace** tab and switch to Administration Mode.
2) **Select** the **Custom Dashboard** node. The Custom Dashboard log window opens.
3) Select a company dashboard.
4) Click the **Download XML** button.
5) Save the XML file.

Refresh the Company Dashboard cache

▶ *To refresh the company dashboard cache*

The Refresh Cache option is available only for Company Dashboards that have the cache enabled. If you attempt to refresh the cache and the cache is not enabled, you will receive the message: *Cannot refresh the cache. Cache is currently disabled on* this *dashboard.*

1) Navigate to the Company Workspace tab and switch to Administration Mode.
2) **Select** the **Custom Dashboard node.** The Custom Dashboard log window opens.
3) Select a company dashboard.
4) Click the **Refresh Cache** button that is located on the tool bar.

Program Administration

The following section describes how to create and manage programs.

In This Section

Creating and Managing Programs

Programs are a way to group like projects or CBS shells together (or projects and shells in combination). Programs allow consolidation of financial, schedule and status data across projects or shells. They are created at the company level in Admin mode. An administrator typically grants permissions to other project or shell team members who will modify an existing program and generate specific project or shell data. For example, a project or shell team member may modify a program to produce high-level forecasting data or to generate program reports based on a project's cost, schedule, and status data.

Although the Company Administrator creates the program, rights are typically granted to project or shell members who will then modify the existing program and generate specific project or shell data.

For example, a project or shell team member may modify a program to produce high-level forecasting data or to generate program reports based on the project cost, schedule and status data for one project or shell or across several projects or shells.

Creating a Project

The follow discusses creating a project by copying from a project template, by copying from another existing project, or creating manually.

Grant permission to administer projects or project templates

In order for a Project Administrator to be able to create and setup a Project, the administrator must have the permission setting to "Administer All" (or "Administer *Project Category*") at the Company Sponsored Projects, Project Properties level.

To grant permissions to Project Administrator User or Group

1) Go to the **Company Workspace** tab and switch to Admin mode.

2) In the left Navigator, click **User Administration > Company Users** or **Partner Users** (to grant permissions to individual users) or **Groups** (to grant permission to a project administration group).

3) Scroll to **Company Sponsored Projects (Standard)** and select.

4) Select the user or group and click **Open**. Click the **Permissions** tab.

5) Select **Administer All** (for non-categorized projects), and/or Administer Project Category.

Create a project by copying a template or project

You can create projects using the project templates you created. You can also create projects by copying from existing projects.

You can verify the project properties, make changes as necessary, update status, or activate as necessary.

Tip: Because you can only have one cost sheet per project (and once a Cost Sheet is created for a project, it cannot be deleted or replaced), you might consider creating a Cost Template in the Templates log and copy into the project separately.

> **Note**: As Project Administrator, you can receive email notification of the successful creation of a shell instance, for shells that are created manually, through Web Services or a CSV file upload, or through auto-creation. This notification can be set up in email notifications in uDesigner. Also, you can set your User Preferences to control whether you receive these notifications.

To create a project from a project template or existing project

1) Go to the Company Workspace tab and switch to Admin mode.

2) Click **Company Sponsored Projects** in the left Navigator.

3) If your company is using project categories, click a project category in which to create the new project. If you don't wish to categorize the project, or if no categories have been setup, click **All**. Note that not all administrators will have access to all project categories.

4) From the **File** menu, click **New** > **Copy From**. The Project Cloning window opens.

5) Click the Copy From drop-down list and choose Project to copy an existing project, or Template to copy a project template.

6) Select a project or template from the list and click **OK**. To search for a specific project or template on the list, click the **Filter By** field and select **Name** or **Number**. In the **Filter For** field, enter all or part of the name or number to search for and click **Search**.

7) In the Select Modules pane, select the modules to include in the new project. Users and Groups are selected by default and copied along with the project properties.

> **Note**: If the Schedule Sheet option is selected, the curves relating to the schedule sheet will be copied to the new project. If the Schedule Sheet is NOT selected, the curves relating to the schedule sheet will be created but the name of the schedule sheet selected on the properties window will be empty.

8) Click **OK**. The Project window opens, displaying the project properties.

   Most properties are copied from the original template with the following exceptions:

   ‣ Project Number: On the General tab, enter a Project Number
   ‣ Project Currency: On the Standards tab, specify the Project Currency
   ‣ Project Image: On the Standards tab, specify the Project Image (optional)

9) When the window is complete, click **OK**.

10) Click **Yes** to confirm and create the new project.

Create a new project manually

To manually create a new project:

1) Go to the **Company Workspace** tab and switch to Admin mode.

2) Click **Company Sponsored Projects** in the left Navigator.

3) Click a project category in which to create the new project. If you don't wish to categorize the project, or if no categories have been setup, click **All**. Note that not all administrators will have access to all project categories.

4) Click the **New** button. The Project window opens.

5) Complete the information on each of the tabs.

   The tabs contain the same fields as the template window.

   Some notes on the tabs:

   ‣ **General** tab: Note Project Status: you may set the project status to Active to make it available to users immediately, or leave it as Inactive until you have completed setting up the new project. This will prevent users from signing in to their company and attempting to access the project before it is ready.

   ‣ **Location** tab: Be sure to enter the complete Project Address and any other project related addresses.

   ‣ **Progress** tab: Enter the project schedule start date, planned completion date, status and project phase.

   You can manage a project's progress on a continuing basis by reviewing the project properties you define here. For instance, at any time you can enter a revised completion date, enter the percent complete for a design and/or construction project, monitor the project status, or change the project phase to ensure information contained in the Document Manager is current and available to the project team at the right time.

   The information that you enter here is also viewable from the Progress pane of the Project landing page. This means a project administrator can quickly view the current status of a project and make modifications as necessary.

6) Click **OK** to save your changes and exit the **Project** window.

Add Cost Sheet

The option "Enable P6 sources" is not available in a Cost Sheet created in a Standard Project or Standard Project Template.

The cost sheet that has the option "Enable P6 sources" selected is not included when you want to create a new Cost Sheet by copying a cost sheet.

The template that has the option "Enable P6 sources" selected is not included when you want to create a new Cost Sheet using: New > Cost Sheet > Copy from Template.

Manage Projects

You can verify the Project properties, make changes as necessary, update status, or activate as necessary. It is recommended that you keep the company progress information up to date to reflect the ongoing status and progress of the project.

You can also modify project information in a Project Template and then update one or more existing projects by "pushing" the information from the template to the projects (see *Updating Projects* (on page 117)).

To open a project

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Company Sponsored Projects** in the left Navigator. Select a project name from the project log and click **Open**. The Project home page opens.

To edit an existing project

1) Open the project's home page and switch to Admin mode.
2) Click the **Open** button. The Project window opens.
3) Modify the project information as necessary on the tabs. You can modify any of the project properties any time during the project duration, except for the project currency. Once a project is set up, the project currency is locked.
4) Click **OK** to save your changes and exit the **Project** window.

> **Note**: The tabs contain the same fields as the Template window.

Activate or deactivate a project

To activate/deactivate a project

1) Open the Project Home Page and switch to Admin mode.
2) Click the **Open** button. The Project window opens.
3) In the **General** tab, set the status to Active, Inactive, or On-hold.
   ‣ **On-hold**: The initial project status. On-Hold projects are listed on the projects log, but you cannot work with them.
   ‣ **Active**: Active, in-progress project. All project actions in User and Administration Mode are available.

▸ **Inactive**: Inactivate projects to suspend project usage. Inactive projects are visible from the Administration Mode under Sponsored Project log only, but *not* visible under the Projects node (i.e., only Sponsor Company can access the project), or in User Mode logs and selections. Only System and Project Administrators (users with Modify Status rights) can reactivate the project.

> **Note**: "Late" tasks in an inactive project may still show up in users' task logs. Though they can access the task, no transactions can be performed in the inactive project.

Creating a Program

To create a new Program:

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Programs** in the left Navigator.
3) Click **New** on the button bar. The Program window opens.
4) Complete the tabs. This defines the program properties:
   ▸ **General**: Define general properties
   ▸ **Shell/Projects:** Add projects and shell to the program
   ▸ **Progress:** Track progress of the program
   ▸ **Links:** Add your own web page links, which appear on the Program home page
   See the following section for details.
5) Click **Apply** to save changes, or **OK** to save and exit the window.

Defining Program Properties

You can define program properties when you first create a program, or open an existing program.

Define Program General Properties (General tab)

To access program properties:

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Programs** in the left Navigator.
3) Select a program from the log and click **Open**. The program properties landing page opens.
4) Click **Open** to open the Program window.
5) Use the information in the following table to complete the General tab.

In this field:	Do this:
Program Number	Enter a number for the program.
Setup Date	This field is populated with the program creation date.

Program Name	Enter a name for the program.
Description	(Optional) Enter a description of the program or projects or shells within it.
Administrator	Click **Select** and select an administrator from the list. Each program must have an administrator.
Image	(Optional) You can click **Browse** and select an image file. This image will appear on the Program Home Page.
Program Category	If a program category data definition has been setup, you can select it here.
Status	Select a status.

Add or Remove Projects or Shells From a Program (Projects tab)

You can add any Active or On Hold project to a program. Inactive projects are not eligible.

To add a Projects/Shellsto a program

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Programs** in the left Navigator.
3) Select a program from the log and click **Open**. The program properties landing page opens.
4) Click **Open** to open the Program window.
5) Click the **Projects/Shells** tab.
6) Click **New**.
7) Select one or more projects or shells and click the **Add Project/Shell** button. To select multiple projects or shells, hold down the **Ctrl** or **Shift** key while selecting.
8) In the Program window, click **Apply** to save, or **OK** to save and exit.

To remove a Projects/Shells:

On the **Projects/Shells** tab, select the project or shell and click **Remove**.

Set Up Program Progress Tracking (Progress tab)

You can enter a start date and planned completion dates for a program by manually entering the dates, or by linking the program to the project or shell schedule sheet. To use the Schedule Manager options, a schedule sheet must be defined in your project or shell. As changes are made in the Schedule Manager, they will automatically change the progress indicator in the Progress tab.

Progress indicators linked to the schedule are:

▶ Start Date
▶ Planned Completion

‣ Revised Completion

To track the progress of a program manually:

1) Go to the Company Workspace tab and switch to Admin mode.
2) Click **Programs** in the left Navigator.
3) Select a program from the log and click **Open**. The program properties landing page opens.
4) Click **Open** to open the Proram window.
5) Click the **Progress** tab.
6) Complete the fields. See the following table for details.
7) Click **Apply** to save the changes, or **OK** to save and exit.

In this field:	Do this:
Start Date	Choose one of the options: Manual: Manually enter the project or shell start date by clicking the calendar icon. From Schedule Manager: Click the selection list and choose a data column from the list (for example, Program Start Date). The Program Schedule Sheet must be created and setup before selections become available.
Planned Completio n	Choose one of the options: Manual: Manually enter the project or shell start date by clicking the calendar icon. From Schedule Manager: Click the selection list and choose a data column from the list (for example, Program Due Date). The Program Schedule Sheet must be created and setup before selections become available.
Revised Completio n	Choose one of the options: Manual: Manually enter the project or shell start date by clicking the calendar icon. From Schedule Manager: Click the selection list and choose a data column from the list The Program Schedule Sheet must be created and setup before selections become available.
Notes	Program notes can be anything that the Administrator feels is relevant to share with other Project or Shell Administrators. This note is not displayed on the Summary or Home Page.

Add Links to Other Program-Related Web Pages (Links tab)

Links are displayed on the Program home page.

To add a link

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Programs** in the left Navigator.
3) Select a program from the log and click **Open**. The program properties landing page opens.
4) Click **Open** to open the Proram window.
5) Click the **Links** tab.
6) Enter a name for the link and the link's URL.
7) To add more links, click the **Add Row** button and repeat step **5**.
8) When you are finished, click **OK**.

Program User Administration

The **User Administration** node appears below the new program name in the Navigator once it is created and activated. As projects or shells are added to programs, the users and groups are not automatically added to the program. By default, the Program Administrator chosen during the program setup is added as a program user. The Program Administrator group is automatically added as a default group, and the program administrator is added to the group by default. You can add additional users and groups to the Program and set permission levels.

Add Users or Groups to a Program

To add users or groups to a program via the Company Workspace:

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click the **User Administration** node for your program in the left Navigator.
3) Click **Users** to add users, or **Groups** to add groups to the program.

> **Note**: If a User Attribute form has been imported, the program user log will reflect the design of any designed Partner Log included in that form. See Importing User Attribute Form for details.

4) Click **New** on the button bar. The standard User/Group Picker window opens.
5) Select a **Company** from the **List Names from:** list box and Users or Groups from the **Show By:** list box.
6) Select the users/groups to include in the Program and click **Add**. You can also create a new group by highlighting the Groups node and selecting **File > New** or the **New** button.
7) When you are done adding users and groups, click **OK** to return to the Users or Groups log.

Grant Program Permissions (Access Control)

Granting program permissions entails granting users access to the modules in the program, such as the Schedule Manager or cost sheets.

To grant user/group permissions to the program

1) Go to the **Company Workspace** tab and switch to Admin mode.

2) Click **Access Control** in the left Navigator.

3) On the right pane, select **User Mode Access > Programs > [module]**. The Permission Settings window opens.

4) Click the **Add** button. The User/Group Picker opens.

5) In the picker, specify a user or group and select the Permission Settings.

6) Click **OK**, then click **OK** in the Permission Settings window.

Project Administration

The following topics describe tasks related to Project Administration.

In This Section

Creating and Managing Projects

Projects can be created from scratch one at a time, or can be created by copying a project template. It is recommended that you create one or more project templates first, then create new projects based on them. Advantages to using a template include ease of individual project setup, consistency between projects, and the ability to update project information easily (for example, if you add a new user, introduce a new business process, or edit a cost sheet column) by allowing you to make an addition or modification directly to the template and then "push" it to existing projects.

> **Note**: You can migrate standard projects to CBS shells. See ***Migrating standard projects to CBS shells*** (on page 272).

How to create and setup a project

Be sure you have the proper permission setting to administer projects. If your company has chosen to "organize projects" (that is, create projects under different project categories), be sure these categories have been set up. Categories can also include asset classes.

Step 1: Create a Project Template. Most major functionality that is available in a project can be set up in a project template. You can set up as few or as many individual features as you like within a template.

Step 2: Create a new Project. This can be done manually, or by copying a project template.

Step 3: Set up permissions. Grant permissions to access and work with the new project to project team members. Refer to the *Unifier Reference Guide* for project permission settings.

Step 4: Setup up gates. This is an optional step. The gates feature allows you set up acceptance criteria to use to track and control project phases.

Step 5: Manage projects. This includes updating projects to "push" updated information, set ups, etc., to existing projects. The projects do not need to have been created originally from the template.

The following sections discuss creating and managing projects and project templates.

Creating a Project Template

Project and project template categories are maintained by the company administrator. Asset classes are added as project category nodes when they are created. One category ("All") is listed by default. You can create project templates under the All category, or other project categories or asset classes as needed. These categories do not appear to users in User Mode; they are a way to organize projects or link asset classes to projects.

Access project templates

To access project templates

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates > Projects (Standard)** in the left Navigator.
3) Expand the **Projects (Standard)** node. Like projects, project templates can be grouped by categories or by asset classes.
4) Click one of the category or asset nodes. The Project Templates log opens. The log lists any project templates that have been created under the category.

Create a project template

The following procedure describes how to create a project template. The procedure is similar to creating a new project.

To create a new project template

1) Go to the Company Workspace tab and switch to Admin mode.
2) Click **Templates > Projects** in the left Navigator.
3) Expand the **Projects (Standard)** area to display the categories. The default is All. The project category that you define here will determine the category to which subsequent projects will be assigned. The project category cannot be changed.

   Use caution when defining a template in a project category. You cannot "re-categorize" a project or project template once it is created and saved.
4) Click one of the category or asset nodes. The Project Templates log opens. The log lists any project templates that have been created under the category.
5) Click the **New** button. The Template window opens. The Template window is equivalent to the Project window; the same properties and tabs are filled out for a project template as for a new project.

6) Complete the Template window. This window will be used for the project Properties when creating projects:

> **General tab:** Define properties. See *Define general project properties (General tab)* (on page 106).

> **Location tab:** Define the project location. See *Define project location (Location tab)* (on page 108) and *Add a project image (Standards tab)* (on page 110).

> **Standards tab:** See *Add project currencies (Standards tab)* (on page 109).

> **Progress tab:** See *Set up project progress tracking (Progress tab)* (on page 112).

> **Links tab:** See *Add links to other project-related web pages (Links tab)* (on page 114).

> **Custom tab:** See *Select a project custom attribute (Custom tab)* (on page 114).

These tabs are the same for both project templates and projects.

7) Click **Apply** to save changes as you enter information, and **OK** when you are ready to save information and exit the Template window.

Create a project template by copying a template or project

You can create a Project Template by copying from an existing Project template or an existing Project.

> **Note**: You can choose to copy any existing Custom Calendars from the template or from an existing project.

To create a project template by copying an existing project or project template

1) Go to the Company Workspace tab and switch to Admin mode.
2) Click **Templates > Project (Standard)** in the left Navigator, then select a project category. The default is **All**. Use caution when defining a project category. You cannot "re-categorize" a project or project template once it is created and saved.
3) From the **File** menu, choose **New >Copy From**. The Template Project Cloning window opens.
4) From the **Copy From** drop-down list, select one of the following:
   > **Template:** The log displays the list of existing project templates
   > **Project:** The log displays the list of available company-sponsored projects
5) Select a listed template or project name.
6) In the Select Modules pane, select the modules to include in the new template.
7) Click **OK**. The Template window opens, displaying the project template properties.

   Most properties are copied from the original project or template into the Template properties window, with the following exceptions:
   > **Project Number:** On the General tab, enter a Project Number
   > **Project Currency:** On the Standards tab, specify the Project Currency
   > **Project Image:** On the Standards tab, specify the Project Image (optional)
8) Click **OK**. Click **Yes** to confirm.

> **Note**: Use caution when selecting which modules to copy. When you create a project template by copying from an existing project or template, you will be copying existing setups already created in the selected modules. (For example, if you select Cost Sheet, you will copy not only the project cost sheet, but any existing work packages and worksheets as well; since cost sheets and work packages cannot be deleted once created, you will not be able to delete these from the new template.)

Set up modules in the project template

Setting up modules is optional. For example, you can configure a Cost Sheet in your project template. When you create a new project using this template, you will have the option of copying this Cost Sheet into the new project.

Project Templates have the same fields as a new Project.

> **Note**: Some fields are not filled in or not copied over when you copy from a template because they are not relevant until a project is created, like Project Start Date and Project Image.

Member Companies

You can select project member companies from your company's list of partner companies. See *Managing Member Companies* (on page 131).

Access Control

Enables setting up default permission settings for users and groups. See *Grant project user permissions through Project Access Control* (on page 136).

Users and Groups

As with projects, you must add at least one user to the project template before you can activate it. Users and groups added to a project template are always copied by default from the template to the project created from it. See *Managing Project Users and Groups* (on page 133).

If your groups are going to be similar across all of your projects, you can define them once in the template rather than creating them in each project. It is not recommended that you put Users into the Project Template unless you know that those users will be on every project. The one exception is that a Project Administrator is required to be named in the template. Users cannot be deleted once they are in the Template, although Users can be deactivated.

Projects Templates can include the following modules:

Business Process Setup

Business Process setups created in the template can be copied over to projects.

Rules

You can define project level cost or funding rules.

Project Information

You can define the business process that will be used in the Project Information: General node.

Gates Setup

You can include a gates setup in your project template. See *Setting Up Gates* (on page 137).

Cost Manager

You can define any or all of the following in a template:

▸ **Cost Sheet** (includes Worksheets and Work Packages)

You can create a cost sheet for the project template. This is similar to creating a cost sheet for a project. And like projects, you can also include worksheets and work packages.

▸ **Funding Sheets**

You can create a project fund sheet, and commitment funding sheet structure.

▸ **Schedule of values (SOV)** (Structures for General Spends, Payment Applications, and/or Summary Payment Applications)

  ▸ For General Spends SOV, the SOV structure is copied from an SOV template in the Templates log.

  ▸ For Payment Applications SOV and Summary Payment Applications SOV, the structure is copied from the line item grid structure of the Payment Application Business Process. This means that you must first complete the Business Process (BP) setup for the Payment Application BP before you can create the structure.

▸ **Cash Flow Curves**

You can create Cash Flow Curves.

> **Note**: Since only one Cost Sheet, Funding Sheet, SOV structure (of each type) and commitment funding structure can exist in a project, make these choices carefully. Once you create these items in the project template, you can modify them, but will not be able to delete or replace them.

Document Manager, **Project Documents**

You can create a folder structure for the document manager that can be used across projects. These can be created from Folder Structure Templates, or folders can be added manually. Unlike Folder Structure Templates, you can also assign users (if they are in the project template) folder-level permissions, and can import folders and folder properties.

Resource Manager

You can create the setup and resource sheets in the template.

Schedule Sheet

A Schedule Template will be used to create the Schedule Sheet. Like the Cost Sheet, once this is created, it cannot be deleted.

User-defined Reports: You can create one or more user-defined report templates, which will be used for project user-defined reports. You can import user-defined reports into project templates from project templates in other companies and Unifier environments. See Importing User-Defined Reports into Project or Shell Templates.

To set up modules in the project template

1) Open the project template.
2) Click a module and add the applicable information. This information can be carried over to new projects created from the template.

Manage Project Templates

Once the Project Template properties have been defined, you can setup any or all of the available modules. These will be copied to projects that have been setup using the template.

> **Note**: You do not have to setup modules here. If you do not setup a module in the Project Template, the modules will not be setup in the projects. You can setup the projects manually after project creation, or by using individual templates, for example, cost sheet templates.

You have the option to edit project properties and modules and update existing projects with the new data. See *Updating Projects* (on page 117) for more information.

To open the project template

1) Go to the Company Workspace tab and switch to Admin mode.
2) Click **Templates>Project (Standard)** in the left Navigator.
3) Select a project category (default is **All**). The **Project Templates** log opens.
4) Select a project template from the log and click **Open**.
5) The project template home page opens. The navigator expands to display the modules that can be configured in the project template. Select a module to edit or set up.

To edit project template properties

1) From the project template home page, click the **Open** button. The Template window opens.
2) Click the tabs to view or edit project template properties.

Defining Project (and Project Template) Properties

This section describes the Properties window for projects and project templates.

Define general project properties (General tab)

To define project locations for a project or project template

1) Open the **General** tab of the Project or Template window.
2) Complete the window as described in the following table.

In this field:	Do this:
Project Number	For Templates, you might enter a phrase such as Enter project number here or information for your Project Administrator regarding how to assign a project number, as each project created from the template will have its own number. When creating a new project, if the Site

	Administrator enabled automatic project numbering during new company setup, this field will be pre-populated each time a new project is created.
Setup Date	Populates automatically with the current date when the project or template is saved.
Project Name	Enter a project name. For templates, you might enter a generic name or instructions such as Enter Project Name here.
Description	Explain the purpose or intended uses of the project or template (especially if you have multiple templates).
Administrator	Click Select to open the User/Group picker and select a Project Administrator. For templates, the user will automatically become part of the Project Administrator group for any project created from the template. (Additional administrators can be selected.)
Construction Type	Choose New Construction or Retrofit/Remodel.
Project Status	You can activate the project template immediately, or place it On-Hold or make it View-Only and activate later. A template that is On-Hold, View-Only, or Inactive cannot be used to create a project. It is good practice to leave a project or template On-Hold until you have completed the setup. Project Administrators/Users with "modify project status" rights are the only ones who can change the status. The project administrator will receive email notification when the status of a project changes. The change of project status could occur due to a manual change, bulk update, through Web Services or a CSV file, or through automatic update. Status definitions for **projects** are: ▸ **Active:** Active, in-progress project. All project actions in User and Administration Mode are available. ▸ **On-Hold:** The initial shell status. On-hold shells appear on the shells log. Shell administration functionality is available to shell administrators for setup and maintenance for users with permissions to perform that function. Users cannot create records in a shell that is On-Hold. If a user attempts to access a shell that is On-Hold, the system displays an alert message stating that the shell is On-Hold. ▸ **View-Only:** For end users, View-Only projects can be viewed, printed, exported, and included in reports. They cannot be modified. When a shell is View-Only, the status overrides (but does not modify) access control permissions, granting only View permissions. The project reverts to the access control permissions when the project is made Active. View-Only projects can be added to and removed from programs, and can roll up to programs, UDRs, and dashboards. Business process records cannot be auto-created in View-Only projects. Data from View-Only projects does not roll up to company-level account codes or cost sheets. Data will roll up from

	View-Only projects to programs, the Planning Manager, and the Asset Manager. No updates can occur to View-Only projects through Integration, Unifier Mobile, or through reverse auto-population. View-Only projects cannot be updated through templates. Consolidate line item functionality is disabled for View-Only projects. View-Only projects have only view, export, and print permissions available. Tasks and Drafts are not available for View-Only projects. Messages are available, but users cannot add general comments. Mailbox is available for viewing, but users cannot send, edit or delete messages for View-Only projects. When a project becomes View-only, all scheduled jobs associated with it are canceled. When the status of the project changes back to Active, you must restart any scheduled jobs. Administrators can perform all actions on View-Only projects. ▸ **Inactive:** Used to suspend project usage. Inactive projects are visible from the Administration Mode under Sponsored Project log only, but **not** visible under the Projects node (i.e., only Sponsor Company can access the project), or in User Mode logs and selections. Only System and Project Administrators (users with Modify Status rights) can reactivate the project. Late tasks in an inactive project may still show up in users' tasks logs. Though they can access the task, no transactions can be performed in the inactive project.
Auto-update Status Setup	The selections on the drop-down list are defined automatic status update setups. These setups are defined at the Company level for use in specific projects. See *Setting Up Automatic Status Update* (on page 136) for details. If you decide not to use the automatic status update, you can deactivate it by deselecting a setup (by literally selecting the word "Select").
Project Type	The selections on the drop-down list are defined in the data set of the Project Type data definition. The default is None. Contact your Company Administrator if you need additional Project Types defined.

Define project location (Location tab)

You can define up to four addresses (Project, Billing, Shipping, and Billing & Shipping) for a project or project template. For each project or project template, you must enter at least one address: the Project Address. The Project Address will be used to generate an online location map accessed in the Project Home Page in User Mode.

The following is applicable when creating a project template or new project:

To define project locations for a project or project template
1) Open the **Location** tab of the Project or Template window.
2) Complete the Location tab as shown in the following table.
3) Click **Apply** to save changes, or **OK** to save and exit.

In this field:	Do this:
Address Type	Select one of the address types listed (you must complete the Project Address fields).
Address 2	Enter the main street address Note: If the Project Template will be used for different project locations, you can enter generic notations for the Project Administrator, such as Enter project address here.
Address 3 Address 4	Generally for P.O. Box numbers, suite numbers, etc.
Country	Choose the from the drop-down list.
Site	Choose a site from the drop-down list. The selections are generated from the Project Site data definition. The default is None.

Add project currencies (Standards tab)

On the Standards tab, you can specify a currency or currencies that will be used on the project. The currency you specify here will be used throughout the project, for example for cost business processes, the cost sheet, etc. You must define at least one currency. If the project is international, you can define multiple currencies in which to display data, although only one can be the default project currency.

> **Note**: The list of available currencies is maintained in **Standards & Libraries > Exchange Rate**.

To define project currency for a project or project template

1) Open the **Standards** tab of the Project or Template window.

2) In the **Currencies** section of the window, click the **Add** button. The Edit Exchange Rate window opens.

> **Note**: The **Base Currency** shown at the top of the Edit Exchange Rate window is the Base Currency set up for your company. For example, if yours is a company in the U.S., then the Base Currency will likely be the United States Dollar (USD). If your company does business internationally, you may make other currencies available for project use.

3) Use the information in the table below to add a currency.

4) Click **OK** to save and exit the Edit Exchange Rate window.

5) In the **Standards** tab, select a **Project Currency** from the drop-down list. This will be used as the default project currency. Once you have selected a project currency and saved the template or project, it cannot be changed. The selections are generated from the Currencies list you defined.

6) Click **Apply** to save changes, or **OK** to save and exit.

In this field:	Do this:
Currency Name	Select the currency you want to use for the cost functions in this project. If the currency you selected is other than the company Base Currency, then complete the following fields.
Rate	Enter an exchange rate to use for conversion calculations. From the drop-down list select one of the following: ▸ If **Float** is selected, the rate is updated automatically from the **Company Currency Table** (**Standards & Libraries > Exchange Rate**). ▸ A **Peg** rate locks in the company rate on the day the rate is set. (Only a Project Administrator can manually modify the **Peg** rate to a value other than the company peg rate.).
Hedge?	If the **Hedge** selection is Yes, then the Hedge rate is used for conversion calculations. Otherwise, the **Float** rate will be used.
Rate	If an amount is entered for the **Rate**, then the hedge rate is used until the amount specified is reached (by spends) and then the system will revert back to the normal rate.
Amount	If **Float** is specified, Unifier will retrieve the rate, based on today's date and time. If **Peg** rate is specified, the field will be editable.
Comments	(Optional) Add any comments that might be necessary to explain the default currency.

Note: Once a currency is selected and saved, it cannot be modified. The remove option is made available to enable you to remove the additional currencies and unsaved changes.

Add a project image (Standards tab)

You can add a representative image of the project that will display on the project home page for users.

For templates, it is not necessary to select a project image because it will not be copied to a project created from the template. However, you can include one to provide an example to users creating projects.

For best results, the recommended image size is 500 pixels wide by 300 pixels high. Image files should be in jpeg or gif format.

To define a project image

1) Open the **Standards** tab of the Project or Template window.
2) In the **Project Image** field, click the **Browse** button.
3) Browse to the location of the image file, select the file and click **OK**.

4) Click **Apply** to save changes, or **OK** to save and exit.

Distribute an External Email Address for the Project (Standards Tab)

External emails are important communications that need to be included in projects. Such emails can come from project members or from external users who do not use Unifier. These email communications (and any attachments) can be collected in a central repository, called the **Project/Shell Mailbox**, so that project members can use them in managing and documenting the project. Once such emails reside in the project's mailbox, project users can view them, forward them to appropriate members, flag them for review, and reply to them. In addition, these external emails can be linked to business process records.

When Unifier is installed on your system, a dedicated email address for your company is specified, and whenever you create a project, Unifier assigns it a unique identifier. Unifier combines this email address and project identifier to create the Project Mailbox. This email address appears on the **Standards** tab, and from the **Standards** tab, you can send the email address for the Project Mailbox to all project participants, both within and outside of Unifier.

> **Notes**:
> - External emails that have been blind carbon-copied (Bcc) are not collected by the mailbox.
> - To prevent spam and virus attacks, you will need to create a list of approved email addresses that will be accepted by the project. See Creating an Approved Email List for Project/Shell Mailboxes.

To distribute the external email address
1) Click the **Send Email** button. An email message window opens.
2) In the **To** field, enter the email addresses of all participants in the project.

   You can also send the address of the dedicated mailbox to external users by adding their email addresses in the **External Cc** field.
3) Click the **Send** button.

Distribute the email address from the landing page

In addition to the Standard tab, you can distribute the email address from the project's landing page. Remember to add the new recipient to the approved email list for this mailbox (Creating an Approved Email List for Project/Shell Mailboxes).

To notify project users whenever the project mailbox receives an external email

1) In the **Send Notification To** field, click the **Select** button. The User Picker opens.
2) Select the users you want to notify and click **OK**.

Set up project progress tracking (Progress tab)

The Progress tab of the Project window helps you track the progress of your project. You can manage milestones and project phase from this window. This information is displayed on the Progress pane of the Project landing page. This means a project administrator can quickly view the current status of a project and make modifications as necessary. Project Phase can affect other modules such as triggering when certain workflows or documents become available.

The Progress tab can be linked to the Project Schedule Sheet. By setting up the Project properties to integrate with the Schedule Manager, changes in the schedule manager will automatically change the progress indicator in the project or program Progress tab. (The Schedule Manager is referenced.)

The Project Phase can be set manually, or can be maintained manually (see *Setting Up Gates* (on page 137).)

To set up project progress tracking

1) Open the **Progress** tab of the Project or Template window.
2) Complete the tab as described in the following table.
3) Click **Apply** to save changes, or **Ok** to save and exit.

In this field:	Do this:
Start Date	Choose one of the options: Manual: Manually enter the project start date by clicking

	the calendar icon.
	From Schedule Manager: Click the selection list and choose a data column from the list (for example, Project Start Date). The Project Schedule Sheet must be created and setup before selections become available.
Planned Completion	Choose one of the options:
	Manual: Manually enter the project start date by clicking the calendar icon.
	From Schedule Manager: Click the selection list and choose a data column from the list (for example, Project Due Date). The Project Schedule Sheet must be created and setup before selections become available.
Revised Completion	Choose one of the options:
	Manual: Manually enter the project start date by clicking the calendar icon.
	From Schedule Manager: Click the selection list and choose a data column from the list The Project Schedule Sheet must be created and setup before selections become available.
Design Complete	This indicates the percentage of the design phase that has been completed. Enter a value.
Construction Complete	This is the percentage of the construction phase that has been completed. Enter a value.
Notes	Project notes can be anything that the Project Administrator feels is relevant to share with other Project Administrators. This note is not displayed on the Summary or Project Home Page.
Status	Chose from one of the three statuses.
Project Phase	If you are manually managing project phases, you can choose from this list for template and projects.
	Note: If you are using Gates, this list may not be applicable.
	Project Phase is a system-defined Data Definition that is pre-filled when the company is created. You can update this list by navigating to Data Structure Setup > Data Definitions > General and add new values to the Data Set list.
	Note: Project Phase is associated with Files and Folders in the Document Manager. Files and Folders can be given a Phase Property. Then, the only Folders and Files that will show in the DM are those folders without a Phase Property or one that matches what is set in

	Project Setup.

Add links to other project-related web pages (Links tab)

Project Links will appear on the Project Home Page. Links entered here in the Project Template will be copied over to the Project.

Project Links will appear on the Project Home Page. They can be used to provide links for users to useful websites, your company's website, an intranet, etc. Links entered here in the Project Template will be copied over to the Project.

To add a project link

1) Open the **Links** tab of the Project or Template window.
2) Enter the name and URL for any number of links you want to appear on the project home page. The name will display as an interactive link on the project home page. When users click on the link, a new browser window opens to the URL.

   For example, to provide a direct link to the government Occupational Health and Safety website, you might enter OSHA as the name, and http://www.osha.gov as the URL.
3) Click **Add Row** to add additional URL links on the project home page.
4) Click **Apply** to save.

Select a project custom attribute (Custom tab)

Projects can have Custom Attributes associated with them. Custom Attributes are created as company-defined Data Definitions. In the case of Projects and Project Templates, they can be used to provide further data not defined elsewhere. In the example below, Regions were defined as a custom attribute.

If no custom attributes have been defined, the tab will be blank.

To select a custom attribute

1) Open the **Custom** tab of the Project or Template window.
2) Select the value from the pull-down menu. Click **OK**.

Create a Project Calendar (Calendar Tab)

Each project can have its own calendar. The project calendar that you specify can be used to override the company calendar, or you can use the company calendar for the project.

If there is no project calendar, or a project calendar is not in use, the company-level standard calendar marked as the default calendar (**Company Calendar (Default)**) is the calendar that is used by the project.

The project calendars can be based on:

a) Standard calendars created at the company level

b) Custom Calendars created for the specific project

The project calendar you create applies only to the project for which you create that calendar. The calendar selected affects project durations and due dates. For example, companies can have multiple projects in different countries that have different working and non-working days. These working and non-working days must be considered when determining such time-driven factors as business process workflow due dates and activity dates in schedule sheets.

> **Note**: Unless otherwise specified, the default calendar for a project is the company calendar that is marked as default at the company level.

To create a project calendar (Classic View)

1) Open the **Calendar** tab of your shell. Alternatively, you can open the **Calendar** tab of your project or Template. The calendar you create in this tab is known as the Project/Shell Calendar.

   I. Click **Details** to open the **Details** window.

   2. Click the **Calendar** tab.

2) Select one of the following calendar options:

   a. **Standard Calendar**

   This allows you to use a standard calendar for your shell, project, or template. You options are **Company Calendar (Default)** or other calendars listed.

   b. **Custom Calendar**

   This allows you to use a custom calendar for your shell, project, or template. You option are **Copy** or create a custom calendar.

The calendar that you select displays in the **Calendar** tab.

> **Note**: You cannot modify a standard calendar.

To create a project calendar (Standard View)

1) Go to shell home click **My Dashboard ...**, and click **Details** to open the details page (overlay).

2) Click **Calendar** tab.

3) Select one of the following calendar options:

   a. **Standard Calendar**

   This allows you to use a standard calendar for your shell, project, or template. You options are **Company Calendar (Default)** or other calendars listed.

   b. **Custom Calendar**

   This allows you to use a custom calendar for your shell, project, or template. You option are **Copy** or create a custom calendar.

The calendar that you select displays in the **Calendar** tab.

Modify a Project Calendar

You can modify the displayed calendar. You can specify the working and non-working days for the calendar. Browse to the month and year using the drop-down lists at the top of the calendar. Saturdays and Sundays are set as non-working days by default. Do one of the following:

To change working and non-working days on a calendar at project level (Classic View)

1) Open the **Calendar** tab of your shell. Alternatively, you can open the **Calendar** tab of your project or Template. The calendar you create in this tab is known as the Project/Shell Calendar.

   I. Click **Details** to open the **Details** window.
   2. Click the **Calendar** tab.
   a. To change a particular date from a working to a non-working day, click the *date* cell to highlight and click **Non Working**. You can select multiple dates. This change impacts the months individually and does not impact the rest of the calendar or subsequent years.
   b. To change Saturdays and Sundays from non- working days to working days, click the *day* cell for example "Sat," to highlight and click **Working**. This will make all Saturdays, or Sundays, of the calendar as working days, including subsequent years. In this scenario, you can select individual *dates* under Saturdays or Sundays and mark them as non-working *dates*.

A non-working date appears grayed out, and it will not be used in date calculations.

To change working and non-working days on a calendar at project level (Standard View)

1) Go to shell home click **My Dashboard ...**, and click **Details** to open the details page (overlay).
2) Click **Calendar** tab.
   a. To change a particular date from a working to a non-working day, click the *date* cell to highlight and click **Non Working**. You can select multiple dates. This change impacts the months individually and does not impact the rest of the calendar or subsequent years.
   b. To change Saturdays and Sundays from non- working days to working days, click the *day* cell for example "Sat," to highlight and click **Working**. This will make all Saturdays, or Sundays, of the calendar as working days, including subsequent years. In this scenario, you can select individual *dates* under Saturdays or Sundays and mark them as non-working *dates*.

A non-working date appears grayed out, and it will not be used in date calculations.

Company Sponsored Projects (Standards Tab) E-Signatures

If you have configured and activated Company Properties > E-Signatures tab with details about the entity that provides electronic signature technology (**DocuSign** or **AdobeSign**), then when you access your project, Projects (Standard), and open the properties window, you can use the **Standards** tab to select the E-Signatures type.

By default, the value of the **E-Signature Type** drop-down list is: **Company Default**. This means that the Project Administrator has selected the Default E-Signature Type in the Company Properties > E-Signatures tab as the E-Signature Type for the project. See *Edit Company (E-Signatures Tab)* (on page 68).

> **Note**: If only one E-Signature provider has been determined in the Company Properties > E-Signatures tab, the value of the **E-Signature Type** drop-down list (**Standards** tab) will be read-only and set as **Company Default**.

You can select a different value from the **E-Signature Type** drop-down list.

The Company Administrator can go to the Company Properties > E-Signatures tab to change the default value (Default E-Signature Type). This change does not impact the value of the **E-Signature Type** in the project, and the values will continue to remain as Company Default or as chosen by the Project Administrator.

Updating Projects

The Update Projects function allows you to quickly add or modify information into a project template, and then apply that template to existing projects. This will "push" the new information to the projects that you specify. By allowing data to be entered or modified once, this function helps to reduce set up time and ensure cross-project uniformity.

The Update Projects function is available for select modules in Project Templates. The following information can be pushed:

- **Users:** users, group membership, permissions
- **Groups:** group names, permissions
- **Business Processes and BP Setups:** Business processes, setups
- **User-defined Reports:** Reports, report permissions
- **Access Control:** modules, users, groups, permissions
- **Cost Sheet:** Cost sheet columns, column access and restrictions
- **SOV:** General and Payment Applications structure
- Commitment Funding: Commitment funding sheet structure
- **Cash Flow:** Curve properties and permissions
- **Rules**: Project cost or fund rules
- **Gates Setups**: Active or inactive setups
- **Schedule Sheet Properties:** title, description, Master Schedule, status, auto-control, project start date, and error notification.

Each project module that can be updated from the template has an Update Project button in the toolbar.

This functionality makes it easy to update information across multiple projects. For example, if you add new users, or group of users, to the company and need to add them to multiple projects, you can add them to a project template, then use the Update Projects functionality to add the users to multiple projects.

Projects with a status of Active or On-Hold can be updated with this functionality. Inactive or View-Only projects cannot. Users with Create permission for the project template modules can do this operation.

> **Note**: You update project information one module at a time. Any Active or On-hold projects can be updated in this way.

General procedure for updating project information

In general, the Update Project feature works like this:

Step 1. Open a Project Template.

Step 2. Navigate to one of the modules listed above. Add or edit data.

Step 3. Click the **Update Project** button. Select which information within the module to update, and which of your active or on-hold projects to "push" the information to. New information will be added to the selected projects. Edited information will overwrite existing data.

You can also cancel a project update before it reaches the In Process status.

Detailed instructions for updating specific types of project information is found in the following sections.

Update users

You can add new users to multiple projects at once by adding them to a project template in the User Administration > Users module. When adding new users to a project, you can assign individual permissions directly to a new user, or add the user to a group to apply group permissions.

The Update Project process runs in the background. Depending on the number of records and projects you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

Some notes about updating users

- Users are identified by their unique User ID.
- Any Active, Inactive or On-hold users can be pushed.
- If the user does not already exist in the project, the user will be added to the project with the permission settings and group membership.
- If the user already exists in the project, the user information is updated (replaced) with the user information as entered in the project template. This includes permission settings and group membership.
- If a group that the user was added to doesn't already exist in the project, the group will be added, and the user will be added to the group. Group permissions are not updated; this is done by updating groups.
- If the group already exists, the user will be added to it. Group properties and permissions will not be affected.

To add or update users using Update Project

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates > Projects (Standard) > All** in the left Navigator. Open the project template to update.
3) In the Project Template, go to the **User Administration > Users** log.
4) Add a user to the project template, or select a user to edit. Define user parameters and assign permissions.
5) Select one or more users in the Users log.
6) Click the **Update Projects** button and choose one of the following:
   - ▸ **Projects**: allows you to choose which project(s) to update. You can use Find to search for specific projects to select from the complete list of projects. You can select as many projects as you want to update. The Page and Display fields display on the Project Update window, but are disabled in this case.
   - ▸ **All Projects**: updates all active and on-hold projects
   - ▸ **History**: allows you to view the update history from past updates or cancel a request before the update begins.

   An Alert window opens, detailing the information that will be updated. Read the message carefully, as once a project is updated, this action cannot be undone.
7) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Update groups

You can add new users to projects individually or by adding them to groups, and then adding the groups to the projects. You can assign the user individual permissions, or add the user to a group and apply group permissions.

The Update Project process runs in the background. Depending on the number of records and projects you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

Notes:

About updating groups:

- Groups are identified by their unique Group Name.
- All group properties, including permission settings, will be added or updated in the projects that you selected.
- If the group does not already exist, the group will be created with the permission settings. Group membership (user list) will not be updated in the project.
- If a group of that name exists, the properties and permissions of that group will be replaced with the new group, but not the list of users.
- Users will not automatically be added to the group; they need to be added by updating users (group membership).

To add or edit user groups using Update Project

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates>Projects (Standard) > All** in the left Navigator. Open the project template to update.
3) In the Project Template, navigate to the **User Administration>Groups** log.
4) Add a group to the project template, or select group to edit. Define group parameters and assign group permissions.
5) Select one or more groups from the Groups log.
6) Click **Update Projects** and choose one of the following:
   - **Projects**: allows you to choose which project(s) to update. You can use Find to search for specific projects to select from the complete list of projects. You can select as many projects as you want to update. The Page and Display fields display on the Project Update window, but are disabled in this case.
   - **All Projects**: updates all active and on-hold projects.
   - **History**: allows you to view the update history from past updates or cancel a request before the update begins.

   An Alert window opens, detailing the information that will be updated. Read the message carefully, as once a project is updated, this action cannot be undone.
7) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Update Business Processes and BP Setups

You can add and update new business processes, or add additional business process setups to existing business processes.

The Update Project process runs in the background. Depending on the number of records and projects you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

Notes:

About updating business processes and setups:

- BP Setup is identified by the unique combination of BP Name, Setup Name and Workflow Name.
- If the BP Name does not exist, it will be added to project with the BP Setup and permissions.
- If the BP exists, but the BP Setup does not, it will be added to the BP.
- If the BP and BP Setup exist, the Setup will be replaced with the new one.
- Users and Groups that are part of a BP setup as assignees are added/updated, but not permissions. If a group is created, it will be empty. Users must be added to the group separately through user administration.
- BP-related permissions are added/updated (for example, discussion groups, which are available in Classic View only).

To add or update business process setups using Update Project

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates>Projects (Standard) >All** in the left Navigator. Open the project template to update.
3) In the Project Template, navigate to the **Setup >Business Process** log.
4) Add any new business processes, if applicable. (The BP must already have been imported into Unifier and configured at the company level.)
5) To add or edit business process setups, select the BP to update in the Business Processes log. Click **Open**. The BP Setup log opens.
6) Create a new setup or modify an existing setup. You may create as many setups as you wish to make available in the project(s).
7) Select one or more setups from the BP Setup log.
8) Click **Update Projects** and choose one of the following:
   - **Projects**: allows you to choose which project(s) to update. You can use Find to search for specific projects to select from the complete list of projects. You can select as many projects as you want to update. The Page and Display fields display on the Project Update window, but are disabled in this case.
   - **All Projects**: updates all active and on-hold projects
   - **History**: allows you to view the update history from past updates or cancel a request before the update begins.

   An Alert window opens, detailing the information that will be updated. Read the message carefully, as once a project is updated, this action cannot be undone.
9) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Workflow Setup for Workflow Business Processes

You have the ability to delete (**Delete**, or **Edit** > **Delete**) inactive Workflow setup for Workflow Business Processes in Project Templates.

Updating Record Properties tab in the BP Setups

When you push the BP setup to selected shells, or all shells, the users and groups who had restrictions to the **Audit log** and **Workflow Progress** tabs, the **Record Properties** tab of the BP setup (in shell template) will be pushed into the shells.

The confirmation message (when pushing BP setup into shells or projects from template) will have an additional information: "Users and groups permissions, in the Record Properties tab, are added to the shell and existing permissions will be updated."

Update User-Defined Reports

You can add and update user-defined reports.

The Update Project process runs in the background. Depending on the number of records and projects you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

Important information about updating reports in Project/Shell:
- Reports are identified by the combination of Name and Data Type.
- Report names do not have to be unique.
- If the report name and data type does not exist, the new one will be added.
- The original owner of the report is added to the Users or Groups of the report in the receiving Project/Shell (Permission tab).
- The administrator of the receiving Project/Shell becomes the report owner.
- If a report exists with the same name and data type in the receiving Project/Shell, the existing report will be replaced with the new report, and the following information will be according to the new report:
  - Report updates
  - Added or changed Users or groups
  - Added or changed permissions

To add or update user-defined reports using Update Project
1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates > Projects (Standard) > All** in the left Navigator. Open the project template to update.
3) In the Project Template, navigate to the **Reports > User-Defined Reports** log.
4) Add a UDR to the project template, or select UDR to edit. Define properties.
5) Select one or more reports from the User-Defined Reports log.
6) Click **Update Projects** and choose one of the following:
   - **Projects**: allows you to choose which project(s) to update. You can use Find to search for specific projects to select from the complete list of projects. You can select as many projects as you want to update. The Page and Display fields display on the Project Update window, but are disabled in this case.

- ▸ **All Projects**: updates all active and on-hold projects.
- ▸ **History**: allows you to view the update history from past updates or cancel a request before the update begins.

   An Alert window opens, detailing the information that will be updated. Read the message carefully, as once a project is updated, this action cannot be undone.

7) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Update access control

You can edit access control parameters and update across projects.

The Update Project process runs in the background. Depending on the number of records and projects you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

> **Notes:**
> - Modules are identified by name.
> - If the module exists in the project, the module is updated, users/groups are created or updated, and permissions are updated for the module.
> - If the module does not exist, the module is added to the project. Users/groups are created and permissions are created for that module.

To update access control using Update Project

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates>Projects (Standard)** in the left Navigator. Open the project template to update.
3) In the Project Template, navigate to **Access Control** and assign user or group permissions to the modules as needed.
4) Click the **Update Projects** button. The Update Projects window opens, displaying the list of modules for which the access control settings can be updated.
5) Select the module(s) that you wish to update, click **Update Projects** and choose one of the following:
   - ▸ **Projects**: allows you to choose which project(s) to update. You can use Find to search for specific projects to select from the complete list of projects. You can select as many projects as you want to update. The Page and Display fields display on the Project Update window, but are disabled in this case.
   - ▸ **All Projects**: updates all active and on-hold projects
   - ▸ **History**: allows you to view the update history from past updates or cancel a request before the update begins.

   An Alert window opens, detailing the information that will be updated. Read the message carefully, as once a project is updated, this action cannot be undone.
6) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Update cost sheet columns in a project

Cost sheet columns can be updated using this functionality.

The Update Project process runs in the background. Depending on the number of records and projects you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

> **Notes**:
>
> About updating cost sheet columns:
>
> - A column is identified by a unique data source.
> - If the project cost sheet does not exist in the project, the column is not added.
> - If the project cost sheet is present but the column does not exist, the column definition is created, and the column is added. Column restrictions are added. Users/Groups are created or updated.
> - For formula columns, be sure to first push the columns or data sources that make up the formula (if they don't already exist in the cost sheet), then push the formula column.
> - Any new column that is created will use the column to its immediate left as the reference point for positioning. When a column is added to the cost sheet via an update, this means: If the column to the left of the column that is being pushed exists in both the template and cost sheet, the column will be positioned in the cost sheet according to its position in the template. If the column to the left of the column being pushed exists in the template but does not exist in the cost sheet, then the column will be added to the end (far right) in the cost sheet.

Cost Column Project Update Rules

If a project cost sheet column of the same name exists, it will be replaced according to the following matrix.

If this template (source):	Is used for this project (destination):	The template will:
Single Date Source	Column exists	Update the column
	Column does not exist	Create column with the same definition
Logical Data source (Formula entry)	Logical Data source Column Exists (Formula entry)	Update and replace the formula
	Logical Data source column exists (Manual entry)	Not update the column or formula
	Column does not exist	Create column with same definition

Logical Data source (Manual entry)	Logical Data source Column Exists (Manual entry)	Update the column
	Logical Data source Column Exists (Formula entry)	Update the column and change it to manual entry
	Column does not exist	Create column with same definition

To add or update cost sheet columns using Update Project

1) Go to the **Company Workspace** tab and switch to Admin mode.

2) Click **Templates > Projects (Standard) > All** in the left Navigator. Open the project template to update.

3) In the Project Template, navigate to **Cost Manager > Cost Sheet**. Create or open the Project Cost Sheet.

4) From the cost sheet, click **Columns** to open the Columns log. Add or edit cost sheet columns as needed.

5) From the **Columns Log** window, select the column to push. Only one column can be updated at a time.

6) Click **Update Projects** and choose one of the following:

   ▸ **Projects**: allows you to choose which project(s) to update. You can use Find to search for specific projects to select from the complete list of projects. You can select as many projects as you want to update. The Page and Display fields display on the Project Update window, but are disabled in this case.

   ▸ **All Projects**: updates all active and on-hold projects.

   ▸ **History**: allows you to view the update history from past updates or cancel a request before the update begins.

   An Alert window opens, detailing the information that will be updated. Read the message carefully, as once a project is updated, this action cannot be undone.

7) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Update Schedule of Values (SOV) Structure

You can update the SOV structure for General Spends, Payment Applications, or Summary Payment Applications.

The Update Project process runs in the background. Depending on the number of records and projects you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

> **Notes**:
>
> ▪ Update Project can be used to create or update the SOV structure. If the structure already exists, it will be updated. If not, it will be created (restrictions apply for payment applications; see below).
>
> ▪ When creating or updating the structure of the Payment Applications SOV or Summary Payment Applications, the Payment Application

business process must be set up in the target project first. If the business process has an active setup, then Update Project will create or update the structure.

To update SOV structure using Update Project

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates > Projects (Standard) > All** in the left Navigator. Open the project template to update.
3) In the Project Template, navigate to **Cost Manager > Schedule of Values**. Select one of the options: **General Spends**/**Payment Applications**/**Summary Payment Applications**.
4) Click **Update Projects** and choose one of the following:

   ▸ **Projects**: allows you to choose which project(s) to update. You can use Find to search for specific projects to select from the complete list of projects. You can select as many projects as you want to update. The Page and Display fields display on the Project Update window, but are disabled in this case.

   ▸ **All Projects**: updates all active and on-hold projects.

   ▸ **History**: allows you to view the update history from past updates or cancel a request before the update begins.

   An Alert window opens, detailing the information that will be updated. Read the message carefully, as once a project is updated, this action cannot be undone.
5) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Update commitment funding structure

You can update the structure used to create commitment funding sheets.

The Update Project process runs in the background. Depending on the number of records and projects you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

> **Notes**:
>
> About updating the commitment funding sheet structure:
>
> - Update Project can be used to create or update the commitment funding structure in the project. If the structure already exists, it will be updated. If not, it will be created.
> - Updating the structure in a project will not affect commitment funding sheets that already exist. New sheets will reflect the updated structure.

To update commitment funding structure using Update Project

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates > Projects (Standard) > All** in the left Navigator. Open the project template to update.

3) In the Project Template, navigate to **Cost Manager > Funding > Commitment Funding Sheet**.

4) Click **Update Projects** and choose one of the following:

   ‣ **Projects**: allows you to choose which project(s) to update. You can use Find to search for specific projects to select from the complete list of projects. You can select as many projects as you want to update. The Page and Display fields display on the Project Update window, but are disabled in this case.

   ‣ **All Projects**: updates all active and on-hold projects.

   ‣ **History**: allows you to view the update history from past updates or cancel a request before the update begins.

   An Alert window opens, detailing the information that will be updated. Read the message carefully, as once a project is updated, this action cannot be undone.

5) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Update Cash Flow Curve Properties and Permissions

You can push cash flow detail curve properties and permissions from a project template to a project.

The Update Project process runs in the background. Depending on the number of records and projects you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

Notes:

About updating cash flow curve properties:

- Both detail curve properties and permissions are pushed from the template to the project.
- Cash flow detail curves are identified by name.
- If a detail curve with the same name exists in the project, it will be replaced. All properties, including detail level and time scale, and permission settings will be updated.
- If a detail curve with the same name does not exist in the project, a new one will be created.
- Users and groups will be added if they do not exist. If a group is created, it will be empty.
- In order to push a curve, the destination project must have a cost sheet.
- Commitment detail level curves will not be pushed.
- A Summary CBS curve cannot be pushed to a project where the cost sheet is flat.
- After a successful update, the updated destination curves will be refreshed.

To update cash flow properties and permissions using Update Project

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates > Projects (Standard) > All** in the left Navigator. Open the project template to update.
3) In the Project Template, navigate to **Cost Manager > Cash Flow**.
4) Add a cash flow curve to the project template, or select one to edit. Define properties and permissions.
5) Select a curve from the Cash Flow log.
6) Click **Update Projects** and choose one of the following:
   ‣ **Projects**: allows you to choose which project(s) to update. You can use Find to search for specific projects to select from the complete list of projects. You can select as many projects as you want to update. The Page and Display fields display on the Project Update window, but are disabled in this case.
   ‣ **All Projects**: updates all projects.
   ‣ **History**: allows you to view the update history from past updates or cancel a request before the update begins.

   An Alert window opens, detailing the information that will be updated. Read the message carefully, as once a project is updated, this action cannot be undone.
7) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Update project cost or fund rules

Project cost or fund rules can be updated using this functionality.

The Update Project process runs in the background. Depending on the number of records and projects you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

> **Notes**:
>
> About updating rules:
>
> - Both active and inactive rules can be pushed.
> - Rules are identified by the combination of rule name and the source.
> - If the rule does not exist, it will be added.
> - If a rule already exists with the same name and source, that rule will be updated. This includes the status: for example, if the rule being pushed is active, and the rule in the project is inactive, the system will update the existing rule and activate it.
> - It is possible to have more than one rule with the same name and source in a project/shell or template. If two or more rules already exist with the same name and source as the rule being pushed, the update will not occur and will give an error.
> - When the update process begins, the system will first attempt to validate each rule (equivalent to clicking the Validate button). This will occur whether the rule is active or inactive in the template. If the rule is validated successfully, the system will proceed with the update.
> - If the rule fails validation, the rule will not be pushed. The attempt will be captured in the History.

To update rules using Update Project

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates > Projects (Standard) > All** in the left Navigator. Open the project template to update.
3) In the Project Template, navigate to **Cost Manager > Rules**.
4) Select one or more rules from the log.
5) Click **Update Projects** and choose one of the following:
   - **Projects**: allows you to choose which project(s) to update. You can use Find to search for specific projects to select from the complete list of projects. You can select as many projects as you want to update. The Page and Display fields display on the Project Update window, but are disabled in this case.
   - **All Projects**: updates all projects.
   - **History**: allows you to view the update history from past updates or cancel a request before the update begins.

An Alert window opens, detailing the information that will be updated. Read the message carefully, as once a project is updated, this action cannot be undone.

6) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Update gates setups

You can update projects with Active or Inactive Gates setups. The Update Project process runs in the background. Depending on the number of records and projects you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

> **Notes**:
>
> About updating Gates setups:
>
> - The Gates setup update will completely overwrite any existing Gates setup, or will be added if it did not previously exist.
> - Previously scheduled Gates runs are overwritten by the new Gates setup. If the pushed setup is Active new scheduled Gates runs are scheduled according to the schedule in the new setup.
> - Both Inactive and Active Gates setups can be pushed in the update.
> - After update the Gates setup reflects the status of the template.
> - After the update, the Current Phase in the Gates setup is reset to the First Phase.
> - After the update, the Gates projects will not run the scheduled refresh if the project is On-Hold. Gates scheduling will resume automatically when the project becomes Active.
> - If you have permission to create Gates setups, you can update Gates setups using Update Project, even if you do not have permission to access the individual projects.
> - Users and groups specified in the Email Notification field are added if they do not exist.
> - Newly-created groups are empty.

To update Gates setups using Update Project

1) Go to the **Company Workspace** tab and switch to admin mode.
2) Click **Templates > Projects (Standard)** in the left Navigator. Open the project template to update.
3) In the project template, click **Setup and select Gates**.
4) Select a Gates setup.
5) Click **Update Projects** and choose one of the following:
    - **Projects**: allows you to choose which project(s) to update. You can use Find to search for specific projects to select from the complete list of projects. You can select as many projects as you want to update. The Page and Display fields display on the Project Update window, but are disabled in this case.

- ▸ **All Projects**: updates all active and on-hold projects.
- ▸ **History**: allows you to view the update history from past updates or cancel a request before the update begins.

An Alert window opens, detailing the information that will be updated. Read the message carefully, as once a project is updated, this action cannot be undone.

6) Click Yes if you want to proceed with the update, or No to cancel.

View update history

You can view details about previously updated project modules.

To view Update Project History

1) In the Project Template, navigate to the module to view the update history.
2) Click the **Update Projects** button and choose **History**. The Update Projects: History window opens. It lists any previous incidents of using Update Projects.
3) Select an instance from the list and click **Open**. The History Details window opens, detailing the module information that was updated. History Details displays:
   - ▸ **Requestor:** User who initiated the update process
   - ▸ **Projects:** Either user-selected or all projects
   - ▸ **Submitted date:** When the update request was submitted
   - ▸ **Start date:** When the update process started
   - ▸ **End date:** When the update process ended

Cancel a project update request

You can cancel an update request that has not yet started; that is, any request that does not have a status of In Process or Finished.

To cancel a project update request

1) In the Project Template, navigate to the module in which you want to cancel the update request.
2) Click the **Update Projects** button and choose **History**. The Update Projects: History window opens.
3) Select an update that has not yet started.
4) Click **Cancel Request**.

Managing Member Companies

If your company has set up Partner Companies, those companies can become eligible to be added to projects. When added to a project, these companies become Member Companies, and their users can participate in projects with any permission level you set for them.

> **Note**: The list of eligible partner companies is maintained in the Partner Companies log. In Administration Mode, navigate to **Company** >

          Partner Companies to view the list.

Add a member company to a project

Active partner company users (users with a unique Unifier user name, and status of Active or On Hold) can be added to projects and assigned permissions, just like sponsor company users. See *Add a user to a project* (on page 133) for more information.

To add a member company to a project

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Company Sponsored Projects > [project] > Member Company** in the left Navigator. The Member Companies log opens.
3) Click the **Add** button. The Add Member Companies window opens. This window lists the available partner companies that can be added to the project as a member company.

   You can click the **Find** button to search for a particular company by Company Name or Contact Name.
4) Select one or more companies from the list and click the **Add Member** button.
5) At the confirmation window, click **Yes**. The company is added to the Member Companies log.

View member company profile

To view a member company profile

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Company Sponsored Projects > [project] > Member Company** in the left Navigator. The Member Companies log opens.
3) Select a company from the list and click **Open**. The Company Profile window for the company opens. This is a view-only window. This information is maintained by the partner company's administrator.
4) Click the **General** tab to view general information, and the **Address** tab to view contact information.

Remove a member company from a project

You can remove a member company from the project's Member Companies list. When a member company is removed from a project, users belonging to the member company will be automatically inactivated for that project.

To remove a member company

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) Click **Company Sponsored Projects > [project] > Member Company** in the left Navigator. The Member Companies log opens.
3) Select the company and click the **Remove** button.

4) At the confirmation window, click **OK**. This will remove the selected company from the list and inactivate any users who have been added to the project.

Managing Project Users and Groups

This section discusses adding groups and users to projects, managing project groups, and managing project permission levels.

You can use bulk processing to update users in projects. See Managing users in bulk for details.

Add a user to a project

After you have created a project, you will need to add users to the list of approved project users. Project users can be from your own sponsor company, or from approved member companies.

When adding users from your company to the project:

▸ To add users from your own (sponsor) company, the user must be either **Active** or **On-Hold** at the company level. When added, the user will automatically be **Active** for the project.

▸ Users who are **Inactive** at the company level cannot be added to a project.

When adding users from a partner company to the project:

▸ In order to add a user from a partner company, the company must first be added to the Member Companies list for the project. The user must be either **Active** or **On-Hold** at the company level for their own company. When added, the user will automatically be **Active** for the project.

▸ The user does not necessarily need to be listed in the Partner Users log at the company level in order to be added to a company. If the user is listed in the Partner Users log, the user must be **Active** or **On-Hold**. If the user is not already in the Partner Users log, they will be automatically added to the list of Partner Users with a status of **Active.**

To add users to a project

1) Go to the Company Workspace tab and switch to Admin mode.
2) Click **Company SponsoredProjects > [project] > User Administration > Users** in the left Navigator. The Users log opens. The log lists all users that are already part of the project.
3) Click **New**. The User/Group Picker opens.

> **Note**: If a User Attribute form has been imported, the project user log will reflect the design of any designed Partner Log included in that form. See Importing User Attribute Form for details.

4) Click the **List Names from** drop-down list at the top of the picker window and choose the company from which to add the new project user.

This drop-down lists your sponsor company plus any member companies that have been added to the project. You can click the **Member Companies** node under the project to view the list of available member companies.

5) Select one or more users to add to the project. You can press the Shift or Ctrl keys to select multiple users at once.

6) Click the **Add** button. You can continue to select and add names to the Selected Users portion of the picker window.

7) Click **OK** to add the users to the project. The new users are listed in the Users log.

> **Note**: By default, new users will have a status of **Active**. You can change the status or other user detail information selecting the user from the list and clicking **Open**.

To add a user to a project template

Open the project template and navigate to **User Administration > Users**. Follow the steps above to add a sponsor company or member company user to the template.

View or edit a project user's profile

You can edit a project user's details. These procedures apply to sponsor company users and member company users.

To view or edit a project user profile

1) Go to the **Company Workspace** tab and switch to **Admin** mode.

2) Click **Company Sponsored Projects > [project] > User Administration > Users** in the left Navigator. The Users log opens.

3) Select a user from the list and click **Open**. The Edit Project User window opens. The window has the following tabs: General, Groups, Permissions and Custom.

4) In the **General** tab, review the contact information for the user as it will appear in the Project Directory. By default, the project address (as defined in the project details) displays as the contact address. You can edit this information as necessary.

   You can also modify the user's project status:

   ▸ **Active**: User is listed in Project Directory, in User/Group Picker, User can log in and participate in the project. New users are Active by default.

   ▸ **Inactive**: If you deactivate a project user, the user's name will not appear anywhere for selection on any project-related functions. The user will not be able to access the project. Inactivating a user at the project level does not affect their status on other projects.

   ▸ **On-Hold**: User can be added to a project, or assigned as a participant in a business process workflow but cannot sign in.

5) Select the **Show user on the Project Directory** option if you want the user's information to be viewable in the Project Directory.

6) In the **Groups** tab, you can add or remove the project users to a project-level group the same way that you add company users to company groups. Click the Add button to add a group to the user's list, or select a group and click Remove to remove the user from the group.

7) In the **Permissions** tab, you can assign project-related permissions to the user, by module and mode. For more information about assigning permissions, see Company User Administration. Permissions are described in the *Unifier Reference Guide.*

8) In the **Custom** tab, you can view available custom attributes that may have been added to the user form.

Create and Manage Project Groups

Groups are a way to collect Users together so that adding new team members to the project and assigning permissions can be done quickly and efficiently. For example, groups can be members of the same project team, and/or they can be users who share the same access privileges. At the company level, groups can span projects. At the project level, all members of a group are members of a given project. Different members of a project may have different access to Unifier functionality, depending on their role on the project.

For example, a Finance person might require access to cost modules and reports dealing with finances, but not RFIs or Transmittals and their associated reports. An Executive might require access to Summary financial information, and not the cost BPs.

As users are added to a Group, they will inherit the Group's permissions. If they are in more than one group, then the highest level of permissions granted in any group for a module will prevail. Permissions are described in the *Unifier Reference Guide*.

When adding users to the group, you can choose eligible users from the sponsor company and any partner company users. The company short name will be listed in the User Picker window next to each user.

Company level groups cannot be copied into a project.

To create a new group

1) Go to the Company workspace tab and switch to Admin mode.

2) Click **Company Sponsored Projects > [project] > User Administration>Groups** in the left Navigator. The Groups log opens.

3) Click **New**. The Groups window opens.

4) Complete the **General** tab:

   ‣ Group Name: Enter a name for the group

   ‣ Manager: Click Select and select a user from the User Picker window. This is the person who will be responsible for administering the group.

   ‣ Description: Enter an optional description for the group.

5) Click the **Members** tab. This is where you add and manage group membership.

   a. Click **Add**.

   b. From the User/Group Picker, select the users to add to the group and click **Add.**

   c. Click **OK**.

6) Click the **Permissions** tab. In this tab, you manage group permission settings. If a user is a member of the group, the user will inherit all group permissions.

Granting permissions to the group is similar to granting permissions to individual users. Choose the project-related permissions for the group that will apply to all members assigned to this group. Choose permissions by module and mode.

7) In the **Custom** tab, you can view available custom attributes that may have been added to the group form.

To edit group information

1) Go to the Company workspace tab and switch to Admin mode.

2) Click **Company Sponsored Projects > [project] > User Administration>Groups** in the left Navigator. The Groups log opens.

3) Select a group and click **Open**, or double-click the selected group. The Groups window opens.

4) Make changes as necessary and click **OK**.

Grant project user permissions through Project Access Control

Once you have created a project, assign permissions to the people who need to access the project. You can use Access Control to grant multiple Users or Groups permission simultaneously, rather than editing the properties for each User or Group individually.

To view or change a project's access control

Click **Access Control** in the Navigator. Unifier displays a copy of the Navigator menu in the right pane of the window. In this right pane, you may click on different modules of the Navigator menu to set permissions for those functions.

Generate and print access information report

You can generate and print an Access Information summary of user and group access (permission settings). The report will display all user and group permissions.

To generate the Access Information report

1) Go to the **Company Workspace** tab and switch to Admin mode.

2) Click **Company Sponsored Projects > [project] > Access Control** in the Navigator.

3) Click the **Access Information** button. The Access Information window opens. It may take several moments to generate the report.

To print the Access Information report

1) Generate the **Access Information** report.

2) Click the **Print** button. (When the report is complete, the **Print** button becomes available.)

Setting Up Automatic Status Update

At the Company level, you can define the setup of the automatic update of project statuses of active projects based on triggering conditions which are defined using various data sources as parameters. For example:

‣ A selected activity on the schedule sheet is in the Completed status

‣ A single-record business process record is set to a specified status

‣ A business process workflow reaches a specified status

Depending on the setup and the conditions that are set, the status of the project can change from Active to a non-active status (On-Hold, View-Only, or Inactive). You can define multiple setups for each project. After you define these setups, they can be used on project or shell instances, or on templates to enable the automatic update of project status.

The data sources that you use in the triggering conditions can be either from project or shell level, or from the Company level. This data sources can be business processes, sheets or attribute forms. You can define the frequency at which Unifier evaluates the conditions to see if a particular active project should change its status, and can define a list of users or groups to be notified when the project status is changed. The highest frequency is daily.

This automatic update of project status can be useful for users that have a large number of projects and want many of these projects to change their status based on certain triggering conditions, and thus the users do not have to search for and modify these projects manually. For example, you can define a setup at the Company level that contains a triggering condition that changes of the status of an active project On-Hold if the project funds consumption exceeds the funds appropriated for that project. This allows the project manager to review the project and take appropriate action. If, in this case, the project manager is able to get additional funding for the project, the Administrator can change the project status back to Active to restart the project activities.

> **Note**: Automatic project status update can change the status of a project from Active to an inactive status. If you want the inactive project to status to revert to Active, you must activate the project manually.

Step 1: Create setups - general information.

Step 2: Verify the order of project statuses.

Step 3: Define project status triggering conditions.

Step 4: Define the schedule for automatic update of project status.

Step 5: Activate the automatic update of project status.

Step 6: Define permissions.

Setting Up Gates

Before you begin: Verify the list of project phases resides in the Project Phase data definition pull-down data set. This is the same list that is used when selecting a project phase manually in the project properties window. You can add or modify the default list as needed. This list makes the phases available for any project or project template; for each project or template, you select which of the phases to use. Create any business processes that you plan to use to drive gates conditions and phase completion.

Step 1: Define Project Phases. For each project or template, you define the list of project phases to include in the setup, choosing from the entire list in the Project Phase data set.

Step 2: Define Gate Conditions. For each phase, define one or more gates conditions. A gate condition is a combination data element and trigger condition that enable transition to the next phase.

Step 3: Schedule Gates runs. The gates runs run the validation of gate conditions. You can schedule runs automatically. This is optional.

Step 4: Activate the gates setup.

Step 5: Define permissions.

> **Note**: If you create a new project by copying a project template or an existing project, any existing gates setup in the source project is copied into the new project, including the gates status. The gates phases are restarted at the first phase in the new project, and the scheduled gates run is activated.

Example of a gates setup and conditions

You will be setting up phases in gates to represent the actual phases of a project. For the project to advance from one phase to another, certain conditions must be met. This example will discuss phases, conditions, and using business processes in the context of the conditions to advance a project from one phase to another.

For example, phases for Project Zero could be:

▸ Preliminary
▸ Investigation
▸ Definition
▸ Measurement
▸ Analysis
▸ Start
▸ Control

Previously, you have set up two business processes to use in the conditions for your gates setup. These are:

▸ **Schedule:** A single record business process that is updated manually by a project manager by checking checkboxes for the various phases such as Definition Phase Complete? or Measurement Phase Complete?
▸ **Funding:** a workflow business process that is automatically updated thorough the steps of the workflow.

As the project manager checks the checkboxes in the phases as represented in the Schedule business process, the gates runs keep checking the statuses of the checkboxes. As they are checked off, the project advances to the next phase.

The exception to this procedure is the transition from the Analysis phase to the Start phase. Additional approval is needed for funding in order for the project to advance from Analysis to Start. The Funding business process is included in the conditions for the Analysis phase. This business process must have the status Construction Approved and have a value of greater than zero for the Analysis phase to be exited and the Start phase entered for the project.

Define the project phase list

To view the project phase list

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Data Structure Setup > Data Definitions** in the left Navigator.
3) Select **Basic**.
4) Select the Project Phase data definition and click **Open**. The Modify Data Definitions window opens.
5) Click the **Data Set** tab. The active phases on this list will be available for project phase setup.
6) Modify the list as needed. Any changes you make here will be reflected in new gates setups. Current setups will not be affected.

Create a gates setup

You can create a gates setup in project templates, and in individual projects. There can be one setup per project.

To create a new gates setup

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Do one of the following:
   ‣ To create the setup in a project template, click **Templates > Projects (Standard)** in the left Navigator. Open the project template.
   ‣ To create the setup in a project, click **Company Sponsored Projects** in the left Navigator. Open the project.
3) Click **Setup > Gates**. The Gates Setup log opens.
4) Click **New**. The gate setup is created automatically. Double-click the setup, or select from the list and click **Open**. The Gates Setup window opens. There are three tabs: General, Settings, Schedule.
5) In the **General** tab, enter a Setup Name, which displays in the log, and an optional Description. At this point, Status is Inactive by default.
6) In the **Settings** tab, define project phases and gates conditions. For details, see *Add project phases to the gates setup (Settings tab)* (on page 139) and *Configure gate elements* (on page 141).
7) In the **Schedule** tab, you can schedule regular gates. See *Define gates runs schedule (Schedule tab)* (on page 142).

Add project phases to the gates setup (Settings tab)

Select which of the phases to use in the project or template from the available project phase list. You can reorder them as necessary for the project or template.

To add project phases to the new gates setup

1) Open the Gates Setup window and click the **Settings** tab.
2) In the **Phases** pane, click the **Add** button. The Select Phases window opens, displaying the list of available project phases.
3) Select one or more project phases to add to the list. To select multiple phases, hold down the **CTRL** or **SHIFT** keys while selecting.
4) Click **OK**. The phases appear in the Phases list.

   The order in which the phases appear on the list is the order in which they will be followed in the project. The first phase on the list will be the first phase of the project.

Configure Gates conditions

To access the gate configuration view:

Select a project phase. The gate configure view opens in the right pane. See the following table for more information about the gate configuration view.

The **Phase Gate Configuration** section in the navigator lists the Project Phases for the current Project. The visual order of the Phases depends on the Order specified in the General tab.

The **Gates Conditions Elements** section allows you to define condition criteria per element. Gate Elements will be selected from all Unifier data sources and modules available in a particular project (for the Sponsoring company).

In this field:	Do this:
Start Date	The Start date for a particular Phase can be manually set or auto populated from a Schedule Sheet by linking it to a particular activity or milestone (activity with zero duration and marked as milestone) where it will update dynamically based on the start date associated with this activity. If there are multiple Start dates, choose the Start date used to set Gantt Charts in Schedule Manager.
	The start date must fall within Project date ranges.
	Note: You cannot choose dates from schedule sheets in the Schedule Manager for generic shells, because the Schedule Manager is not available in generic shells.
Planned Completion	Can be manually set or auto populated from a Schedule Sheet by linking it to a particular activity or milestone (activity with zero duration and marked as milestone) where it will update dynamically based on the start date associated with this activity. If there are multiple End dates, choose the End date used to set Gantt Charts in Schedule Manager.
	Note: You cannot choose dates from schedule sheets in the Schedule Manager for generic shells, because the Schedule Manager is not available in generic shells.
	Note: Dates are for reporting only. Phases cannot be date driven.

Advance to Next Project Phase...	This checkbox enables automatic phase advancement. Select the checkbox if you want the project to move automatically to the next phase once all Gate Elements for a particular Phase have been checked.
Notify users on Phase Completion	Allows you to define users who receive phase completion notification. You can configure the body text in the notification (similar to the BP Setup on the End Step, where you can specify the message text content.
Reevaluate conditions on every Gates run	When selected, this checkbox specifies that processing always starts at the First phase during a scheduled Gates Run/Refresh. You might have to scroll down to see this checkbox.
	If the checkbox is unchecked for a phase:
	▶ If the phase is currently incomplete, incomplete conditions are evaluated and completed conditions are skipped
	▶ If the phase is currently complete, phase processing is skipped
	▶ If the checkbox is checked in a phase:
	▶ Every condition in that phase is reevaluated. Including conditions that were met
	▶ All conditions (except conditions that were marked as "ignore" manually) are marked as incomplete at the beginning of every Gates run and refresh.
	Saved Gates run (PDF) from prior runs persist. Processing will stop at a Phase where first un-met condition is encountered. By default this checkbox is deselected.

Configure gate elements

To add a Gate Condition Element

1) In the Gates Setup window, gate configuration view, select a project phase and click **Add**. The Data Type window opens.
2) Select a **Data Type** from the drop-down.
3) Click **OK.** The Edit Gate Condition window opens.
4) Complete the **General** tab: Enter a Name for the Gate Element. This can be the name of the data element or any descriptive name. This appears on the Gate Conditions Elements list. You can add an optional Description.
5) Click **Apply** to save changes, or **OK** to save changes and exit the window.

To define query and trigger conditions

1) In the Edit Gate Condition window, click the **Query** tab.
2) Under Query Conditions, click **Add**. The Query Condition window opens.
3) Complete the **Query** tab:

Data Element: Click the Select button. The Data Element Picker opens. The list is generated from the data type you chose in the General tab. If the data element is a picker, pull-down or radio button, the Value field will display the values entered in the data set tab of for the data definition associated with the data element. For a full list of data elements and data types, refer to the *Unifier Reference Guide*.

▶ Label: The label defaults to the data element name. You can enter a different label.

▶ Condition: Define Gate Condition Element Condition. The condition options vary dynamically depending on the selected Data Element. The screen shots below list out the various options for different Data Element types. Examples include equals, does not equal.

▶ Values: Specify value. The Values field varies dynamically depending on the selected Data Element and Condition. (For example, if the element is a text box, the condition might be Contains, and value might be one or more letters to search for. If the element is a pull-down or other data definition with a data set, you will select a value from the data set.)

Change the order of project phases

To change the order of the phases in a gates setup

Select a phase and click the **Move Up** or **Move Down** button.

Define gates runs schedule (Schedule tab)

You can define a gates run schedule in the Gates Setup window, Schedule tab. This run evaluates gates conditions, and marks completed conditions as Complete. The update process can also be invoked manually in user mode. The scheduler engine is a background process.

In this field:	Do this:
Enable Scheduled Gates Runs	Select this checkbox to enable scheduled updating of Gate Elements. Deselecting this checkbox will disable the scheduler, and any scheduled future runs will be canceled immediately. The scheduled gates runs are disabled in the last phase provided all conditions are met, and the Enable Scheduled Gates Runs checkbox is automatically deselected.
Frequency	Choose Frequency of the Scheduled Gates Runs (Daily, weekly, monthly, quarterly, yearly)
Range of Recurrence	You can specify a date on which the Gate Runs will end, or no end date.
Auto-email as PDF Attachment to Gates creator	Select this checkbox to enable automatic emailing of the scheduled run results as a PDF attachment. The report displays the current status of each project phase and gate condition.

Activate or deactivate a gates setup

Activating a gates setup will enable the scheduled gates runs. After activation, if you need to edit the gates set up, you will need to deactivate it first.

You can make edits while the setup is inactive, including: adding or removing phases; reordering phases; add, modify or remove conditions within a phase.

Some notes about activating/deactivating gates setup:

▶ Reactivating an active project: If you temporarily deactivate a project that is in process, and then reactivate it, the gates check will start over at the first phase. This is because the setup needs to check all phases for new phase additions or new gate conditions that may have been added. You can manually update the project phases by clicking the Refresh button for gates in User Mode. This will evaluate all phases starting from the first phase, even if the phase has been marked Complete, and mark the first phase as the current phase. Note: be aware this may trigger email notifications regarding gates advancement, as set up in the Settings tab (where the users who are notified are defined), and those users' email subscription settings (User Preferences).

▶ While a gates set up is inactive: No scheduled gates run will be done. To manually advance phases in User Mode Gates for the project, the gates setup must be active.

▶ View-Only and Inactive projects: If a project has View-Only or Inactive status, the gates setup is inactivated, and you must manually reactivate the setup.

Set user permissions for gates

To grant User Mode Gates permissions:

In Access Control or Permissions window, navigate to **User Mode > Shells/Projects (Standard) > Gates**. The permissions are:

▶ **Change Phase**: Allows the user to change gates phases.
▶ **Modify and Refresh**: Allows the use to modify gates and refresh gates.
▶ **Refresh**: Allows the user to refresh gates.
▶ **View**: Allows the user to view gates.

Create an automatic project status update setup

Multiple setups can be defined at the company level and then used to configure individual projects.

To create a new project status update setup

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Company Workspace > Auto-update Status Setup** in the left Navigator. The Auto-Update Status Setup log opens.
3) Click **New**. The Auto-update Status Setup window opens. There are three tabs: General, Settings, Schedule.
4) In the **General** tab, enter a Setup Name, which displays in the log, and an optional Description.

5) In the **Settings** tab, define the order of the non-active statuses and the status change query and trigger conditions. For details, see *Choose the order of non-active statuses (Settings tab)* (on page 144) and *Define status change query and trigger conditions (Settings tab)* (on page 144).

6) In the **Schedule** tab, you can schedule the shell status update. See *Define project status update schedule (Schedule tab)* (on page 145).

7) Once you have defined the setup, you must activate it to be able to apply it to a project. See *Activate or deactivate an auto-update status setup* (on page 146).

> **Note**: You must deactivate a setup to be able to modify it.

Choose the order of non-active statuses (Settings tab)

By default the order of the listed statuses is **On-Hold**, **View-Only**, and **Inactive**. These are listed on the left side of the **Settings** tab in the Status pane. You can change the order using the **Move Up** or **Move Down** buttons. You can change the order of the non-active statuses. The order of the statues is significant because the triggering conditions for the statuses are evaluated in the order in which they are listed on this tab, with the verification of the triggering conditions occurring for each condition listed in turn.

For example, if the conditions for the first listed status are not met, then the conditions for the next listed status are evaluated. If the conditions for that status are not met, then the triggering conditions for the third status conditions are evaluated. As soon as the first match occurs, Unifier will automatically change the project status and does not perform further evaluation.

To reorder non-active project statuses

1) Open the Auto-update Status Setup window and click the **Settings** tab.
2) In the Status pane, select the status you want to move.
3) Click the **Move Up** or **Move Down** button to reposition the selected status.
4) Click **Apply** to save changes, or **OK** to save changes and exit the window.

Define status change query and trigger conditions (Settings tab)

The **Conditions Elements** section allows you to define condition criteria per element. Elements can be selected from all Unifier data sources and modules available at the Company level.

In this field:	Do this:
Notify users and groups on Status change	Allows you to define the users and groups who will receive status change notification.
Email content	Enter the content of the email you want to send to notified users and groups. This content appears in the Additional Information section of the email.

To define query and trigger conditions

1) Under Conditions Elements, click **Add**.
2) Select a Data Type, and click **OK**. The Query Condition window opens.
3) Complete the **General** tab by entering a name for the query and a brief description. The Data type and Element is auto-populated from the selection you make on the Query tab.
4) Click the **Query** tab.
5) Click **Add**.
6) Complete the **Query** tab:
   ▸ **Data Element:** Click the Select button. The Data Element Picker opens. The list is generated from the data type you chose in the General tab. If the data element is a picker, pull-down or radio button, the Value field will display the values entered in the data set tab of for the data definition associated with the data element. For a full list of data elements and data types, Refer to the *Unifier Reference Guide*.
   ▸ **Label:** The label defaults to the data element name. You can enter a different label.
   ▸ **Condition:** Define Gate Condition Element Condition. The condition options vary dynamically depending on the selected Data Element. The screen shots below list out the various options for different Data Element types. Examples include equals, does not equal.
   ▸ **Values:** Specify value. The Values field varies dynamically depending on the selected Data Element and Condition. (For example, if the element is a text box, the condition might be Contains, and value might be one or more letters to search for. If the element is a pull-down or other data definition with a data set, you will select a value from the data set.)
7) Select the trigger conditions.
8) Click **OK**.

> **Note**: The DE of type Rich Text is not available when you define queries in the Auto-Update Status Setup window.

Define project status update schedule (Schedule tab)

You can define a schedule to check the conditions for the automatic update in the Auto-update Status Setup window, Schedule tab.

The maximum frequency that Unifier will verify whether triggering conditions are met is daily. If you have a need for greater frequency of verification, you must monitor the project with the project manager and then change the project status manually as needed. For example, if the triggering condition verification is performed in the morning, and the project funds are being spend during the course of the day, the project could exceed its budget before the condition verification occurs the next morning, and the project status is automatically changed.

In this field:	Do this:
Enable Scheduled Runs	Select this checkbox to enable scheduled evaluating of the automatic update status. Deselecting this checkbox will disable the scheduler, and any scheduled future runs will be canceled immediately.

	The scheduled evaluation is disabled for the last status in the list, provided all conditions are met, and the Enable Scheduled Runs checkbox is automatically deselected.
Frequency	Choose Frequency of the Scheduled Runs (Daily, weekly, monthly, quarterly, yearly)
Range of Recurrence	You can specify a date on which the Scheduled Runs will end, or no end date.

Activate or deactivate an auto-update status setup

You must activate a setup in order to be able to apply it to a project.

> **Note**: You must deactivate a setup to be able to modify it.

To activate or deactivate a project status update setup

1) To activate or deactivate a new setup to use in projects, go to the Company Workspace tab and switch to Admin mode.
2) Click **Company Workspace > Auto-update Status Setup**. The Auto-Update Status Setup log opens.
3) Select a setup in the log.
4) Click the **Status** button. You can choose **Active** or **Inactive**.

Set permissions for automatic update of project status

1) Go to the Company Workspace tab and switch to Admin mode.
2) Click **Access Control** in the left Navigator.
3) On the right pane, select **Administration Mode Access > Company Workspace > Auto-update Status Setup**. The permissions are:
   ▸ **Create:** Allows the creation of new auto-update status setups, edit existing auto-update status setups and activate or deactivate auto-update status setups.
   ▸ **Modify:** Allows the edit existing auto-update status setups and activate or deactivate auto-update status setups. This permission excludes the ability to create a new auto-update status setup.
   ▸ **View:** Allows viewing of existing auto-update status setups.

Shells Administration

You can use a Shell to organize the information about projects, or facilities, in one place. A Shell includes functions and features that are necessary for managing the information about projects, or facilities, within that Shell. A Shell does not require to function like a Project.

In This Section

Dedicated Mailbox for the Shell

External emails are important communications that need to be included in shells. Such emails can come from project team members or from external users who do not use Unifier. These email communications (and any attachments) can be collected in a central repository for the shell, called a **Mailbox**. Once such emails reside in the shell's Mailbox, users can view them, forward them to appropriate members, flag them for review, and reply to them. In addition, these external emails can be linked to business process records.

> **Note**: External emails that have been blind carbon-copied (Bcc) are not collected by the Mailbox.

When Unifier is installed on your system, a dedicated email address for your company is specified, and whenever a shell is created, Unifier assigns it a unique identifier. Unifier combines this email address and shell identifier to create the shell's Mailbox.

> **Note**: To prevent spam and virus attacks, you will need to create a list of approved email addresses that will be accepted by the shell. See

> Creating an Approved Email List for Project and Shell Mailboxes for
> more information.

When you create a shell, you can notify all shell participants, both within and outside of Unifier,
of the shell's email address. See ***Create a New Shell Manually*** (on page 166).

User Permissions and Navigation

Navigation from the Landing Page to a specific place in the sub-shell hierarchy requires
permissions. Permissions can be:

- Granted on an instance-by-instance basis
- Pushed through shell templates
- Users can be managed through groups or added individually to instances

Setting up Shells

Before you begin: Shells types must be designed in uDesigner.

Step 1: Import shell types. Import into Unifier the shells that were designed in uDesigner.

Step: Set permissions to configure the shells in the Shell Manager.

Step 3: Configure imported shells in the Shell Manager.

Step 4: Set permissions to administer shell templates, which you can use to create shells for
projects.

Step 5: Create shell templates.

Step 6: Set permissions to add or modify shells.

Step 7: Create new shells for user projects.

> **Note**: You will set permissions at several points during shell setup, in
> order to be able to access, or to grant access to, various aspects of
> working with the shell.

Importing Shells

All designs, including shell designs, are designed in uDesigner and deployed to Unifier. See
Importing Configuration Packages.

> **Note**: Importing Forms that Contain Data Pickers: Data pickers point to a data source for the records they display. If that data source—the BP, shell, space, planning item, or manager class—to which the picker is pointing is not already in Unifier, you will receive a warning. The business process will not operate correctly until the data source is imported.

CSV Import or Restful Services (Create Shell)

When you create a shell instance by using CSV import or Restful Services (Create Shell), the system copies into the created Shell:

▶ The **View Forms** tab information from the selected shell template.

▶ The forms added in the shell template, along with users and groups who are part of the viewers list.

Setting Permissions to Configure Shell Types in the Shell Manager

To set permissions to configure shell types in the Shell Manager:

1) In Administration mode, go to the **Company Workspace** tab and click **Access Control** in the left Navigator.
2) On the right pane, select **Administration Mode Access > Configuration > All > Shell Manager**.
3) See Edit user or group permissions using Access Control.
4) Click **OK**.

Configuring Shells

Configuring a shell consists of activating it and organizing it into a hierarchy.

> **Note**: Before you configure shells it is worthwhile to plan the shell hierarchy with your users and uDesigner user. The instance, and cost settings affect how you will use the shell and its relationship to other shells. Planning will help you achieve the result that will meet your business needs.

To configure the shell types in the Shell Manager

1) Go to the **Company Workspace** tab and switch to **Administration Mode**.
2) Click **Configuration > Shell Manager** in the left Navigator.
3) Select a shell type and click the **Open** button. The Configuration <shell name> window opens.
4) Complete the **General** tab as described in the first table below.
5) Click the **Organize** tab. On this tab you can specify the sub-shell types that are allowed under a shell type.

This tab is where you establish the shell hierarchy, by selecting allowed sub-shells. For example, assume you have configured a shell called Region, which has the sub-shell types Properties and Buildings. Also, Properties has Buildings as a sub-shell. Unifier performs validation during shell configuration, and manages the relationships among the shells that you configure. The second table below shows the relationships among the shells described above.

Click the **Add** button to add sub-shell types from the list of imported shells. You can add sub-shell types to the sub-shell type you are currently configuring. Click **Add** and select the sub-shell types to add. Select the types to add, and click **OK**. You can only add shells that have the Active status.

6) Select the **Active** checkbox for the sub-shell types you want to activate. You can deactivate sub-shell types that you do not want users to use for sub-shell instance creation. You can deactivate sub-shell type even if sub-shell instances have been created with that type.

> **Note**: You can remove a sub-shell type from the list by clicking Remove, as long as an instance of the sub-shell type is not created under the shell.

7) Click **Apply** to save changes as you enter information, and **OK** when you are ready to save information and exit the Configuration window.

8) Complete the configuration steps for each shell type.

In this field	Do this
Enable automatic numbering	Select to allow automatic numbering of projects based on the specified Format and Start values. You can deselect this checkbox to disable automatic numbering. This checkbox is selected by default.
Format/Start	Specify the format and starting number for projects if automatic numbering is enabled. Format determines the format of the numbering schema. Start determines the starting number of the numeric schema. By default, Format is blank and Start is 0001. The numbering schema format cannot be changed after a user creates shell instances using the originally specified format.
Cost Codes: CBS/Generic	Displays the type of cost code specified in uDesigner for the shell type. ▶ CBS: Standard Cost Manager ▶ Generic: Generic Cost Manager The default selection is determined by which cost code was specified in uDesigner.
Status	Status can be Active or Inactive. Users cannot access shells types with the status Inactive. The default is Inactive. If a shell type is Inactive, users cannot create shell instances of that type.

Shells->	Parent	Child	Grandchild
Subshells that are allowed			
Parent	No	No	No
Child	Yes	No	No
Grandchild	Yes	Yes	No

Update generic cost sheet columns and rows

You may have a large number of codes that are used within the Generic Cost Manager. In addition you may have a large number of shells in your implementation. To update codes and columns in your generic cost manager sheets with a minimal effort, you can push columns in a project or shell template generic cost sheet from the Columns Log to cost sheets.

Notes:

About updating shell instance dashboards:

- A cost sheet must already exist in the destination shell. Pushing a column from a template will not create a cost sheet that can receive the column.
- You can push one column at a time.
- If a source column is a single data source, then the destination column will be created with that single data source if it does not already exist. (Column A or B in example below)
- If a source column is a formula with only single data sources, then pushing the source column will create that column in the destination cost sheet, if it does not already exist. (Column C in example below)
- If a source column is a formula with columns included in the formula, as long as all constituent columns contain single data sources, the source column can be pushed; for any columns that do not exist in the destination cost sheet, the formula will be changed to a single data source in the formula. (Column D in example below)
- If a source column is a formula with constituent columns that include logical data sources, the logical data source must exist in the destination cost sheet. The formula for the logical data source may be different in the destination cost sheet. Any column that contains a single data source will follow the rule above. (Column F in example below)

Column	A	B	C	D	E	F
Column Name	Original Commitment	Change Orders	Pending Commitments	Total Commitments	Trends	Forecast
Data Source	Purhcase_Order (Approved)	Change_Orders(Approved)	CM011	CM012	Trends(Open)	CM013
Formula			Purchase_Order (Pending) + Chanage_Orders (Pending)	Original Commitment + Change Orders		Total Commitments + Trends

To add or update generic cost sheet columns from a template

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates > Shells** in the left Navigator.
3) Open the shell-type template to update.
4) In the shell template, navigate to **Configurable Modules > Generic Cost Manager**.
5) Select the **Generic Cost Manager Sheet** template and click the **Structure** button.
6) In the Generic Cost Manager Sheet log, select the cost sheet template and then click the **Columns** button. The Columns Log window opens.
7) Select a cost sheet column.
8) Click **Update Shells** and choose one of the following:

▸ **Shells**: You can use this option to select one or more shells to update. When the update window opens, it lists all shells in the project. You can use Find to isolate the shells you want to update. The find window contains data elements from the Find form that was designed in uDesigner. When you have isolated the shells to update, click the Update button and select either Selected Shell(s) or All Filtered Shells.

▸ **All Shells**: You can use this option to update all shells of that shell type.

▸ **History**: You can view the update history from past updates or cancel a request before the update begins.

An Alert window opens letting you know that you are about to push changes to the selected shells; there is no undo for the update.

9) Click **Yes** if you want to proceed with the update, or **No** to cancel.

To update generic cost sheet rows from a template

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates > Shells** in the left Navigator.
3) Open the shell template you want to update.
4) In the template, navigate to **Configurable Modules > Generic Cost Manager**.
5) Select the template and click the **Structure** button.
6) Select a row or rows to push to the project/shell level generic cost sheet. You can select multiple rows by holding down the Shift or Ctrl keys as you click on the rows.

   Unifier will update leaf-level rows, but not summary rows.

7) Click **Update Shells** and choose one of the following:

   ▸ **Shells**: allows you to choose which shell(s) to update. You can use Find to search for specific shells to select from the complete list of shells. You can select as many shells as you want to update. The Page and Display fields display on the Shell Update window, but are disabled in this case.

   ▸ **All Shells**: updates all active and on-hold shells

   ▸ **History**: allows you to view the update history from past updates or cancel a request before the update begins.

   An Alert window opens, detailing the information that will be updated. Read the message carefully, as once a shell is updated, this action cannot be undone.

8) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Configuring Shell Manager Configuration Package

The following configurations can be included in the Shell Manager Configuration Package:

▸ General setup

   All the fields included in the General Configuration (General tab).

▸ Organize setup

   All the fields included in the Organize tab.

> **Notes**:
> ▪ The sub-shells defined in the Shell hierarchy are also included in the

Configuration Package.

- The sub-shells defined in the **Organize** tab are included in the Configuration Package.
- You can export the sub-shells.

For more information, see the Configuration Package Management section in this guide.

Setting Permissions to Administer Shell Templates

Setting Shell Template administration access:

1) Go to the **Company Workspace** tab and switch to **Administration Mode**.
2) Click **Access Control** in the left Navigator.
3) On the right pane, select **Administration Mode Access > Templates > Shells [shell node]**.
4) See Edit user or group permissions using Access Control.
5) Click **OK**.

Accessing a Created Shell Template

From the **Shells** node under **Templates**, you can access the shell type templates that are created.

One node is created under **Shells** for each shell type that is imported and that has an active configuration status.

> **Note**: Single-instance shells are not listed under **Templates** > Shells as there can only be one instance created for those shell types, and there is no need of a template.

To access shell templates

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) Click **Templates** > **Shells** in the left Navigator.
3) Expand the **Shells** node. Any shell templates are grouped by shell types.

   One node is created for each shell type imported. For example, Buildings, Linear Assets, Projects.
4) Click one of the shell type nodes, for example **Projects**. The **Projects Templates** log window opens. The log lists any project templates that have been created for that shell type.

Create a Shell Template

The following procedure describes how to create a shell template.

To create a new shell template

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) Click **Templates** > **Shells** in the left Navigator.

Expand the **Shells** to display the shell types.

3) Click one of the shell type nodes. The <shell> Templates log opens. The log lists any shell templates that have been created under that particular shell type.

4) Click the **New** button. The <shell> templates Details window opens.

5) The General tab you see will depend on the Shell Attributes form that was imported. In the General tab, complete the fields as described in the table below:

6) In the Currency tab, click the **Add** button. The Edit Exchange Rate window opens.

> **Note**: The **Base Currency** shown at the top of the Edit Exchange Rate is the Base Currency set up for your company. For example, if yours is a company in the U.S., then the Base Currency will likely be United States Dollar (USD). If your company does business internationally, you may make other currencies available for shell use.

a. Complete the Edit Exchange Rate window:
   ▪ Click the **Select** button.
   ▪ Select a currency from the list and click **OK**. The available currencies are defined at the time your company was set up. (The currency list is maintained in **Standards & Libraries> Exchange Rate**.) Contact your Company Administrator if you need additional currencies.

b. If the currency you selected is other than the company Base Currency, then complete the following:
   ▪ **Rate**: enter an exchange rate to use for conversion calculations. From the drop-down list select one of the following:
      ▪ If **Float** is selected, the rate comes from the company active exchange rate set (**Standards & Libraries > Exchange Rate**).
      ▪ A **Peg rate** is locked at the rate set. (Only an administrator can change the Peg rate, or Peg to Float or Hedge).
      ▪ If the **Hedge** selection is **Yes**, then the **Hedge rate** is used. Otherwise, the Float rate will be used. If an amount is entered for the Rate, then the hedge rate is used until the amount specified is reached (by spends) and then the system will revert back to the active exchange rate.
   ▪ Click **OK** to save and exit the Edit Exchange Rate window.

c. Select a **Default Currency** from the drop-down list. This will be used as the default shell currency. Once you have selected a shell currency and saved the template or shell, it cannot be changed. The selections are generated from the Currencies list you defined.

> **Note**: You cannot modify this default currency after you save the changes to the template Detail window.

7) In the **Options** tab, you can upload an image file. This image is displayed on landing page of the shell in both Administrator and User Modes. Click **Browse** to browse for the image file and then click the **Add** button. Also, you can select the phase of the shell on this tab. The phases available are based on the Phase data definition.

Within the Shell Details, the user can select which attributes forms to use for the Document Manager, for both folders and documents.

From the **Options** tab, the user can define which attribute form (**Document Manager Attribute Form**) to use for the document/folder. By default , the "DMS Attributes" folder properties attribute form, which is system-defined in Document Manager, can be selected, and the corresponding **Document Manager Attribute Form** is used to determine the DMS structure. The user will have an option to choose other attributes forms as well. Only the active DM configuration forms will be available for selection.

In case a previous active **Document Manager** configuration (in a shell) is marked as inactive, the DMS structure keeps that attribute form structure. When you open the shell details, the **Document Manager Attribute** is defaulted to system-defined attribute form because the previous configuration has been marked as inactive. The **Document Manager Attribute Form User** will show the previous DM attribute form that is kept by the shell. If you click **OK**, Unifier displays a message, informing you of this change.

In case if a previous active **Document Manager** configuration (in a shell) is deleted because the associate folder attribute form was deleted, the DMS structure is defaulted to the system-defined attribute form of a supported DMS structure for the shells. When you open the shell details, the **Document Manager Attribute** is defaulted to system-defined attribute form because the previous configuration has been deleted. The **Document Manager Attribute Form Used** will show the system defined DM attribute form that is kept by the shell. If you click **OK**, Unifier displays a message, informing you of this change.

Project/Shell Creation BP behavior

While creating Project/Shell creation BP records, the shell template that has been selected via the shell picker keeps the folder properties attribute form that is mentioned in the respective templates and have the DMS structure accordingly.

Company and Standard Projects

The Company Workspace Document Manager is defaulted to DMS attribute which is system-defined.

The Options tab also enables you to select the entity that provides electronic signature technology (DocuSign or AdobeSign). For Projects (Standard), the value for the E-Signature Type drop-down list is: Company Default. This means that the Company Administrator has selected Company Default in the Company Properties > E-Signatures tab. See ***Edit Company (E-Signatures Tab)*** (on page 68).

> **Note**: If a value (E-Signature Type) has been determined in the Company Properties > E-Signatures tab, the value of the E-Signature Type drop-down list (Standards tab) will be read-only.

You can select a different value from the E-Signature Type drop-down list.

The Company Administrator can the Company Properties > E-Signatures tab to change the default value (Default E-Signature Type). This change does not impact the value of the E-Signature Type in the project, and the values will remain as:

▸ Company Default
▸ DocuSign
▸ AdobeSign

8) The **Options** tab also enables you to select the entity that provides electronic signature technology (**DocuSign** or **AdobeSign**). For Shells, or Shell Templates, the default value for the **E-Signature Type** drop-down list is: **Company Default**. This means that the Project Administrator has selected the **Default E-Signature Type** in the Company Properties > E-Signatures tab as the E-Signature Type for the project. See *Edit Company (E-Signatures Tab)* (on page 68).

> **Note**: If only one E-Signature provider has been determined in the Company Properties > E-Signatures tab, the value of the **E-Signature Type** drop-down list (**Standards** tab) will be read-only and set as **Company Default**.

You can select a different value from the E-Signature Type drop-down list.

The Company Administrator can go to the Company Properties > E-Signatures tab to change the default value (Default E-Signature Type). This change does not impact the value of the E-Signature Type in the project, and the values will continue to remain as Company Default, or as chosen by the Project Administrator.

9) Complete the **Links** tab to add links to the shell. These links are displayed on the shell landing page in User Mode. Use links to provide users with access to useful websites, your company's website, an intranet, or other destinations. Click Add Row and enter the name and URL for the links you want to add to the landing page.

10) In the **Calendar** tab, create a shell calendar. Each shell can have its own calendar. The shell calendar that you specify can be used to override the Company calendar, or you can use the Company calendar for the shell If there is no shell calendar, or a shell calendar is not in use, the company-level Standard Calendar marked as the default calendar is the calendar that is used by the shell. Shell calendars can be based on Standard Calendars created at the Company level, or Custom Calendars created for the specific shell. The shell calendar you create applies only to the shell for which you create that calendar. The calendar selected affects shell durations and due dates. For example, companies can have multiple projects in different countries that have different working and non-working days. These working and non-working days must be considered when determining such time-driven factors as business process workflow due dates and activity dates in schedule sheets.

> **Note**: Unless otherwise specified, the default calendar for a shell is the Company calendar that is marked as default at the Company level.

a. Open the Calendar tab of the shell or Template window. The calendar you create in this tab is known as the Project/Shell Calendar.

b. You can select a company-level Standard Calendar, or use a Custom Calendar for your shell. The calendar that you select displays in the Calendar tab.
   - To use a Standard Calendar as the shell calendar, click the Standard Calendar radio button and select a calendar from the drop-down list.
   - To use a Custom Calendar as the shell calendar, click the Custom Calendar radio button and click Copy. You can copy a previously-created Standard Calendar and use it as the project calendar.

c. You can modify the displayed calendar. You can specify the working and non-working days for the calendar. Browse to the month and year using the pull-down menus at the top of the calendar. Saturdays and Sundays are set as non-working days by default. Do one of the following:

   ▪ To set a particular date as a non-working day (for example, a holiday), click the date on the calendar and select **Non Working**. The date will appear grayed out, and will not be used in date calculations.

   ▪ To set a non-working day as a working day, click a grayed cell and select **Working**.

   ▪ To set a particular day of the week (for example, every Saturday) as a non-working day, click the day at the top of the calendar (for example "Sat"), then click **Non Working**. All Saturdays in the calendar will be changed to non-working days (gray).

   ▪ To set a particular day of the week as a working day, click the day at the top of the calendar, then click **Working**.

   ▪ If you only want to set the day of the week in a particular month as working or non-working days, select each day individually and click **Working** or **Non Working**.

   Note: If you have marked the day of the week as a non-working day throughout the calendar by selecting the day at the top of the calendar (for example "Sat"), then you will not be able to mark individual days (that is, individual Saturdays in this example) as working days. To be able to include both working and non-working instances of a day of the week on the calendar, you must select them individually.

d. Click **OK**. When you click OK, the calendar displayed in the Calendar tab is the shell calendar.

11) Click **Apply** to save changes as you enter information, and **OK** when you are ready to save information and exit the window.

In this field	Do this
Description	Enter a description of the shell type template.
Administrator	Select an administrator for the template.
Location	Disabled for template creation.
Status	You can activate the shell immediately, or place it On-hold and activate later. A template that is On-hold or Inactive cannot be used to create a shell. It is good practice to leave a shell or template On-hold until you have completed the setup. Shell Administrators/Users with "modify shell status" rights are the only ones who can change the status.

The Shell Administrator will receive email notification when the status of a shell changes. The change of shell status could occur due to a manual change, bulk update, through Web Services or a CSV file, or through automatic update. |

Status definitions for **shells** are:

▸ **Active:** Active, in-progress shell. All shell actions in User and Administration Mode are available.

▸ **On-hold:** The initial shell status. On-hold shells appear on the shells log. Shell administration functionality is available to shell administrators for setup and maintenance for users with permissions to perform that function. Users cannot create records in a shell that is On-Hold. If a user attempts to access a shell that is On-Hold, the system displays an alert message stating that the shell is On-Hold.

▸ **View-Only:** For end users, View-Only shells can be viewed, printed, exported, and included in reports. They cannot be modified. When a shell is View-Only, the status overrides (but does not modify) access control permissions, granting only View permissions. The shell reverts to the access control permissions when the shell is made Active. View-Only shells can be added to and removed from programs, and can roll up to programs, UDRs, and dashboards. Business process records cannot be auto-created in View-Only shells. Data from View-Only shells rolls up to Generic Cost Manager cost sheets if all of the shells in the hierarchy are generic. Data also rolls up to the program level cost sheet, if all of the shells in the hierarchy are CBS type and are included in the program setup, and Schedule Manager information rolls up to the program-level Schedule Sheet. Data rolls up to dashboards on a View-Only shell from child shells in the hierarchy, and rolls up to a parent shell from a View-Only shell. No updates can occur to View-Only projects through Integration, Mobile, or through reverse auto-population. View-Only shells cannot be updated through templates. Consolidate line item functionality is disabled for View-Only shells. Users can navigate through the shell hierarchy using View-Only shell instances. View-Only shells have only view, export, and print permissions available. Tasks and Drafts are not available for View-Only shells. Messages are available, but users cannot add general comments. Mailbox is available for viewing, but users cannot send, edit or delete messages for View-Only shells. When a shell becomes View-only, all scheduled jobs associated with it are canceled. When the status of the shell changes back to Active, you must restart any scheduled jobs. Administrators can perform all actions on View-Only shells.

▸ **Inactive:** Used to suspend shell usage. Inactive shells are visible from the Administration Mode under Sponsored Shell log only, but **not** visible under the Shells node (i.e., only Sponsor Company can access the shell), or in User Mode logs and selections. Only System and Shell

	Administrators (users with Modify Status rights) can reactivate the shell.
	Note: "Late" tasks in an inactive shell may still show up in users' tasks logs. Though they can access the task, no transactions can be performed in the inactive shell.
Auto-update Status Setup	The selections on the drop-down list are defined automatic status update setups. These setups are defined at the Company level for use in specific shells. See **_Setting Up the Automatic Update of Shell Status_** (on page 257) for details. If you decide not to use the automatic status update, you can deactivate it by deselecting a setup (by literally selecting the word "Select").
Shell Number	Unique number that identifies the shell.
GeoCoding	Details for mapping. This field appears if geocoding was set up in uDesigner for the shell.

Note: Once a currency is selected and saved, it cannot be modified. The remove option is made available to enable you to remove the additional currencies and unsaved changes.

Create a shell template by copying a template or shell

You can create a Shell Template by copying from an existing shell template or an existing shell.

To create a shell template by copying an existing shell or shell template

1) Go to the Company Workspace tab and switch to Admin mode.
2) Click **Templates > Shells** in the left Navigator, then select a shell type.
3) Select the shell type template you want to copy.
4) Click **Copy** button. The Template <shell type name> Cloning window opens.
5) From the **Copy From** drop-down list, select one of the following:
   ‣ **Template**: The log displays the list of shell templates created under the current shell type.
   ‣ **<shell type name>**: The log displays the list of available shell instances. You can select one to use for template creation.
6) Select a listed template or shell name.
7) In the Select Modules pane, select the modules to include in the new template. The modules available depend on the cost code type of the shell or shell template (CBS or Generic). See **_Shell Cloning window selections_** (on page 161) for the lists of available modules by cost code type.
8) Click **OK**. The template Detail window opens, displaying the shell template properties.

   Most properties are copied from the original shell or template into the template Detail window, with the following exceptions:

- ▸ **Number:** On the General tab, enter a Number for the shell template. If automatic numbering is specified, this field is read-only.
- ▸ **Currency:** On the Currency tab, specify the Shell Currency
- ▸ **Image:** On the Options tab, specify the Shell Image (optional)

The status is set to On-Hold.

9) Click **OK**. Click **Yes** to confirm.

Shell Cloning window selections

In a shell log, when you click the Copy button, the cloning window lists optional calendar, module, manager, sheet, and structure selections. You must select an item to include it in the new shell. See *Create a shell by copying a template or shell* (on page 170).

Cloning window selections for all shell templates and shells (both CBS and generic codes)

- ▸ **User/Groups**: This is not an optional selection; users and groups in a template or shell are always included by default. See User and Group Administration
- ▸ **BP Setup**: You have the option to copy all, or none, of the business processes and their setups that are in the template or shell. See General Procedures for Setting up Business Processes.

  Templates do not allow record creation of multiple-record business processes, but they do allow record creation of single-record business processes under the Information>General node. If you added a single-record business process into the template or shell, and created a record, that record with all of its data is cloned when you select this option. See Single-record business processes.
- ▸ **Configurable Modules > Configurable Managers (CM1 through CM25)>**: Configurable Managers are designed in uDesigner, and have flexible coding structures to data collection and analysis. Each manager appears in the module selection pane by its unique name.
- ▸ **Custom Calendars**: Custom calendars provide a means to address variations in work schedules, holidays, and other non-working days. You can add custom calendars to a shell detail form on the Calendar tab. See Creating Multiple Calendars.
- ▸ **Dashboard Setup**: Shells and templates may have multiple dashboards, each governed by unique permission settings. See *Creating a shell dashboard in a template* (on page 270).
- ▸ **Document Folder Structure**: Folder templates help standardize document organization in the Document Manager.
- ▸ **Gates Setup**: Gates provide a means of automating when a project moves to the next phase. See *How to Set Up Gates* (on page 261).
- ▸ **Resource Manager**: Manage personnel resources using the Resource Manager.
- ▸ **User Defined Reports**: You can create multiple user-defined report templates and include them in the new shell during cloning.

Cloning window selections for only Generic code shell templates and shells

- ▸ **Commitment Summaries**: In the same way the schedule of values summarizes all cost information related to a particular commitment business process, the commitment summary tracks commitment record information. See Setting up the Commitment Summary Template.
- ▸ **Generic Cost Manager (CM0)**: The Generic Cost Manager captures cost-related transactions for a generic shell. Each generic shell can have one Generic Cost Manager.

Cloning window selections only for CBS code shell templates and shells

- ▸ **Cash Flow**: Cash flow is the distribution of cost over time— in project management terms, it is the movement of cash into or out of a project measured during a specific time period.
- ▸ **Commitment Funding Sheet**: A funding sheet tracks project funding —where it comes from and how it is being spent. You can create one funding sheet per template or shell. See Setting up the Funding Manager.
- ▸ **Cost Sheet**: The cost sheet provides detailed tracking of the project's budget and costs. You can create one cost sheet per template or shell. See Setting up Cost Sheets.
- ▸ **Schedule of Values**: The schedule of values summarizes all cost information related to a particular commitment business process. See Setting Up Schedule of Values (SOV).
- ▸ **Rules**: Project cost or funding rules impose conditions on project transactions per rule queries. See Creating Rules and Rules Templates.
- ▸ **Schedule Sheet**: Schedule sheets track project activities and milestones. You can have multiple schedule sheets in a project. Once created, they cannot be deleted.

Shell Template Modules and Managers

In shell templates you can prepare modules and managers to make standardized templates, which ensure project uniformity and greatly reduce the potential for errors. You can have different templates for different project models. For example, you can have one template for "cookie-cutter" projects that do not change, and you can have another template for projects that might incur substantial changes. Unifier will copy any prep-work when you use the template to create a new shell, a process called cloning. Manager and module availability can differ depending upon CBS or generic code specification in uDesigner. See ***Create a shell by copying a template or shell*** (on page 170).

Managers and Modules Available in all Shell Templates (Both CBS and Generic Codes)

- ▸ Member Companies: In order to make partner companies that you added at the company level available in your projects, you add them in Member Companies. Member companies added to a shell template automatically copy to a shell during cloning. See ***Managing Member Companies*** (on page 171).
- ▸ Access Control: For modules and managers included in a shell template, you can assign user-mode permissions. Permissions set in a template will automatically copy to a shell during cloning. Keep in mind, records created in user mode may require permission assignment in user mode. See Managing permissions and access control.
- ▸ User Administration: Users and groups added to a template are copied by default from the template to a new shell during cloning. See User and Group Administration.
  - ▸ Users—Users added to a template automatically copy to the shell during cloning. Users added to shell templates cannot be deleted, only inactivated.
  - ▸ Groups—Groups added to a template, and any users added to these groups, automatically copy to the shell during cloning.
- ▸ Setup:
  - ▸ Business Process—You have the option to copy all, or none, of the business processes and their setups that were added to a template. See General Procedures for Setting up Business Processes. If you added a single-record business process to a template, and created a record, that record with all of its data will be copied during cloning. See Single-record business processes.

- ▶ Dashboards—You can define dashboards in a template and opt to include them when you clone a new shell from the template. See ***Creating a shell dashboard in a template*** (on page 270).
- ▶ Gates—Gates provide a means of automating when a project moves to the next phase. You can define gates in a template and opt to include them when you clone a new shell from the template. See ***How to Set Up Gates*** (on page 261).
- ▶ Planning Manager—This is where you can plan for new projects, and create proposals and forecasts for projects already running in Unifier.
- ▶ Resource Manager—This is where you can set up and manage personnel resources in a company, project, or shell.

- ▶ Information: This is where single-record business processes exist. When you clone a template, any single-record business processes are copied as well. See Single-record business processes.
- ▶ **Configurable Modules > Configurable Managers (CM1 through CM25)>**: Configurable Managers are designed in uDesigner, and have flexible coding structures to allow data collection and analysis.
- ▶ **Document Manager**: You can create a folder structure for the Document Manager that can be used across shells. These can be created from Folder Structure Templates, or folders can be added manually. Unlike Folder Structure Templates, you can also assign users folder-level permissions (if they are in the shell template), and can import folders and folder properties.
- ▶ **Reports**: You can create one or more user-defined report templates, which will be used for shell-level user-defined reports. You can import user-defined reports into shell templates from shell templates in other companies and Unifier environments, for example from the **Development/Test** environment to the **Production** environment. See Importing User-Defined Reports into Project or Shell Templates.

Selections available in only Generic code shell templates

- ▶ Configurable Modules > Generic Cost Manager (CM0): The Generic Cost Manager captures cost-related transactions in a Generic Shell. These can include costs like rent, lease payments, or landscape care that are based on time scales such as monthly, quarterly or yearly. Each generic shell can have one Generic Cost Manager.
- ▶ Cost Manager > Commitment Summaries: In the same way the schedule of values summarizes all cost information related to a particular commitment business process, the commitment summary tracks commitment record information. See Setting up the Commitment Summary Template.

Selections available only in CBS code shell templates

Cost Manager

- ▶ Cash Flow

  Cash flow is the distribution of cost over time - in project management terms, it is the movement of cash into or out of a project measured during a specific time period.

- ▶ Cost Sheet

  The cost sheet provides detailed accounting of the project's budget and costs. You can create one cost sheet per template or shell. See Setting up Cost Sheets. Tip! Set up the standard cost sheet template and copy it into the shell template.

▶ Earned Value

The earned value module provides quantitative tracking information about project or shell status using earned value analysis. You can only set User Mode permissions in a template.

▶ Funding

The Funding Manager helps you to keep track of where project funding comes from and how it is being spent. You can create one funding sheet per template or shell. See Setting up the Funding Manager.

▶ Schedule of values (SOV)

The SOV sheet summarizes all cost information related to a particular commitment business process. This is where you define structures for General Spends, Payment Applications, or Summary Payment Applications.

You can define a General Spends SOV structure by copying from an SOV template in the Templates log.

For Payment Application SOV and Summary Payment Application SOV, the structure is copied from the line item grid structure of the Payment Application Business Process. This means that you must first complete the Business Process (BP) setup for the Payment Application BP before you can create the structure. See Setting Up Schedule of Values (SOV).

Rules

You can define shell-level cost or funding rules. See Creating Rules and Rules Templates

Schedule Manager

▶ Schedule Sheet

A schedule template will be used to create the schedule sheet. Like the cost sheet, once this is created, it cannot be deleted.

▶ Custom Calendars

Primavera Unifier allows you to create Custom Calendars to be used by the Schedule Manager.

Shell Templates

If the Data Element (DE) "uuu_int_schedule_type" *is not included* in the attribute form, then:

▶ The template that has the option "Enable P6 sources" selected is not included when you want to create a new Cost Sheet using: New > Cost Sheet > Copy from Template.

▶ The cost sheet that has the option "Enable P6 sources" selected is not included when you want to create a new Cost Sheet by copying a cost sheet from a Shell instance.

If the DE "uuu_int_schedule_type" is included in the attribute form, then:

When you add a Cost Sheet to the template (using a standalone template or by Copy from other Shell instances), you can select a "Tree" structure cost sheet, only.

> **Notes**:
> ▪ You can select any Cost Sheet irrespective of whether the option "Enable P6 Sources" is selected or not.
> ▪ Once you create a Cost Sheet , the option "Enable P6 Sources" is

available for edit.

- Once you add columns to the Cost Sheet using "P6 Data Sources" you cannot deselect the property.
- If you remove the columns using P6 Data Sources, you can deselect the "Enable P6 Sources" option.

The value for the DE "uuu_int_schedule_type" remains blank because the DE is read-only.

Document Manager Template

Use the document manager template log page to create folders, perform actions, update shells, and find folders.

▸ **+ Create** : Create folders in the template.

▸ **Actions ▾** : Perform the following actions (Export, Import, Index Report, Move, Copy, and Delete) on a folder.

▸ **Find on Page**: Find folders by filtering on the various columns.

▸ **Update Shells:** Use this drop-down menu to update the permissions, or the Structure & Permissions for a particular shell or all shells. You can also view the update history.

> **Note**: The Comment, Lock, Ref and BP columns are not displayed in the document template log.

Manage Shell Templates

To open the shell template

1) Go to the Company Workspace tab and switch to Admin mode.
2) Click **Templates > Shells** in the left Navigator.
3) Select a shell type. The shell templates log opens.
4) Select a shell template from the log and click **Open**.

To edit shell template properties

1) From the shell template home page, click the **Open** button. The template Detail window opens.
2) Click the tabs to view or edit shell template properties.

Adding View Forms in Shell Template

You (the project administrator) can setup the View forms in shell templates. For details, see Setting Up View Forms in Shell Attributes.

When you create shells using shell templates, the **View Forms** tab information will be copied into the created shell. In addition:

▸ All of the View forms that are added in the template will be copied into the created shell.

▸ All of the users or groups, who are a part of the viewers list in the View forms, will become the members of the newly created shell.

Setting Permissions to Create or Modify Shell Instances

To set shell instance access:

1) In Administration mode, go to the **Company Workspace** tab and click **Access Control** in the left Navigator.

2) On the right pane, select **Administration Mode Access > Company Sponsored /Shells> [shell node]**.

3) See Edit user or group permissions using Access Control, select these permissions depending on what access need to be granted:

   ▸ **Create**: Allows the creation of new shell instances

   ▸ **Modify Status**: Allows the modification of the status of shell instances

   ▸ **Modify Properties**: Allows the modification of shell instance properties

   ▸ **Configure User Dashboard**: Allows the configuration of the shell dashboard in User Mode. This is the dashboard listed as My Dashboard in the View Dashboard drop-down list that displays for the end user in a shell instance.

4) Click **OK**.

Creating a Shell

There are multiple ways to create a shell.

▸ Manually, from scratch
▸ Copying from a shell template
▸ Copying from an existing shell
▸ Importing via a CSV file
▸ Using a shell creation business process

When you create a shell from a shell template or by copying another shell, any shell dashboard that exists in the source template, Unifier copies the dashboard into the destination shell.

Create a New Shell Manually

To manually create a new shell

1) Go to the **Company Workspace** tab and switch to **Admin** mode.

2) Click **Company Sponsored Shells** in the left Navigator.

3) Select a shell type.

> **Note**: Ensure that you configure and test shells in the **Development** environment before you import the shells into the **Test** environment or **Production** environment.
>
> The DE of type Rich Text DE is not available to be added to the Company Sponsored Shells.

4) Click the **New** button. The <shell> template Details window opens.
5) On the **General** tab, complete the fields as described in the first table below.

   The fields in the table here are only the required fields. The shell that was designed for your company may include other fields.
6) On the **Currency** tab, click the **Add** button to add a default currency for the shell type template.

   > **Note**: You cannot modify this default currency after you save the changes to the template Detail window.

7) Use the information in the second table below to add a currency.
8) Click the **Options** tab.
9) Use the information in the third table below to complete the **Options** tab.
10) Complete the Links tab to add links to the shell. These links are displayed on the shell landing page in User Mode. Use links to provide users with access to useful websites, your company's website, an intranet, or other destinations.
    a. Click Add Row and enter the name and URL for the links you want to add to the landing page.
11) Click **Apply** to save changes as you enter information, and **OK** when you are ready to save information and exit the window.

In this field	Do this
Description	Enter a description of the shell type template.
Administrator	Select an administrator for the template.
Location	The Location picker allows you to change the location of a shell, and is accessible when you set up a shell or modify the shell details. See *Location picker behavior* (on page 170) for details. Use the Location Picker to select where the shell instance will reside. In the Location picker: ▸ Find searches the current level ▸ Open shows the next level of shells ▸ Select completes the action ▸ Location Picker will allow breadcrumbs to display through the hierarchy ▸ Work systematically from the top of the hierarchy to the bottom ▸ There must be an instance of a single shell to connect to You can use the Location picker to reorganize the shell hierarchy.

	The shell can move across tabs, or laterally along the hierarchy. When you move a shell instance, all of the shell data moves with the shell. If an auto-populated business process moves with the shell instance, then the auto-populated data moves with the business process. Data for the business process will be collected from the new shell location. In addition, if a child shell has been designed with linked elements, field values on the shell's attribute form or single-record BPs will be automatically updated to reflect changes when the shell is moved.
Status	You can activate the shell immediately, or place it On-hold and activate later. A template that is On-hold or Inactive cannot be used to create a shell. It is good practice to leave a shell or template On-hold until you have completed the setup. Shell Administrators/Users with "modify shell status" rights are the only ones who can change the status. Status definitions for **shells** are: ▸ **On-hold:** The initial shell status. On-hold shells appear on the shells log. Shell administration functionality is available to shell administrators for setup and maintenance for users with permissions to perform that function. Users cannot create records in a shell that is On-Hold. If a user attempts to access a shell that is On-Hold, the system displays an alert message stating that the shell is On-Hold. ▸ **Active:** Active, in-progress shell. All shell actions in User and Administration Mode are available. ▸ **Inactive:** Used to suspend shell usage. Inactive shells are visible from the Administration Mode under Sponsored Shell log only, but **not** visible under the Shells node (i.e., only Sponsor Company can access the shell), or in User Mode logs and selections. Only System and Shell Administrators (users with Modify Status rights) can reactivate the shell. Note: "Late" tasks in an inactive shell may still show up in users' tasks logs. Though they can access the task, no transactions can be performed in the inactive shell.
Shell Number	Unique number that identifies the shell.
GeoCoding	Details for mapping. This field appears if geocoding was set up in uDesigner for the shell.
Currency Name	Select the currency you want to use for the cost functions in this project. If the currency you selected is other than the company Base Currency, then complete the following fields.
Rate	Enter an exchange rate to use for conversion calculations. From the drop-down list select one of the following: If **Float** is selected, the rate is updated automatically from the

	company currency table (Standards & Libraries > Exchange Rate).
	A **Peg rate** is locked at the company rate on the day the rate is set. (Only a Project Administrator can manually modify the Peg rate to a value other than the company peg rate.).
Hedge?	If the Hedge selection is **Yes**, then the Hedge rate is used for conversion calculations. Otherwise, the Float rate will be used.
Rate	If an amount is entered for the Rate, then the hedge rate is used until the amount specified is reached (by spends) and then the system will revert back to the normal rate.
Amount	If **Float** is specified, Primavera Unifier will retrieve the rate, based on today's date and time.
	If **Peg Rate** is specified, the field will be editable.
Comments	(Optional) Add any comments that might be necessary to explain the default currency.
Image	(Optional) Upload an image file. This image is displayed on landing page of the shell in both Administrator and User Modes. Click **Browse** to browse for the image file and then click the **Add** button
Phase	(Optional) Select the phase of the shell on this tab. The phases available are based on the Phase data definition
Shell Email Email Address	The **Email Address** field shows the dedicated email "mailbox" that is automatically created for the shell. (For information on this mailbox, see *Dedicated Mailbox for the Shell* (on page 147).)
	You can distribute this shell email address to all users, both within and outside of Primavera Unifier, who will participate in the shell. To do so:
	Click the **Send Email** button. An email message window opens.
	In the **To** field, enter the email addresses of all participants in the shell.
	You can also send the address of the dedicated mailbox to external users by adding their email addresses in the **External Cc** field.
	Click the **Send** button.
	Note: You can also create a link on the shell dashboard that users can use to distribute this email address to shell users. (
Shell Email Send Notification To	Use this field to send notification to users in the shell whenever the shell mailbox receives an external email. To do so:
	Click the **Select** button. The User Picker opens.
	Select the users you want to notify and click **OK**.

Location picker behavior

The Location Picker opens when you click the **Location Select** button. This is an example of a Location picker:
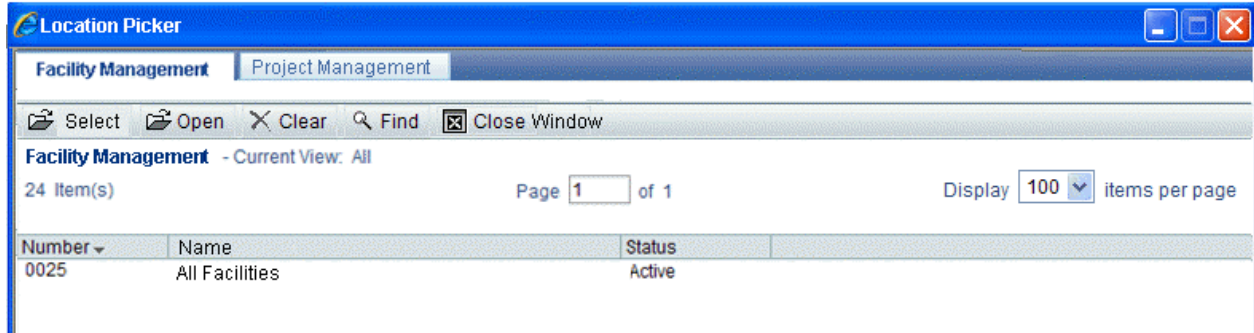
In this example there are two single instance shells, Facility Management and Project Management. You can use this Location picker to select a shell instance. The multiple instance shells are listed under the single shell instances that are represented as tabs. You can select a tab on which the shell is listed on the organization configuration.

When this picker is opened first it displays the instance of single shell. In this example it is showing All Facilities. If Project Management tab is clicked then you should see the single instance shell created under that tab. You can now select this instance by highlighting it and clicking the **Select** button. If you want to drill down to another shell instance which is created under this single shell instance, you can navigate to it by selecting the single instance shell and double clicking or selecting a shell and clicking the **Open** button.

Create a shell by copying a template or shell

You can create shells using the shell templates you created. You can also create shells by copying from existing shells. You can verify the shell properties, make changes as necessary, update status, or activate as necessary.

> **Note**: As Shell Administrator, you can receive email notification of the successful creation of a shell. This notification can be set up in email notifications in uDesigner. Also, you can set your User Preferences to control whether you receive these notifications.

Creating a shell from a shell template or another shell, copies shell dashboards in the source template or shell to the destination shell. You can choose to copy any existing Custom Calendars from the template or from an existing shell.

To create a shell from a shell template or existing shell

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Company Sponsored Shells** in the left Navigator.
3) Select a shell name.
4) Click the **Copy** button. The Shell Cloning window opens.
5) Click the **Copy From** drop-down list and choose **Shell** to copy an existing shell, or **Template** to copy a shell template.

6) Select a shell or template from the list and click **OK**.

To search for a specific shell or template in the list, click the **Filter By** field and select **Name** or **Number**. In the **Filter For** field, enter all or part of the name or number to search for and click **Search**.

7) In the Select Modules pane, select the modules to include in the new shell. Users and Groups are selected by default and copied along with the shell properties. See *Shell Cloning window selections* (on page 161) for a discussion of the modules available for selection in the type of shell you are cloning.

> **Note**: When you copy a shell or template, you also copy existing setups in the modules you selected. If you select BP Setup when you copy a template, you will copy any existing business process setups, including those for any single-record business processes (SRBPs). SRBP setups and record data are copied along with everything else.

8) Click **OK**. The Shell Details window opens, displaying the shell properties.

Most properties are copied from the original template with the following exceptions:

- **Number**: On the General tab, enter a Shell Number
- **Currency**: On the Currency tab, specify the Shell Currency
- **Image**: On the Options tab, specify the Shell Image (optional)

9) When you finish completing the shell details, click **OK**. Click **Yes** to confirm and create the new shell.

Managing Member Companies

If your company has set up Partner Companies, those companies can become eligible to be added to shells. When added to a shell, these companies become Member Companies, and their users can participate in shells with any permission level you set for them.

> **Note**: The list of eligible partner companies is maintained in the Partner Companies log. In Administration Mode, navigate to Company>Partner Companies to view the list.

Add a member company to a shell

Active partner company users (users with a unique Unifier user name, and status of Active or On Hold) can be added to shells and assigned permissions, just like sponsor company users.

To add a member company to a shell

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Company Sponsored Shells > <shell name > <project name > Member Companies** in the left Navigator. The Member Companies log opens.
3) Click the **Add** button. The Add Member Companies window opens. This window lists the available partner companies that can be added to the shell as a member company.

You can click the **Find** button to search for a particular company by **Company Name** or **Contact Name**.
4) Select one or more companies from the list and click the **Add** button.

5) At the confirmation window, click **Yes**. The company is added to the Member Companies log.

View member company profile

To view a member company profile

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Company Sponsored Shells > [shell] > [shell instance] > Member Companies** in the left Navigator. The Member Companies log opens.
3) Select a company from the list and click **Open**. The Company Profile window for the company opens. This is a view-only window. This information is maintained by the partner company's administrator.
4) Click the **General** tab to view general information, and the **Address** tab to view contact information.

Remove a member company from a shell

You can remove a member company from the shell's Member Companies list. When a member company is removed from a shell, users belonging to the member company will be automatically inactivated for that shell.

To remove a member company

1) Select the company and click the **Remove** button.
2) At the confirmation window, click **OK**. This will remove the selected company from the list and inactivate any users who have been added to the shell.

Managing Shell Users and Groups

This section discusses adding groups and users to shells, managing shell groups, and managing shell permission levels.

Add a user to a shell

After you have created a shell, you will need to add users to the list of approved shell users. Shell users can be from your own sponsor company, or from approved member companies.

When adding users from your company to the shell:

▸ To add users from your own (sponsor) company, the user must be either **Active** or **On-Hold** at the company level. When added, the user will automatically be **Active** for the shell.

▸ Users who are inactive at the company level cannot be added to a shell.

When adding users from a partner company to the shell:

▸ In order to add a user from a partner company, the company must first be added to the Member Companies list for the shell. The user must be either **Active** or **On-Hold** at the company level. When added, the user will automatically be **Active** for the shell.

▸ The user does not necessarily need to be listed in the Partner Users log at the company level in order to be added to a company. If the user is listed in the Partner Users log, the user must be **Active** or **On-Hold**. If the user is not already in the Partner Users log, they will be automatically added to the list of Partner Users with a status of **Active**.

To add users to a shell

1) Go to the **Company Workspace** tab and switch to Admin mode.

2) Click **Company Sponsored Shells > [shell name] > [project name] > User Administration > Users** in the left Navigator. The Users log opens. The log lists all users that are already part of the shell.

3) Click **New**. The **User/Group Picker** opens.

> **Note**: If a User Attribute form has been imported, the shell user log will reflect the design of any designed Partner Log included in that form. See Importing a User Attribute Form for details.

4) Click the **List Names from** drop-down list at the top of the picker window and choose the company from which to add the new shell user.

This drop-down lists your sponsor company plus any member companies that have been added to the shell. You can click the Member Companies node under the shell to view the list of available member companies.

> **Note**: By default, new users will have a status of **Active**. You can change the status or other user detail information selecting the user from the list and clicking **Open**.

5) Select one or more users to add to the shell. You can press the **Shift** or **Ctrl** keys to select multiple users at once.

6) Click the **Add** button. You can continue to select and add names to the **Selected Users** portion of the picker window.

7) Click **OK** to add the users to the shell. The new users are listed in the Users log.

To add a user to a shell template

Open the shell template and navigate to **User Administration > Users**. Follow the steps above to add a sponsor company or member company user to the template.

View or edit a shell user's profile

You can edit a shell user's details. These procedures apply to sponsor company users and member company users.

To view or edit a shell user profile

1) Go to the **Company Workspace** tab and switch to Admin mode.

2) Click **Company Sponsored Shells > [shell instance] > User Administration > Users** in the left Navigator. The Users log opens.

3) Select a user from the list and click **Open**. The Edit Shell User window opens. The window has the following tabs: General, Groups, Permissions and Custom.

> **Note**: If a User Administration design has been imported from uDesigner by your Administrator, the content of this profile can vary.

4) In the **General** tab, review the contact information for the user as it will appear in the Shell Directory. By default, the shell address (as defined in the shell details) displays as the contact address. You can edit this information as necessary.

You can also modify the user's shell status:

▶ **Active**: User is listed in Shell Directory, in User/Group Picker, User can log in and participate in the shell. New users are Active by default.

▶ **Inactive**: If you deactivate a shell user, the user's name will not appear anywhere for selection on any shell-related functions. The user will not be able to access the shell. Inactivating a user at the shell level does not affect their status on other shells.

▶ **On-Hold**: User can be added to a shell, or assigned as a participant in a business process workflow but cannot log in.

5) Select the **Show user on the Shell Directory** option, if you want the user's information to be viewable in the Shell Directory.

6) In the **Groups** tab, you can add or remove the shell users to a shell-level group the same way that you add company users to company groups. Click the **Add** button to add a group to the user's list, or select a group and click Remove to remove the user from the group.

7) In the **Permissions** tab, you can assign shell-related permissions to the user, by module and mode.

8) In the **Custom** tab, you can view available custom attributes that may have been added to the user form.

Create and Manage Shell Groups

Groups are a way to aggregate Users together so that adding new team members to the shell and assigning permissions can be done quickly and efficiently. For example, groups can be members of the same shell team, and/or they can be users who share the same access privileges. At the company level, groups can span shells. At the shell level, all members of a group are members of a given shell. Different members of a shell may have different access to Unifier functionality, depending on their role on the shell.

For example, a Finance person might require access to cost modules and reports dealing with finances, but not RFIs or Transmittals and their associated reports. An Executive might require access to Summary financial information, and not the cost BPs.

As users are added to a Group, they will inherit the Group's permissions. If they are in more than one group, then the highest level of permissions granted in any group for a module will prevail.

When adding users to the group, you can choose eligible users from the sponsor company and any partner company users. The company short name will be listed in the User Picker window next to each user.

Company level groups cannot be copied into a shell.

To create a new group

1) Open the shell and switch to Admin mode.

2) Click **Company Sponsored Shells > [shell] > [shell instance] > User Administration > Groups** in the left Navigator. The Groups log opens.

3) Click **New**. The Groups window opens.

4) Complete the **General** tab:

   ▸ Group Name: Enter a name for the group

   ▸ Manager: Click Select and select a user from the User Picker window. This is the person who will be responsible for administering the group.

   ▸ Description: Enter an optional description for the group.

5) Click the **Members** tab. This is where you add and manage group membership.

   a. Click **Add**.

   b. From the User/Group Picker, select the users to add to the group and click **Add.**

   c. Click **Ok**.

6) Click the **Permissions** tab. In this tab, you manage group permission settings. If a user is a member of the group, the user will inherit all group permissions.

   Granting permissions to the group is similar to granting permissions to individual users. Choose the shell-related permissions for the group that will apply to all members assigned to this group. Choose permissions by module and mode.

7) In the **Custom** tab, you can view available custom attributes that may have been added to the group form.

To edit group information

1) Open the shell and switch to Admin mode.

2) Click **Company Sponsored Shells > [shell] > [shell instance] > User Administration > Groups** in the left Navigator. The Groups log opens.

3) Select a group and click **Open**, or double-click the selected group. The Groups window opens.

4) Make changes as necessary and click **Ok**.

Grant shell user permissions through Shell Access Control

Once you have created a shell, assign permissions to the people who need to access the shell. You can use Access Control to grant multiple Users or Groups permission simultaneously, rather than editing the properties for each User or Group individually.

To view or change a shell's access control

Do either of the following:

   ▸ Open the shell and switch to Admin mode. Click **Access Control** in the Navigator.

   ▸ Go to the **Company Workspace** tab and switch to Admin mode. Click **Company-Sponsored Shells > [shell type] > [shell]** in the left Navigator. Then click **Access Control** in the Navigator.

Unifier displays a copy of the Navigator menu in the right pane of the window. In this right pane, you may click on different modules of the Navigator menu to set permissions for those functions.

Generate and print access information report

You can generate and print an Access Information summary of user and group access (permission settings). The report will display all user and group permissions.

To generate the Access Information report

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Company Sponsored Shells > [shell] > [shellinstance] > Access Control** in the Navigator.
3) Click the **Access Information** button. The Access Information window opens. It may take several moments to generate the report.

To print the Access Information report

1) Generate the **Access Information** report.
2) Click the **Print** button. (When the report is complete, the **Print** button becomes available.)

Create new shells using an imported CSV file

An Integration interface must be created for shell creation to work via CSV file.

To create new shells using an imported CSV file

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Company Sponsored Shells** in the left Navigator.
3) Select a shell type.
4) In the shell log, click **Export Template**.
5) Complete the shell creation template CSV file. Some hints:
    ‣ The shell location must have a leading /. Be sure to use the true shell name as entered in the Shell Manager configuration.
    ‣ Shell statuses are Active or Inactive. Use initial capitalization.
    ‣ Administrators must be valid users. You might enter the user's full name (for example, Henry James) or the system user name (for example, *hjames*) depending on the configuration.
    ‣ If using currency override, be sure the currency is active in Exchange rates and the CSV file contains a valid currency code.
6) In the shell log, click **Import**.
7) Select the modules to include in the shell.
8) Select the template from the listed templates and click **OK**.
9) Browse for the CSV file.
10) Click **OK**.

Reasons for a Shell Creation business process CSV failing to import

1) Any incorrect rows will cause the CSV upload to fail and an error message will display the incorrect row number.
2) Incorrect shell location used (this has to be set up before importing a CSV.)

3) Invalid shell name or number.

4) The location on the imported CSV file is not a valid parent location.

5) The sub-shell of the type that you are importing was not configured under the parent location specified.

6) Currency override used an invalid currency code or the currency was not active in Exchange rates.

> **Notes**:
>
> - If shell creation fails, the user who attempted to import the CSV will get an email notification of the import failure.
> - When creating a shell through CSV, the Document Manager attribute form that is associated with the template, or shell instance, will be copied over to the new created shell.

Create shells with the shell creation business process

Before you begin, review these conditions for successful Shell creation from the Shell creation business process:

▶ Shell creation business process must be designed and deployed in uDesigner and configured and set up in Unifier.

▶ Shell template must be created

▶ Shell hierarchies must be correctly configured in Shell Manager

▶ Shell number must be unique

▶ Shell override currency, if it is to be used, must be active in Exchange Rates

The shell creation business process can synchronously auto-create a multiple-instance CBS or generic shell anywhere in or across a shell hierarchy. The business process uses a shell location picker to assign where the shell will reside in the hierarchy, and a shell picker to select a template. This means shell organization must be correctly configured in the Shell Manager and the shell template must be created.

The shell creation business processes designer can define the business process as company level or shell level. The designer may use workflow to support review and approval processes, or elect to design the business process without workflow. At run time, Unifier passes select information captured in the business process form to the newly created shell, thus avoiding redundant data entry. Reaching terminal status, as defined in uDesigner, triggers the synchronous shell creation process. If there is a planning item picker on the shell creation business process record or line item Unifier will link the planning item to the new shell.

Notification

Unifier will send an email notification upon successful shell auto-creation, provided notification is set up in business process setup, Unifier has a valid email address for anyone selected to receive notification, and those selected subscribe to email notification in user preferences. If auto-creation fails, Unifier will immediately send an alert to those selected to receive notification.

There are two types of shell creation business processes: simple and line item.

▶ Simple-type

The simple-type shell creation business process creates one shell per record. Reaching a terminal record status, as defined in uDesigner, triggers the synchronous shell auto-creation process. The business process designer has the option to either define workflow or not. In uDesigner the designer can define integration; in Unifier you can obtain the business process import template from the business process log.

It is important to note that the CSV import template must be correctly completed or Unifier will reject the CSV file in its entirety and not create any shells. When Unifier rejects a CSV file it creates an error file that tells you which line item is in error and why it is in error. To ensure a successful upload of the shell creation business process CSV file, retain the column headings in the same order as exported, and complete all required fields.

▸ Line Item-type

The line item-type shell creation business process creates a shell for each line item. Use the upper form to create the parent shell and each line item to create a child shell. Auto-creation happens when:

- Record terminal status is reached, as defined in uDesigner
- Line item status is met, as defined in uDesigner
- A line item passes validation

At run time, when Unifier processes a line item-type shell creation business process record, it will create a new shell from each line item that passes validation. For example, if there are 10 line items in the shell creation record, but only five pass validation, Unifier will create five shells. Shell creation line items can be consolidated, provided consolidation is configured in uDesigner.

CSV Import or Restful Services (Create Shell)

When you create a shell instance by using CSV import or Restful Services (Create Shell), the system copies into the created Shell:

▸ The **View Forms** tab information from the selected shell template.
▸ The forms added in the shell template, along with users and groups who are part of the viewers list.

Integration Tab

The **Integration** tab in shell template attribute window is used to map multiple P6 projects with the respective Unifier shell.

> **Note**: The mapping is used for Activity Sheet, only. Mapping does not have any impact on the existing summary sheet. For details about summary sheet see Setting Up and Managing Asset Sheets.

The **Integration** tab in shell template attribute window has the following options:

▸ **Add**
▸ **Remove**
▸ **Apply**
▸ **OK**

▶ **Cancel**

The **Integration** tab in shell template attribute window has the following columns:

▶ **Project ID**

An alphanumeric field that can be populated using **Add**. The **Project ID** cannot be modified or removed from this tab.

▶ **Project Name**
▶ **Schedule Type**

While you create the mapping, you are required to enter only the Project ID (marked as mandatory field). Unifier populates the other columns (**Project Name** and **Schedule Type**) when you run project synchronization.

When you add projects, using this tab, to create an Activity Sheet:

▶ You cannot modify, or remove, a Project ID.
▶ If the **Link Multiple Projects** option is not disabled, then the system uses synchronization in multiple P6 projects.

If the user decides to change the existing mapping setup (Activity Sheet), Unifier replaces the existing Activity Sheet with P6 projects after the next synchronization.

If a user tries to remove (**Remove**) a project that is mapped to an Activity Sheet, unifier cannot process the change because the schedule for the project is present in the Activity Sheet.

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, Unifier 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, Unifier 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).

CBS Type Shell for a Non-EVM User

Updating a CBS type shell

In a CBS type shell, when a non-EVM user opens the shell details (**My Dashboard ...** > **Details**), the non-EVM user can click the **Integration** tab to add only one P6-related project (click the plus sign symbol: **Add Project ID**). If there is an Activity Sheet available, and the user decides to add a schedule for the project, then Unifier will display a message informing the user that the existing schedule in the Activity Sheet will be replaced with the added schedule for project. If the user selects **Yes**, then the new schedule will be included in the Integration tab and the Add External Project ID option becomes disabled.

Use the gear menu to delete the added, or existing, schedule for project.

Once non-EVM user add a new schedule for project and clicks Save, the shell dashboard page opens and displays the new schedule project information in the **Details** block. This enables the non-EVM user to proceed with the data synchronization.

To synchronize data:

‣ Click the **EVM** node to expand (from the left Navigator).

‣ Click **Activity Sheet** sub-node. The **Activity Sheets** log window opens.

‣ Click the **Get Data** icon. The **Get Data** window opens.

‣ Click inside the **Project** field and add the schedule for project.

‣ From the **Activity Sheets** log window (on the right-hand panel), click the **History** tab, and click the **Refresh** icon.

‣ From the **Activity Sheets** log window (on the left-hand panel), click the activity sheet to open it.

The **Activity Sheet** log window lists all of the activities for the added schedule for project.

Similar to an EVM user, a non-EVM user can use the following tabs of the **Activity Sheet** log window (on the right-hand panel) to see more information:

‣ **General**

‣ **Assignments**

‣ **Audit Log**

The non-EVM user can click on the **Assignments** tab, click on the gear menu of resource, and perform the following:

‣ **View Assignment Spread**

‣ **Assign CBS**

‣ **Assign Rate Source**

The non-EVM user can click on an activity (in the **Activity Sheet** log window) and select the following options:

‣ **View Activity Spread**

‣ **Assign CBS**

The non-EVM user cannot add a column to the **WBS Sheet** (**WBS Sheet** sub-node, from the left Navigator). The same limitation (inability to add column) applies to the **Cost Sheet** (**Financial Reporting** node > **Cost Sheet** sub-node, from the left Navigator).

Creating a CBS type shell

When creating a new CBS type shell (**Company Workspace** (**Admin** mode) > **Company Sponsored Shells** > **Projects**), a non-EVM user can use the **Integration** tab to add a single source project ID (click **Add**).

CBS Type Shell for an EVM User

The shell Integration tab enables you to link to a single or multiple Primavera Cloud projects.

‣ Users with EVM license can add multiple Oracle Primavera Cloud projects to be linked to a Unifier project.

‣ Users without EVM license will be able to link to a single Oracle Primavera Cloud project using the Integration tab.

You can add the Primavera Cloud Project ID using the **Add** option in the Integration tab. All validations (regarding valid project ID, duplicate Project ID, etc.) will take place when you add a Project ID in the Integration tab. The Project Name and Schedule Type columns will be read-only, and the values will be populated once the Oracle Primavera Cloud project is synchronized with the Unifier project.

The Project Name value will populate with the name of the Oracle Primavera Cloud project, and the Schedule Type will be populated with the default value: Duration. The following other fields (in shell details) are populated if the shell is synchronized with the Oracle Primavera Cloud project, using the Project Number from the shell attribute form:

Shell Status	Populated with a valid status value. It can be: Active. **Note**: The Shell Status will be populated or updated only when the shell instance is created by using a new OOTB synchronization from Gateway (**Send Activity data from Primavera Cloud to Unifier**). When a user gets activity data using the **Get Data** option in the **Activity Sheets** log, the value of the Shell Status will not be updated.
Project Start Date	The start date of the project, received from the Oracle Primavera Cloud project. This data element in the shell attribute form will get updated only when a project is created from the Gateway.
Integrated with	This data element in the shell attribute form will be populated as: Primavera Cloud.

> **Note**: For projects that are integrated with Oracle Primavera Cloud using the shell Integration tab, the Shell Status and the Project Start Date will not be updated.

Project Mappings in Gateway

Oracle Primavera Cloud	Gateway	Unifier
projectName	Name	ProjectName
dataDate	DataDate	Data_date
projectCode	Id	ProjectNumber
Start Date	DataDate	uuu_project_start_date
status	Status	uuu_shell_status

The plus (+) option will be disabled once you add the Oracle Primavera Cloud Project ID, and the data from Oracle Primavera Cloud project will be synchronized with the Unifier project in case the user does not have an EVM license.

A user with an EVM license will be able to add multiple Oracle Primavera Cloud Project IDs, and the data from multiple Oracle Primavera Cloud projects can be synchronized with the Unifier project. Furthermore, the **Schedule Type** field will be shown as 'Duration' for all of the Oracle Primavera Cloud projects in the **Integration** tab of shell details. In the shell details **General** tab, the field **Integrated with** is populated as: Oracle Primavera Cloud.

Managing Shells

You can verify the shell properties, make changes as necessary, update status, or activate as necessary. It is recommended that you keep the company progress information up to date to reflect the ongoing status and progress of the shell.

You can also modify shell information in a shell type template and then update one or more existing shells by "pushing" the information from the template to the shells (see *Updating Shells* (on page 185)).

To open a shell

Click the tab for the shell. The shell landing page opens.

To edit an existing shell

1) Go to the Company Workspace tab and switch to Admin mode.
2) Click **Company Sponsored Shells** in the left Navigator; select the shell instance, click to open the shell (from the log). The shell window opens. Click **My Dashboards**, and then click **Details** to open the **Details** page.
3) Modify the shell information as necessary.

    You can modify any of the shell properties any time during the shell duration, except for the shell currency. Once a shell is set up, the shell currency is locked.

    The Location picker allows you to change the location of a shell, and is accessible when you set up a shell or modify the shell details. See *Location picker behavior* (on page 170) for details.

    Use the Location Picker to select where the shell instance will reside. In the Location picker:
    ▸ Find searches the current level
    ▸ Open shows the next level of shells
    ▸ Select completes the action
    ▸ Location Picker will display breadcrumbs through the hierarchy
    ▸ Work systematically from the top of the hierarchy to the bottom
    ▸ There must be an instance of a single shell to connect to

    > **Note**: You can use the Location picker to reorganize the shell hierarchy. The shell can move across tabs, or laterally along the hierarchy. When you move a shell instance, all of the shell data moves with the shell. If an auto-populated business process moves with the shell instance, then the auto-populated data moves with the business process. Data for the business process will be collected from the new shell location. In addition, if a child shell attribute form or a single-record BP in a child shell has been designed with linked elements, the child shell attribute data and BP data will be automatically changed to reflect the new parent shell's current attribute values.

4) Click **Save** to save your changes and exit the **Details** window.

To deactivate an existing shell

1) Go to the Company Workspace tab and switch to Admin mode.
2) Click **Company Sponsored Shells** in the left Navigator; select the shell instance, click to open the shell (from the log). The shell window opens. Click **My Dashboards**, and then click **Details** to open the **Details** page.
3) On the **General** tab, go to the **Status** field and select **Inactive**.

> **Note**: If you deactivate a single instance shell (a shell that displays in Unifier as a tab) you cannot access that shell again to activate it. The tab will persist, but not be accessible.

4) Click **Save** to save your changes and exit the **Details** window.

To copy the customized user attributes from the company-level directory

You can copy (bulk) any customized user attributes from the company-level directory and paste them into the shell.

1. Go to your company (**Company Workspace**) and switch to the **Admin** mode.
2. In the left-hand Navigator, click **Company Sponsored Shells** node to expand.
3. Click **Projects** sub-node to open the **Projects** log.
4. From the toolbar, click **Export** to expand the menu.
5. Click **Export Users** to expand the menu, select one of the following options, and follow the prompts:
a. **All Shells**
b. **Selected Shells**

After your selection, Unifier will download (bulk) an Excel sheet (CSV file) with all the existing users. Click **Yes**, to copy the company-level directory values under the **Copy Attributes** column, for the shell.

If you do not click **Yes**, no values will be copied from the company-level directory.

To complete the importing of the values:

1. From the toolbar, click **Import** to expand the menu.
2. Click **Import Users** to expand the menu, select one of the following options, and follow the prompts:
a. **All Shells**
b. **Selected Shells**

Proceed with importing the values by uploading the Excel sheet (CSV file). Unifier will update (bulk) the user attributes data elements and their values.

When creating a new project or shell through the **New** option, you must either add user manually or through a CSV file. After creating the new project or shell, you can import the information. If you add user manually, the **Copy Attributes from Company Workspace** option (in the **General** tab of <shell> > **User Administration** > **Users** or **Groups**) enables you to import the values in the **Copy Attributes** column of the CSV file.

If you copy user attributes values from a shell template, the shell template attributes for the Users are copied over, also.

By default, Unifier adds the project administrator to any newly created, or copied, shell. In this scenario, the additional attributes will not be copied.

Packaging Single Instance Shells

You can package Single Instance Shells that exist in the **Development/Test** environment in order to transfer the Configuration Package to the **Production** environment.

The Configuration Package that you create will include:

- The Shell details data (data from all tabs in the Shell).
- The currency defined in the Currency tab and if the selected currency does not exist in the destination environment, the system will create it.

> **Note**: The Currency attributes such as Code, Name, Symbol, and so forth are not updated when you import the Configuration Package, and after you create the shell, the Currency tab content will not be updated upon subsequent imports.

- The calendar from the Calendar tab   and if the selected calendar does not exist in the destination environment, the system will create it.

The following Shell details are included in the Single Instance Shell:

> **Note**: The following Shell details are exported and imported to the destination environment on the first import, only. No subsequent updates of Shell details data can be performed in the destination environment.

- Shell data that exists in the form for the following fields: Shell Name, Shell Number, Administrator, and Shell Status.

The Shell log window is a user-defined log, and the user-defined columns appear next to the system-defined columns.

When you create a Single Instance Shell Configuration Package successfully, the system stamps the Shell with the Last Packaged Date.

Shells cannot be created if they are not activated in the Configuration module, so the configuration of the Shell will be included in the Shell Configuration Package at the time of transfer between environments.

> **Note**: The contents of the Organize tab, which defines the Shell hierarchy, will be included.

Updating Shells

The Update Shells function allows you to quickly add or modify information into a shell template, and then apply that template to existing shells. This will "push" the new information to the shells that you specify. By allowing data to be entered or modified once, this function helps to reduce set up time and ensure cross-shell uniformity.

The Update Shells function is available for select modules in shell type templates. Go to: **Company Workspace** > **Admin** mode > **Templates** > **Shells**

> **Note**: When you copy a Setup (Company Workspace > Admin mode > Templates > Shells > Projects > … > Setup > …) from a Shell template, the fields in the shell details block all will be copied.

The modules that you can update are listed below.

- ▸ **Users**: users, group membership, permissions
- ▸ **Groups**: group names, permissions
- ▸ **Business Processes and BP Setups**: Business processes, setups
- ▸ **User-defined Reports**: Reports, report permissions
- ▸ **Access Control**: modules, users, groups, permissions
- ▸ **Cost Sheet**: Cost sheet columns, column access and restrictions
- ▸ **SOV**: General and Payment Applications structures
- ▸ **Commitment Funding**: Commitment funding sheet structure
- ▸ **Cash Flow**: Properties and permissions
- ▸ **Rules**: Cost or fund rules
- ▸ **Schedule Sheet Properties**: title, description, Master Schedule, status, auto-control, project start date, and error notification. Updating Schedule Sheet Properties from Templates
- ▸ **Gates**: Active or Inactive setups
- ▸ **Shell Instance Dashboards**: dashboards created at the shell level, and are available for users to view (but not edit) with granted permissions

Each of these modules has an Update function where you can use Find to isolate the shells you want to update. The find window contains data elements from the Find form (designed in uDesigner). This makes targeting shells with specific information possible. For example, if you add new users, to the company, and need to add them to many shells, but not every shell, you can add them to a shell template and use the Update Shells functional to add the users to only those shells that require them.

Shells with a status of Active or On-Hold can be updated with this functionality. Inactive or View-Only shells cannot. Users with create permission for the shell type template modules can do this operation.

> **Note**: You update shell information one module at a time. Any Active or On-hold shells can be updated in this way.

When you create a configuration package for your shell templates, the system includes the following configurations from the selected component list:

- All shell templates that are included in the component list.
- Content of the shell template.
- Configuration of selected shells and business processes.

You can package the shell templates that exist in the **Development/Test** environment and transfer the configuration package to the **Production** environment, and your configuration package will include the shell details data (data from all tabs in the shell setup).

Currency

The currency, defined in the **Currency** tab, is included as a part of the configuration package. If the selected currency does not exist, then the system creates one in the destination environment. The currency attributes such as Code, Name, Symbol, and so forth cannot be updated by means of configuration package import. The **Currency** tab content is update upon every import. If the exchange rates, defined for currencies in the source shell template, do not exist in the destination environment, then the system creates a new exchange rate record for that currency and that exchange rate will be set to Active, and:

- The Effective is set to the configuration package Import Date.
- The Peg rate is brought over from the source environment.
- The Float rate is brought over from the source environment, if the rate does not exist in the destination environment.

Calendar

The calendar, from the **Calendar** tab, is included as a part of the configuration package. If the selected calendar does not exist, then the system creates one in the destination environment.

Shell Details

The following shell details, in the form, will be exported and imported in the destination environment upon every import:

- Text fields, Pull downs (Integer and String), Radio buttons, check boxes, Integer, Decimal and Currency Amounts and Dates. The dataset values, or the default values, will not transfer unless you include those in your configuration package.

  > **Note**: Any picker that refers to some other design object like BP pickers, data pickers, and so forth will not be included.

- The contents of the **Organize** tab (shell configuration), which defines the shell hierarchy, will be included. This includes the defined sub-shells.

Shells cannot be created if you do not activate them in the **Configuration** module.

The configuration package creation will fail if:

- The design of the included shell is not a part of the component list.

▶ The shell design version that is included in the component list does not match the deployed Shell design version.

Business Processes

▶ A Shell Template can have several Business Processes in the **Development/Test** environment.

▶ Only those Business Processes that have been included in the configuration package, marked as publish for production, can be transferred to the **Production** environment.

▶ The configuration package can contain Workflows that have been setup (activated in Configuration module). If there are multiple Workflow setups in a Business Process, then all the setups are included in the configuration package, regardless of the status.

▶ Business Processes, and other design objects, in a template depend on their setups in the Configuration module. Only the configuration setups of the Business Processes, and the Shell that the Business Process resides in, are included in the template can be a part of the configuration package.

▶ In Workflow setups, where additional filtering on assignees exist for steps, the published design for user attribute form in the configuration package must include the deployed design.

▶ In Workflow setups, in case the **Advance workflow when next step is determined** option is selected:

    ▸ When the user updates shells (Update Shells option), all of the shells (or the selected shells) will receive the next step setup.

    ▸ When the user updates a BP setup, from an environment different than the current environment, then the next step setup will be imported.

User-Defined Reports (UDRs)

You can transfer User-Defined Reports (UDRs) that have been included in a Shell Template (Company Workspace > Admin mode > Templates > Shells) from **Development/Test** environment to **Production** environment. The data source for the reports can be a uDesigner design, a Data View, or a system-provided source.

Single Record Business Process (BP)

The data from the Single Record BP gets exported from the source environment and then gets imported into the destination environment. This includes: Text fields, Pull downs (Integer and String), Radio buttons, check boxes, Integer, Decimal and Currency Amounts and Dates. The dataset values, or the default values, will not transfer unless you include those in your configuration package.

The following data/items are not included in the configuration package:

▶ Any picker that refers to some other design object like BP pickers or data pickers.

▶ Attachments, linked records, and general comments.

Groups and Users

▶ Only the Shell Administrator user will be extracted for User Mapping, when importing the configuration package.

▶ Only groups will be extracted for the selected components in the shell templates.

Access Control

▶ For both Admin and User modes, the user can select the permissions for the Design objects in shell templates.

Updating Shell Formation - General Procedure

In general, the Update Shells feature works like this:

Step 1. In Administration Mode, open a shell type template.

Step 2. Navigate to one of the modules listed above. Add or edit data.

Step 3. Click the **Update Shells** button. Select which information within the module to update, and which of your active or on-hold shells to "push" the information to. New information will be added to the selected shells. Edited information will overwrite existing data.

You can also cancel a shell update before it reaches the In Process status.

Detailed instructions for updating specific types of shell information is found in the following sections.

Updating Shells, Users

You can add new users to multiple shells at once by adding them to a shell template in the **User Administration > Users** module. When adding new users to a shell, you can assign individual permissions directly to a new user, or add the user to a group to apply group permissions.

The Update Shells process runs in the background. Depending on the number of records and shells you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

Some notes about updating users

- Users are identified by their unique User ID.
- Any **Active**, **Inactive** or **On-hold** users can be pushed.
- If the user does not already exist in the shell, the user will be added to the shell with the permission settings and group membership.
- If the user already exists in the shell, the user information is updated (replaced) with the user information as entered in the shell template. This includes permission settings and group membership.
- If a group that the user was added to doesn't already exist in the shell, the group will be added, and the user will be added to the group. Group permissions are not updated; this is done by updating groups.
- If the group already exists, the user will be added to it. Group properties and permissions will not be affected.

To add or update users using Update Shells

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) Click **Templates > Shells** in the left Navigator.
3) Open the shell type template to update.

4) In the shell type template, navigate to the **User Administration > Users** log.

5) Add a user to the shell type template, or select a user to edit. Define user parameters and assign permissions.

6) Select one or more users in the Users log.

7) Click the **Update Shells** button and choose one of the following:

   ▸ **Shells**: You can use this option to select one or more shells to update. When the update window opens, it lists all shells in the project. You can use Find to isolate the shells you want to update. The find window contains data elements from the Find form that was designed in uDesigner. When you have isolated the shells to update, click the Update button and select either Selected Shell(s) or All Filtered Shells.

   ▸ **All Shells**: You can use this option to update all shells of that shell type.

   ▸ **History**: You can view the update history from past updates or cancel a request before the update begins.

   An Alert window opens letting you know that you are about to push changes to the selected shells; there is no undo for the update.

8) Click **Yes** if you want to proceed with the update, or **No** to cancel.

To delete users

1) Go to the **Company Workspace** tab and switch to **Admin** mode.

2) Click **Templates > Shells** in the left Navigator.

3) Open the shell type template to update.

4) In the shell type template, navigate to the **User Administration > Users** log.

5) If you are not an administrator or owner of an item in the template:

   1. Select the shell user for deletion.

   2. You can click on the **Usage** option, which downloads the usage report.

   3. The usage report lists all the references of the selected user in the template. You can check if the deletion would impact any area of the usage report.

   4. Select the **Delete** option.

   5. A confirmation message is displayed along with **Yes** and **No** options.

   6. If you choose **Yes**, then the item is deleted and all the user references are removed from the template.

   ▸ The system deletes the user even if the selected user is the only user under the **Assignee** section of any workflow BP. You must manually open the BP and save the user in order to move them to an **Inactive** status. You can also assign a new user in the workflow.

6) If the selected user is an owner of a document, cost sheet, work sheet, schedule sheet, or User-defined report:

   1. Select a user ID and click on the **Delete** option.

   2. A confirmation message is displayed along with **Yes** and **No** options.

   3. If you choose **Yes**, then the system closes the message and automatically downloads the usage report without performing a deletion. You can refer to the usage report to understand the impact areas and take the necessary action.

7) If you select multiple users and all of them are owners of a document, cost sheet, work sheet, schedule sheet, or User-defined report:

   1. Select the user IDs and click on the **Delete** option.

   2. A confirmation message is displayed along with **Yes** and **No** options.

   3. If you choose **Yes**, then the system closes the message and automatically downloads the usage report for all the selected users without performing a deletion. You can refer to the usage report to understand the impact areas and take the necessary action.

8) If you select multiple users and none of them are owners of any content in the template:

   1. Select the users and click on the **Delete** option.

   2. You can select all the users and click on the **Usage** option, which downloads the combined usage report for all the selected users.

   3. A confirmation message is displayed along with **Yes** and **No** options.

   4. If you choose **Yes**, then the system deletes all the selected users.

9) If you select multiple users and a few of them are owners of some elements in the template:

   1. Select the users and click on the **Usage** option.

   2. The system downloads the combined usage report for all the selected users.

   3. Select the **Delete** option.

   4. A confirmation message is displayed along with **Yes** and **No** options.

   5. If you choose **Yes**, then the system automatically downloads the usage report for the remaining users who are restricted from deletion.

   6. Another confirmation message is displayed along with **Yes** and **No** options.

   7. If you choose **Yes**, then the system deletes the selected users that are not owners.

   ‣ You can refer to the usage report to further understand why some users cannot be deleted.

10) The push functionality and the copy shells work the same as they did previously. If a user is deleted and the record can no longer be selected, then a push cannot be performed. However, if a user is deleted and the shell template is copied to create a new template, then the deleted user would no longer be included. When a user is deleted and the shell is selected for download as part of a **Component List** in a **Configuration Package**, the deleted user is no longer part of the package. Any existing shells are not affected by the changes made and the deletions performed.

Updating Shells, Groups

You can add new users to shells individually or by adding them to groups, and then adding the groups to the shells. You can assign the user individual permissions, or add the user to a group and apply group permissions.

The Update process runs in the background. Depending on the number of records and shells you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

Notes:

About updating groups:

- Groups are identified by their unique Group Name.
- All group properties, including permission settings, will be added or updated in the shells that you selected.
- If the group does not already exist, the group will be created with the permission settings. Group membership (user list) will not be updated in the shell.
- If a group of that name exists, the properties and permissions of that group will be replaced with the new group, but not the list of users.
- Users are not automatically added to the group; they need to be added by updating users (group membership).

To add or edit user groups using Update Shells

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) Click **Templates > Shells** in the left Navigator.
3) Open the shell template to update.
4) In the shell type template, navigate to the **User Administration > Groups** log.
5) Select one or more groups from the Groups log.
6) Click **Update Shells** and choose one of the following:
   - **Shells**: You can use this option to select one or more shells to update. When the update window opens, it lists all shells in the project. You can use Find to isolate the shells you want to update. The find window contains data elements from the Find form that was designed in uDesigner. When you have isolated the shells to update, click the Update button and select either Selected Shell(s) or All Filtered Shells.
   - **All Shells**: You can use this option to update all shells of that shell type.
   - **History**: You can view the update history from past updates or cancel a request before the update begins.

   An Alert window opens letting you know that you are about to push changes to the selected shells; there is no undo for the update.
7) Click **Yes** if you want to proceed with the update, or **No** to cancel.

To delete user groups

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) Click **Templates > Shells** in the left Navigator.
3) Open the shell template to update.
4) In the shell type template, navigate to the **User Administration > Groups** log.
5) If you select a single group in the template:
   1. Select the shell group.
   2. You can click on the **Usage** option, which downloads the usage report for the selected group. This behavior is dependent on the browser you are working in.

3. The usage report lists all the references of the selected group in the template. You can check if the deletion would impact any area of the usage report.

4. Select the **Delete** option.

5. A confirmation message is displayed along with **Yes** and **No** options.

6. If you choose **Yes**, then the item is deleted and all references of the selected group are removed from the template.

   ▸ The system deletes the group even if the selected group is the only assignee in any workflow BP. You must manually open the BP and save the group for it to move to an **Inactive** status. You can also assign a new user in the workflow.

   ▸ The system should not allow the deletion of the **Project Administrators** group. If you select the **Project Administrators** group and click on the **Delete** option, then a confirmation message is displayed along with an **OK** option. Click on the **OK** option to proceed further. You can select the **Project Administrators** group and click on the **Usage** option to download the usage report for the group.

6) If you select other groups apart from **Project Administrators**:

   1. Select the shell groups.

   2. You can click on the **Usage** option, which downloads the combined usage report for the selected groups. This behavior is dependent on the browser you are working in.

   3. The usage report lists all the references of the selected groups in the template. You can check if the deletion would impact any area of the usage report.

   4. Select the **Delete** option.

   5. A confirmation message is displayed along with **Yes** and **No** options.

   6. If you choose **Yes**, then the item is deleted and all references of the selected groups are removed from the template.

   ▸ The system deletes the groups even if the selected group is the only group under the **Assignee** section of any workflow BP. You must manually open the BP and save the group for it to move to an **Inactive** status. You can also assign a new user in the workflow.

7) If you select multiple groups for deletion that include **Project Administrators**:

   1. Select multiple shell groups.

   2. You can click on the **Usage** option, which downloads the combined usage report for the selected groups. This behavior is dependent on the browser you are working in.

   3. The usage report lists all the references of the selected groups in the template. You can check if the deletion would impact any area of the usage report.

   4. Select the **Delete** option.

   5. A confirmation message is displayed along with **Yes** and **No** options.

   6. If you choose **Yes**, then the system displays another confirmation message along with **Yes** and **No** options. If you select **No**, then the operation is aborted.

   7. If you choose **Yes**, then the selected groups, apart from the **Project Administrators** group, are deleted. If you select **No**, then the deletion is not performed.

8) The push functionality and the copy shells work the same as they did previously. If a group is deleted and the record can no longer be selected, then a push cannot be performed. However, if a group is deleted and the shell template is copied to create a new template, then the deleted group would no longer be included.

Updating Shells - Setup Node, Business Process

Go to: **Company Workspace** > **Admin** mode > **Templates** > **Shells** > "Shell template" > **Setup** > **Business Process**.

You can add and update new business processes, or add additional business process setups to existing business processes.

The Update Shell process runs in the background. Depending on the number of records and shells you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

The business process setup is identified by the unique combination of business process name, setup name, and workflow name.

If the business process name does not exist, it will be added to project with the BP Setup and permissions.

If the BP exists, but the BP Setup does not, it will be added to the BP.

If the BP and BP Setup exist, the Setup will be replaced with the new one.

Users and Groups that are part of a BP setup as assignees are added/updated, but not permissions. If a group is created, it will be empty. Users must be added to the group separately through user administration.

BP-related permissions are added/updated (for example, discussion groups, which are available in Classic View only).

To add or update business process setups using Update Shells

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) Click **Templates** > **Shells** in the left Navigator.
3) Open the shell type template to update.
4) In the shell type template, navigate to **Setup** > **Business Processes**.
5) Add any new business processes, if applicable. (The BP must already have been imported into Unifier and configured at the company level.)
6) To add or edit business process setups, select the BP to update in the Business Processes log. Click **Open**. The BP Setup log opens.
7) Create a new setup or modify an existing setup. You may create as many setups as you wish to make available in the shell(s).
8) Select one or more setups from the BP Setup log.
9) Click **Update Shells** and choose one of the following:

> ▸ **Shells**: You can use this option to select one or more shells to update. When the update window opens, it lists all shells in the project. You can use Find to isolate the shells you want to update. The find window contains data elements from the Find form that was designed in uDesigner. When you have isolated the shells to update, click the Update button and select either Selected Shell(s) or All Filtered Shells.

> ▸ **All Shells**: You can use this option to update all shells of that shell type.

> ▸ **History**: You can view the update history from past updates or cancel a request before the update begins.

An Alert window opens letting you know that you are about to push changes to the selected shells; there is no undo for the update.

10) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Conditions for Creating a Business Process setup Configuration Package

When you include a *Workflow Business Process* setup for Configuration Package:

▸ If it is a first time export, you must include the BP design in the configuration package.

▸ For subsequent exports, you must include the latest BP design the configuration package.

When you include a *non-Workflow Business Process* setup for Configuration Package:

▸ If it is a first time export, you must include the BP design in the configuration package.

▸ For subsequent exports, if you have included the Data Element used in the setup (for example, Auto Creation setup) in the configuration package, then:

> ▸ If published, then it will automatically be included in configuration package, by including the BP setup

> ▸ If not published, then you must include the BP design as well.

At the time of import, the system transfers the setup information of the design object, irrespective of the Configuration status (Active/Inactive).

Oracle recommends that you include your design object for Configuration Package after you change the configuration of your design.

Workflow Setup for Workflow Business Processes

You have the ability to delete (**Delete**, or **Edit** > **Delete**) inactive Workflow setup for Workflow Business Processes in Shell Template so that they are not included when a particular BP setup is included in the component list for configuration package.

Updating Record Properties tab in the BP Setups

When you push the BP setup to selected shells, or all shells, the users and groups who had restrictions to the **Audit log** and **Workflow Progress** tabs, the **Record Properties** tab of the BP setup (in shell template) will be pushed into the shells.

The confirmation message (when pushing BP setup into shells or projects from template) will have an additional information: "Users and groups permissions, in the Record Properties tab, are added to the shell and existing permissions will be updated."

Updating Shells - Setup Node, Dashboards

You can add new dashboards to shell instances, for users to view. You can assign the user View permission to the shell instance dashboards.

The Update process runs in the background. Depending on the number of shells you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

Some notes about updating shell instance dashboards

- If granted View permission, users can view shell instance dashboards, but cannot modify them.
- If a user added to shell instance dashboard permissions, and that user does not exist in the shell, that user is added to the shell upon update.
- If a user has created My Dashboard in User Mode for a shell, that dashboard is not overwritten by Update Shells.

To add or update shell instance dashboards using Update

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) From the left Navigator, click **Templates** > **Shells** > "Shell template" > **Setup** > **Dashboards**. The **Dashboards** log window opens.
3) Select one or more shell instance dashboards from the Dashboards log.
4) Click **UpdateShells** and choose one of the following:
   - **Shells**: You can use this option to select one or more shells to update. When the update window opens, it lists all shells in the project. You can use Find to isolate the shells you want to update. The find window contains data elements from the Find form that was designed in uDesigner. When you have isolated the shells to update, click the Update button and select either Selected Shell(s) or All Filtered Shells.
   - **All Shells**: You can use this option to update all shells of that shell type.
   - **History**: You can view the update history from past updates or cancel a request before the update begins.

     An Alert window opens letting you know that you are about to push changes to the selected shells; there is no undo for the update.
5) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Conditions for Creating a Dashboard Setup Configuration Package

Note: You must include the Data Cubes used in the Dashboard.

When you export a Dashboard for the first time, you must include all uDesigner design objects that form the Dashboard data source in the Configuration Package.

For subsequent exports ensure that the design object that uses the Data Element that is specifically used in the setup is present in the Production Published Package. As long as this condition is met, the configuration package creation will be successful. If this condition is not met, then the latest design will have to be included in the configuration package. When the data source is a business process, the setup must also be included in the configuration package; otherwise, the creation process will not complete.

Dashboards Components in the Configuration Package

The system includes the following components of a dashboard in the Configuration Package (.zip file):

Dashboards	Component	Field / Option
Dashboard		Name
Dashboard		Description
Dashboard		Permissions
Dashboard	Tab Block	Tab Name
Dashboard	Tab Block	Tab Layout
Dashboard	Tab Block	Show option
Dashboard	Tab Block	Filters
Dashboard	Source Details / Analytics Block	Block Order
Dashboard	Source Details / Analytics Block	Block Title
Dashboard	Source Details / Analytics Block	Source Name
Dashboard	Source Details / Analytics Block	Block Type

Dashboard	Analytics Block	URL The URL value will be blank in the Export package. Import process will plug in the default value based on the Unifier Configurator property.
Dashboard	Custom Block	Data Cube
Dashboard	Custom Block	Show Data From
Dashboard	Custom Block	Block Title
Dashboard	Custom Block	Display Type
Dashboard	Custom Block	Source Grouped By (If Group By option is a design object then that design should also be included in the Configuration Package)
Dashboard	Custom Block	Output Type
Dashboard	Custom Block	Report On
Dashboard	Custom Block	Summary Type
Dashboard	Custom Block	Show Result
Dashboard	Custom Block	Show Total
Dashboard	Custom Block	Decimal Places
Dashboard	Custom Block	Currency Format
Dashboard	Drilldown Block	Data Cube
Dashboard	Drilldown Block	Block Title
Dashboard	Drilldown Block	Block Filter Elements (If filter elements are design objects, then they must be included in the Configuration Package as well.)
Dashboard	Drilldown Block / Edit Drilldown Details	Title

Dashboard	Drilldown Block / Edit Drilldown Details	Show Data From
Dashboard	Drilldown Block / Edit Drilldown Details	Display Type
Dashboard	Drilldown Block / Edit Drilldown Details	Source Grouped By (If Group By option is a design object then that design must also be included in the Configuration Package.)
Dashboard	Drilldown Block / Edit Drilldown Details	Output Type
Dashboard	Drilldown Block / Edit Drilldown Details	Report On
Dashboard	Drilldown Block / Edit Drilldown Details	Summary Type
Dashboard	Drilldown Block / Edit Drilldown Details	Show Result
Dashboard	Drilldown Block / Edit Drilldown Details	Show Total
Dashboard	Drilldown Block / Edit Drilldown Details	Decimal Places
Dashboard	Drilldown Block / Edit Drilldown Details	Currency Format
Dashboard	Portlet Block	Name

Dashboard	Portlet Block	URL
		Use **Reset** to reset the URL.
		Use **Get Parameters t**o get parameters from the URL as populated by the user in URL text box. When received, use the **URL Parameter Mapping** menu (accordion) to pass the values to the parameters in URLs, by mapping those to fields from shell attribute form, and then format the values so that the URL can render in the dashboard during runtime, correctly.
Dashboard	Standard Block	Source Name
Dashboard	Standard Block	Data Type (If Data Type option is a design object then that design must also be included in the Configuration Package)
Dashboard	Standard Block	Report On
Dashboard	Standard Block	Block Title
Dashboard	Standard Block	Display Type
Dashboard	Standard Block	Show Result
Dashboard	Standard Block	Show Total
Dashboard	Standard Block	Decimal Places
Dashboard	Standard Block	Currency Format

Updating Shells - Setup Node, Gates

Go to: Company Workspace > Admin mode > Templates > Shells > "Shell template" > Setup > Gates.

You can update shells with Active or Inactive Gates setups. The Update Shells process runs in the background. Depending on the number of records and shells you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

Important Information About Updating Gates (Project Phase Gates) Setups:

‣ The Gates setup update will completely overwrite any existing Gates setup, or will be added if it did not previously exist.
‣ Previously scheduled Gates runs are overwritten by the new Gates setup. If the pushed setup is Active new scheduled Gates runs are scheduled according to the schedule in the new setup.
‣ Both Inactive and Active Gates setups can be pushed in the update.
‣ After update the Gates setup reflects the status of the template.

▶ After the update, the Current Phase in the Gates setup is reset to the First Phase.

▶ After the update, the Gates shells will not run the scheduled refresh if the shell is On-Hold. Gates scheduling will resume automatically when the shell becomes Active.

▶ If you have permission to create Gates setups, you can update Gates setups using Update Shell, even if you do not have permission to access the individual shells.

▶ The phase conditions that have been completed already will reset to incomplete, by the system.

▶ Users and groups specified in the Email Notification field are added if they do not exist.

▶ Newly-created groups are empty.

▶ Any conditions that had been previously checked to be ignored will not be checked again, and the information about the user who had checked the ignore option will be lost.

▶ The project will not set to where it was in the Phase Gates progress prior to template update, if the ignore checkbox has been used for any of the phase completion conditions.

> **Note**: Post update, the next time that the system picks up the scheduled runs, the status of the gate phases may vary depending on the setup.

To update Gates setups using Update Shell

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates > [shell type] > [shell instance]** in the left Navigator.
3) In the shell template, click **Setup and select Gates**.
4) Select a Gates setup.

   ▶ **Shells**: You can use this option to select one or more shells to update. When the update window opens, it lists all shells in the project. You can use Find to isolate the shells you want to update. The find window contains data elements from the Find form that was designed in uDesigner. When you have isolated the shells to update, click the Update button and select either Selected Shell(s) or All Filtered Shells.

   ▶ **All Shells**: You can use this option to update all shells of that shell type.

   ▶ **History**: You can view the update history from past updates or cancel a request before the update begins.

   An Alert window opens letting you know that you are about to push changes to the selected shells; there is no undo for the update.

5) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Conditions for Creating Gates setup Configuration Package

When you export the Gates setup for the first time, you must include the data sources for the query condition used in the Gates setup.

For subsequent exports, ensure that the design which uses the Data Element that is specifically used in the setup is present in the Production Published package. As long as this condition is met, the package creation will be successful. If this condition is not met, then the latest design will have to be included in the package.

Gates Components in the Configuration Package

The system includes the following components of Gates in the Configuration Package (.zip file):

Gates Component	Field / Option
Log	Name
Log	Status
Gates / General tab	Name
Gates / General tab	Description
Gates / General tab	Status

Gates Component	Field / Option
Gates / Settings tab	Phase name
Gates / Settings tab / Phase Gate Configuration Note: If the option of Start Date and Planned Completion dates are from Schedule sheet, then only the dates will get copied over. The Master schedule sheet will not get copied over.)	All options

Gates Component	Field / Option
Gates / Settings tab / Gate Condition Elements	All Gate Condition Elements. The corespon...

Gates Component	Field / Option
Gates / Settings tab / Gate Conditions	All query conditions setup within the Gate

Gates Component	Field / Option
Gates / Settings tab	Advance to next Project...option

Gates Component	Field / Option
Gates / Settings tab / Additional Information block	All options including Users and Groups

Gates Component	Field / Option
Gates / Settings tab	Reevaluate conditions on every Gates Run ...

Gates Component	Field / Option
Gates / Schedule tab	All options including the users and groups

Updating Shells - Setup Node, Planning Manager

A Shell template might have many planning items in the **Development/Test** environment; however, not all of the planning items might be ready for transfer to another environment.

To access the Shell template for Planning Manager, go to the **Company Workspace** > **Admin** mode > **Templates** > "Shell template" > **Setup** > **Planning Manager**

You can select multiple items to include in your configuration package.

Conditions for Creating a Planning Manager setup Configuration Package

When you include the Planning Manager setup information in a Configuration Package for the first time, you must include the corresponding design in the Configuration Package.

For subsequent exports, you do not need to include the latest design, if the design exists in the Published Configuration Package, already.

At the time of import, the system transfers the setup information of the design object, irrespective of the Configuration status (Active/Inactive).

Oracle recommends include your design in the Configuration Package after you change the configuration of your design.

Planning Manager Components in the Configuration Package

The system includes the following components of Planning Manager in the Configuration Package (.zip file):

Component	Field / Option
Planning Manager Setup / <Item Name> / General tab	Setup Name
Planning Manager Setup / <Item Name> / General tab	Description
Planning Manager Setup / <Item Name> / General tab	Help File

Access Control for Planning Manager Setup

The configuration package includes permissions settings of Users and Groups from Shell templates, Planning Manager.

To see the permission settings for Dashboards:

1) Go to the **Access Control** module (Project/Shell > Admin mode > Access Control).
2) Click to expand **Administration Mode Access**.
3) Click to expand **Setup**.
4) Click **Planning Manager** to open the **Module Permission Settings** window.
5) Proceed with adding, modifying, or removing permissions.

Updating Shells - Setup Node, Resource Manager

Go to: **Company Workspace** > **Admin** mode > **Templates** > "Shell template" > **Setup** > **Resource Manager**

You can select and include the Resource Manager in the Configuration Package.

Conditions for Creating a Resource Manager setup Configuration Package

The setup of Resource Manager does not depend on any uDesigner designs and the configuration.

At the time of import, ensure that the Role Based Allocation value is the same between the Configuration Package and the **Production** environment, or destination server.

> **Note**: The above check is applicable only when the setup has already been done.

At the time of import, the system transfers the setup information of the design object, irrespective of the Configuration status (Active/Inactive).

Oracle recommends that you include your design in the Configuration Package after you change the configuration of your design.

Resource Manager Components in the Configuration Package

The system includes the following components of Resource Manager in the Configuration Package (.zip file):

Component	Field / Option
Resource Manager Configuration / Role Based Allocation block	Selected option
Resource Manager Configuration / Resource Sheet Defaults	Timescale Unit
Resource Manager Configuration / Resource Sheet Defaults	Date From
Resource Manager Configuration / Resource Sheet Defaults	Date To

Access Control for Planning Manager Setup

The Configuration Package includes permissions settings of Users and Groups from Shell templates, Resource Manager.

To see the permission settings for Dashboards:

1) Go to the **Access Control** module (Project/Shell > Admin mode > Access Control).
2) Click to expand **Administration Mode Access**.
3) Click to expand **Setup**.
4) Click **Resource Manager** to open the **Module Permission Settings** window.
5) Proceed with adding, modifying, or removing permissions.

Updating Shells - Setup Node, Configurable Modules (Classes)

Go to: **Company Workspace** > **Admin** mode > **Templates** > "Shell template" > **Setup** > "Configurable Manager" > "CM0 Classes"/"Class Name"

Any Configurable Manager of Code and Record type which have classes and which are setup in a Shell template can be packaged as part of Configuration Package.

You can package any Configurable Manager of Code-type and Record-type as part of Configuration Package, if the:

▸ Configurable Manager has classes
▸ Configurable Manager was set up in a Shell template

A shell template might have many CM Classes in the **Development**/**Test** environment; however not all of CM Classes might be ready for transfer to another environment.

Conditions for Creating a CM Class setup Configuration Package

When you include the setup information in the Configuration Package for the first time, you must include the corresponding design in the Configuration Package.

For subsequent exports, you do not need to include the corresponding design in the Configuration Package.

At the time of import, the system transfers the setup information of the design object, irrespective of the Configuration status (Active/Inactive).

Oracle recommends that you include your design object for Configuration Package after you change the configuration of your design.

CM Class Components in the Configuration Package

The system includes the following components of CM Class in the Configuration Package (.zip file):

Component	Field / Option
CM Class Setup / General	Setup Name
CM Class Setup / General	Description
CM Class Setup / General	Help File
CM Class Setup / General	Auto Creator
CM Class Setup / General	Send Error Notification to

Access Control for CM Class Setup

The Configuration Package includes permissions settings of Users and Groups from Shell templates, CM Class.

To see the permission settings for Dashboards:

1) Go to the **Access Control** module (Project/Shell > Admin mode > Access Control).
2) Click to expand **Administration Mode Access**.

3) Click to expand **Setup**.

4) Click **Parts** to open the **Module Permission Settings** window.

5) Proceed with adding, modifying, or removing permissions.

Updating Shells - Configurable Modules Node (Sheets)

Go to: **Company Workspace** > **Admin** mode > **Templates** > "Shell template" > **Setup** > "Configurable Manager" > "CM0 Sheet"/"Sheets Name"

The Generic Cost Sheet templates enables you to have generic cost-codes-based cost sheet, and setup, in Shell templates of Generic Cost Code type (Generic Shells).

You can include the CM0 setup that exists in a Shell template in the Shell Template Configuration Package.

Conditions for Creating a CM Class setup Configuration Package

When you include the setup information in the Configuration Package for the first time, you must include the corresponding design in the Configuration Package.

For subsequent exports, you do not need to include the corresponding design in the Configuration Package.

At the time of import, the system transfers the setup information of the design object, irrespective of the Configuration status (Active/Inactive).

Oracle recommends that you include your design object for Configuration Package after you change the configuration of your design.

CM Class Components in the Configuration Package

The system includes the following components of CM Class in the Configuration Package (.zip file):

Component	Field / Option
CM Class Setup / General	Setup Name
CM Class Setup / General	Description
CM Class Setup / General	Help File
CM Class Setup / General	Auto Creator
CM Class Setup / General	Send Error Notification to

Updating Shells - Rules Node

Rules can be updated in CBS code-based shells.

The Update Shells process runs in the background. Depending on the number of records and shells you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

Notes:

About updating rules:

- Both active and inactive rules can be pushed.
- Rules are identified by the combination of rule name and the source.
- If the rule does not exist, it will be added.
- If a rule already exists with the same name and source, that rule will be updated. This includes the status: for example, if the rule being pushed is active, and the rule in the shell is inactive, the system will update the existing rule and activate it.
- It is possible to have more than one rule with the same name and source in a project/shell or template. If two or more rules already exist with the same name and source as the rule being pushed, the update will not occur and will give an error.
- When the update process begins, the system will first attempt to validate each rule (equivalent to clicking the Validate button). This will occur whether the rule is active or inactive in the template. If the rule is validated successfully, the system will proceed with the update.
- If the rule fails validation, the rule will not be pushed. The attempt will be captured in the History.

To update rules using Update Shells

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates > Shell** in the left Navigator.
3) Open the shell template to update.
4) In the Shell Template, navigate to   **Rules**.
5) Select one or more rules from the log.
6) Click **Update Shells** and choose one of the following:
   ▶ **Shells**: You can use this option to select one or more shells to update. When the update window opens, it lists all shells in the project. You can use Find to isolate the shells you want to update. The find window contains data elements from the Find form that was designed in uDesigner. When you have isolated the shells to update, click the Update button and select either Selected Shell(s) or All Filtered Shells.
   ▶ **All Shells**: You can use this option to update all shells of that shell type.
   ▶ **History**: You can view the update history from past updates or cancel a request before the update begins.

   An Alert window opens letting you know that you are about to push changes to the selected shells; there is no undo for the update.
7) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Conditions for Creating a Rules setup Configuration Package

When you package the Rules Setup information for the first time, you must include the following in the package:

▶ Design of the Business Processes used in the Rule definition.
▶ Corresponding designs.

The design the design for Configuration Package.

For subsequent exports, ensure that the design which uses the Data Element that is specifically used in the setup is present in the Production Published package. As long as this condition is met, the package creation will be successful. If this condition is not met, then the latest design will have to be included in the package.

Importing of Rules based on Rule Status

> **Note**: For both Active and Inactive, the system does not check for the existence of the specific CBS codes in the Cost Sheet (Applicable where the Rule definition uses CBS codes).

Rules with Active Status

At the time of Import, ensure that:

▶ The Cost Sheet or Funding Sheet, used in Rules definition, exists either in the Package or in the destination server.
▶ The data source is present, as a column, in the Funding sheet.
▶ The cost sheet columns or the Funding Sheet columns used in Rule definition required for Rule Activation are present either in the package or in the destination server.

When CBS codes are used, ensure that the Cost Sheet used for Rules definition exists either in the Package or in the destination server.

Rules with Inactive Status

The system does not perform any checks at the time of import.

Rules Components in the Configuration Package

The system includes the following components of Rules in the Configuration Package (.zip file):

Component	Field / Option
Rule Properties / General	Name
Rule Properties / General	Description
Rule Properties / General	Control Source
Rule Properties / General	Rule Level

Component	Field / Option
Rule Properties / General	Status
Rule Properties / General	Users / Groups who can override field. Users and groups will be part of the Configuration Package. (Applicable only for Rule level = Per selected CBS Codes and Per selected summary CBS codes)
Rule Properties / General	Notify Users / Groups when overridden field. Users and groups will be part of the Configuration Package. (Applicable only for Rule level = Per selected CBS Codes and Per selected summary CBS codes)
Rule Properties / Rule	Limit expression formula: Formula string. The formula string contains BPs.
Rule Properties / Rule	Data Expression: Might be a formula using BP data sources.
Rule Properties / Rule	Message when condition not met.
Rule Properties / CBS Codes	CBS Codes (Applicable only for Rule level = Per selected CBS Codes and Per selected summary CBS codes)

Updating Shells - Cost Manager Node, Cash Flow

Go to: Company Workspace > Admin mode > Templates > Shells > "Shell template" > Cost Manager > Cash Flow.

The Cash Flow module enables you to generate and compare Baseline, Actuals (or "spends"), Portfolio, Forecast, and Custom curves in a project or CBS code-based Shell.

You can use a Cash Flow Curve template to create cash flow curves in CBS-code based Shells.

All Cash Flows defined in a shell template will be included in the Configuration Package.

You can select and include multiple items in the Configuration Package.

Conditions for Creating a Cash Flow setup Configuration Package

Detail	Curve type	Component	Check
Project/ Level Summary CBS CBS Commitment	Any	Cost = Distribute amount from cost sheet column ensure that the checks relevant to Cost Sheet are performed. If above conditions are not met, you will see an error.	Cost Sheet in the shell template.
Project/ Level Summary CBS CBS Commitment	Any	Schedule = Use dates from Schedule Sheet	Schedule Sheet in the shell template.
Project/ Level Summary CBS CBS Commitment	Any	Filter set to specific CBS Codes	When the Filter is set to specific CBS codes, ensure that the Cost Sheet in the Shell template has also been included.

Detail	Curve type	Component	Check
Commitment	Any	Commitment Business Processes both Commitment and Change Orders	Commit Business Process selected must be included in the Configuration Package. If this condition is not met, throw an error.

Cash Flow Components in the Configuration Package

The system includes the following components of Cash Flow in the Configuration Package (.zip file):

▶ Cash Flow content – Detail Level: Project/Shell
▶ Cash Flow content – Detail Level: Summary CBS
▶ Cash Flow content – Detail Level: CBS
▶ Cash Flow content – Detail Level: Commitment

> **Note**: For "Additional checks required" see to Conditions for Creating a Cash Flow setup Configuration Package, in this topic.

Cash Flow content – Detail Level: Project/Shell

Component	Field / Option
Cash Flow Properties / General	All fields
Cash Flow Properties / Curves	All Curves
Cash Flow Properties / Curves / Curve type - Baseline	All fields including the selected options for Distribution, Cost and Schedule 1 - If Distribution = Auto by default profile, the Distribution Profile will be included in the Configuration Package. 2 - If Cost = Distribute amount from cost sheet column, all the cost sheet columns available for selection will be included in the Configuration Package. In addition to this, the value selected for this field will also be included in the Configuration Package. Additional checks required. Note that Cost Sheet must always be included in the Package. 3 - If Schedule = Use dates from Schedule Sheet, the schedule sheet selected in the field should be included in the Package. Additional checks required. DEs selected in the From Date and To Date fields will also be included in the Configuration Package in addition to the possible values of the Schedule sheet DEs.

Component	Field / Option
Cash Flow Properties / Curves / Curve type - Forecast / General	All fields including the selected options for Distribution, Cost and Schedule. Behavior to be the same as the one outlined in Cash Flow / Curves / Baseline
Cash Flow Properties / Curves / Curve type - Forecast / Options	All options selected for the Forecast Curve will be included in the Configuration Package
Cash Flow Properties / Curves / Curve type – Portfolio Budget	All fields selected for the Forecast Curve will be included in the Configuration Package 1 - Additional checks might be needed for Portfolio Manager related Configuration. 2 - Currency is a required field for Portfolio Budget curve. The default value is set to the Project Currency. However this currency might differ from the Project Currency. It could be any of the Active and Future currencies listed in the Exchange Rate table. Therefore, if the currency differs from the Project Currency then in addition to the Currency value specified in this field, the currency and its exchange rate information will also be included in the Configuration Package. Rules for creating Currencies and Exchange Rates - Currency will get created if it does not already exist - Currency attributes such as Code, Name, Symbol etc will not be updated by means of Package import. - Currency tab content will get updated upon every import. If exchange rates defined for currencies in the source shell template do not exist in the destination environment, then a new exchange rate record will get created for that currency and that exchange rate will be set to Active. - The Effective date will be set to the Package Import Date. - The Peg rate will be brought over from the source environment. - The float rate will be brought over if the rate does not exist in the destination environment.
Cash Flow Properties / Curves / Curve type - Actuals	All fields selected for the Forecast Curve will be included in the Configuration Package. Additional checks required.
Cash Flow Properties / Filter	Selected Filter options If Filter = Select Summary CBS OR Select CBS codes, then the selected CBS codes will be included as part of Filter options.
Cash Flow Properties / Options	Decimal Place Option will be included in the Configuration Package.

Component	Field / Option
Cash Flow Properties / Schedule	All options set in the Schedule tab will be included in the Configuration Package.
Cash Flow Properties / Summary	Not applicable in templates
Cash Flow / Permissions	Users and Groups
Cash Flow / Filters	Filters defined for the curves will also be included in the Package

Cash Flow content – Detail Level: Summary CBS

Component	Field / Option
Cash Flow Properties / General	All fields
Cash Flow Properties / Curves	All Curves
Cash Flow Properties / Curves / Curve type - Baseline	All fields including the selected options for Distribution, Cost and Schedule. 1- If Distribution = Auto by default profile per summary CBS, the Distribution Profile for the corresponding Summary CBS code will be included in the Configuration Package. Additional checks required. 2- If Cost = Distribute amount from cost sheet column, all the cost sheet columns available for selection will be included in the Configuration Package. In addition to this, the value selected for this field will also be included in the Configuration Package. Additional checks required. Note that Cost Sheet must always be included in the Package. 3- If Schedule = Use dates from Schedule Sheet, the schedule sheet selected in the field should be included in the Package. Additional checks required. DEs selected in the From Date and To Date fields will also be included in the Configuration Package in addition to the possible values of the Schedule sheet DEs.
Cash Flow Properties / Curves / Curve type - Forecast / General	All fields including the selected options for Distribution, Cost and Schedule. Behavior to be the same as the one outlined in Cash Flow / Curves / Baseline

Component	Field / Option
Cash Flow Properties / Curves / Curve type - Forecast / Options	All options selected for the Forecast Curve will be included in the Configuration Package
Cash Flow Properties / Curves / Curve type – Portfolio Budget	All fields selected for the Portfolio Budget Curve will be included in the Configuration Package. 1- Additional checks might be needed for Portfolio Manager related Configuration. 2- Currency is a required field for Portfolio Budget curve. The default value is set to the Project Currency. However this currency might differ from the Project Currency. It could be any of the Active and Future currencies listed in the Exchange Rate table. Therefore, if the currency differs from the Project Currency then in addition to the Currency value specified in this field, the currency and its exchange rate information will also be included in the Configuration Package. Rules for creating Currencies and Exchange Rates - Currency will get created if it does not already exist - Currency attributes such as Code, Name, Symbol etc will not be updated by means of Package import. - Currency tab content will get updated upon every import. If exchange rates defined for currencies in the source shell template do not exist in the destination environment, then a new exchange rate record will get created for that currency and that exchange rate will be set to Active. - The Effective date will be set to the Package Import Date. - The Peg rate will be brought over from the source environment. - The float rate will be brought over if the rate does not exist in the destination environment.
Cash Flow Properties / Curves / Curve type - Actuals	All fields selected for the Forecast Curve will be included in the Configuration Package. Additional checks required.
Cash Flow Properties / Filter	Selected Filter options If Filter = Select Summary CBS, then the selected Summary CBS codes will be included as part of Filter options. Additional checks required.
Cash Flow Properties / Options	Decimal Place Option will be included in the Configuration Package.

Component	Field / Option
Cash Flow Properties / Schedule	All options set in the Schedule tab will be included in the Configuration Package.
Cash Flow Properties / Summary	Not applicable in templates
Cash Flow / Permissions	Users and Groups
Cash Flow / Filters	Filters defined for the curves will also be included in the Package

Cash Flow content – Detail Level: CBS

Component	Field / Option
Cash Flow Properties / General	All fields
Cash Flow Properties / Curves	All Curves

Component	Field / Option
Cash Flow Properties / Curves / Curve type - Baseline	All fields including the selected options for Distribution, Cost and Schedule. Distribution Case 1: Auto by default profile per CBS, the Distribution Profile for the corresponding CBS code will be included in the Configuration Package. Additional checks required. Note: Cost Sheet must always be included in the Package. Case 2: Use data from Schedule Sheet, the schedule sheet will be included in the Configuration Package. Additional checks required. Case 3: Use data from P6 Source, the P6 source selected in the curve will also be included in the Configuration Package. If Cost = Distribute amount from cost sheet column, all the cost sheet columns available for selection will be included in the Configuration Package. In addition to this, the value selected for this field will also be included in the Configuration Package. Additional checks required. Schedule Case 1: Use dates from Schedule Sheet, the schedule sheet selected in the field should be included in the Package. Additional checks required. DEs selected in the From Date and To Date fields will also be included in the Configuration Package in addition to the possible values of the Schedule sheet DEs. Case 2: Use dates from P6 Source, the P6 source selected in the curve will also be included in the Configuration Package.
Cash Flow Properties / Curves / Curve type - Forecast / General	All fields including the selected options for Distribution, Cost and Schedule. Behavior to be the same as the one outlined in Cash Flow / Curves / Baseline
Cash Flow Properties / Curves / Curve type – Portfolio Budget	All fields selected for the Portfolio Budget Curve will be included in the Configuration Package
Cash Flow Properties / Curves / Curve type - Forecast / Options	All options selected for the Forecast Curve will be included in the Configuration Package

Component	Field / Option
Cash Flow Properties / Curves / Curve type – Portfolio Budget	All fields selected for the Portfolio Budget Curve will be included in the Configuration Package 1- Additional checks might be needed for Portfolio Manager related Configuration. 2- Currency is a required field for Portfolio Budget curve. The default value is set to the Project Currency. However this currency might differ from the Project Currency. It could be any of the Active and Future currencies listed in the Exchange Rate table. Therefore, if the currency differs from the Project Currency then in addition to the Currency value specified in this field, the currency and its exchange rate information will also be included in the Configuration Package. Rules for creating Currencies and Exchange Rates - Currency will get created if it does not already exist - Currency attributes such as Code, Name, Symbol etc will not be updated by means of Package import. - Currency tab content will get updated upon every import. If exchange rates defined for currencies in the source shell template do not exist in the destination environment, then a new exchange rate record will get created for that currency and that exchange rate will be set to Active. - The Effective date will be set to the Package Import Date. - The Peg rate will be brought over from the source environment. - The float rate will be brought over if the rate does not exist in the destination environment.
Cash Flow Properties / Curves / Curve type - Actuals	All fields selected for the Actuals Curve will be included in the Configuration Package. Additional checks required.
Cash Flow Properties / Filter	Selected Filter options If Filter = Select CBS, then the selected CBS codes will be included as part of Filter options. Additional checks required.
Cash Flow Properties / Options	Decimal Place Option will be included in the Configuration Package.
Cash Flow Properties / Schedule	All options set in the Schedule tab will be included in the Configuration Package.
Cash Flow Properties / Summary	Not applicable in templates?
Cash Flow / Permissions	Users and Groups

Component	Field / Option
Cash Flow / Filters	Filters defined for the curves will also be included in the Package

Cash Flow content – Detail Level: Commitment

Component	Field / Option
Cash Flow Properties / General	All fields. Additional checks required for Business Processes.
Cash Flow Properties / Curves	All Curves
Cash Flow Properties / Curves / Curve type - Baseline	All fields including the selected options for Cash flow granularity, Distribution and Commit BPs. Additional checks required for Business Processes.
Cash Flow Properties / Curves / Curve type - Forecast / General	All fields including the selected options for Cash flow granularity, Distribution and Commit BPs.
	If Distribution Method has a Profile, then the Profile will also be included in the Configuration Package.
	Behavior to be the same as the one outlined in Cash Flow / Curves / Baseline
Cash Flow Properties / Curves / Curve type - Forecast / Options	All options selected for the Forecast Curve will be included in the Configuration Package

Component	Field / Option
Cash Flow Properties / Curves / Curve type – Portfolio Budget	All fields selected for the Portfolio Budget Curve will be included in the Configuration Package

1- Additional checks might be needed for Portfolio Manager related Configuration.

2- Currency is a required field for Portfolio Budget curve. The default value is set to the Project Currency. However this currency might differ from the Project Currency. It could be any of the Active and Future currencies listed in the Exchange Rate table. Therefore, if the currency differs from the Project Currency then in addition to the Currency value specified in this field, the currency and its exchange rate information will also be included in the Configuration Package.

Rules for creating Currencies and Exchange Rates

- Currency will get created if it does not already exist

- Currency attributes such as Code, Name, Symbol etc will not be updated by means of Package import.

- Currency tab content will get updated upon every import.

If exchange rates defined for currencies in the source shell template do not exist in the destination environment, then a new exchange rate record will get created for that currency and that exchange rate will be set to Active.

- The Effective date will be set to the Package Import Date.

- The Peg rate will be brought over from the source environment.

- The float rate will be brought over if the rate does not exist in the destination environment. |
| Cash Flow Properties / Curves / Curve type - Actuals | All fields selected for the Actuals Curve will be included in the Configuration Package. Additional checks required. |
| Cash Flow Properties / Filter | Selected Filter options

If Filter = Select CBS, then the selected CBS codes will be included as part of Filter options.   Additional checks required. |
Cash Flow Properties / Options	Decimal Place Option will be included in the Configuration Package.
Cash Flow Properties / Schedule	All options set in the Schedule tab will be included in the Configuration Package.
Cash Flow Properties / Summary	Not applicable in templates.
Cash Flow / Permissions	Users and Groups

Component	Field / Option
Cash Flow / Filters	Filters defined for the curves will also be included in the Package

Updating Shells - Cost Manager Node, Cost Sheet

Go to: Company Workspace > Admin mode > Templates > Shells > "Shell template" > Cost Manager > Cost Sheet

Conditions for Creating a Cost Sheet setup Configuration Package

When the Sheet Setup information is packaged for the first time, the Cost Attribute design must also be included in the configuration package. If this check fails, then the package creation will result in an error. For subsequent exports, the deployed version of the design must match the Published version of the design. This is mainly being done since the package includes the Cost Sheet (CBS) rows and these depend on the deployed design.

This check will not be performed for customers who do not use Cost attribute forms. If the destination server has the cost attribute form, but the Configuration Package does not include the Cost Attribute design, then the import will fail and an error will be displayed.

When the Sheet Setup information is packaged for the first time, the design of any data source used in the column definition of the sheet must be part of the package. If this check fails then the package creation will result in an error. For subsequent exports, check will be made to ensure that the design which uses the Data Element (ex: Status) that is specifically used in the setup is present in the Published package. As long as this condition is met, the package creation will be successful. If not, the latest design will have to be included in the package.

Cost Sheet Components in the Configuration Package

The system includes the following components of Cost Sheet in the Configuration Package (.zip file):

Component	Field / Option
Cost Sheet / Properties / General	Title
Cost Sheet / Properties / General	Description

Cost Sheet / Properties / General	Default View
Cost Sheet / Properties / Structure	Structure option
Cost Sheet / Properties / Structure	All segments
Cost Sheet / Properties / Options	Labels
Cost Sheet / Properties / Options	Forecast Details option
Cost Sheet / Properties / Options	Forecast Inclusion
Cost Sheet / Properties / Options	Forecast Type
Cost Sheet / Properties / Options	P6 Integration: Enable P6 Sources. When this option is selected, and if the Cost sheet has used any of the P6 Data Sources, then Configuration Package will also include the P6 Data sources defined in Standards & Libraries. If the P6 data sources do not exist in the destination then they will get created and will be in Published state. The system currently allows up to 12 P6 data sources to be defined in the server. So at the time of Import, checks will have to be made to ensure that the total number of P6 data sources does not exceed 12.

Cost Sheet / Columns / Column Properties	All options
	Since the data source of a cost sheet column maybe a Cost BP, additional checked are to be performed at the time of Configuration Package creation to ensure that the BP is included in the Configuration Package as well.
	If the entry method uses Work Sheet then the Worksheet must be included in the Configuration Package.
	The package will also include the hidden columns.
Cost Sheet / Columns / Restrictions	Users and Groups setup for Restrictions.
Cost Sheet / Budget Distribution	The Budget Distribution option will be disabled at the Shell template level. Hence user cannot setup any distribution.
Cost Sheet / Fund Assignment order	The Fund assignment option will be disabled a the Shell template level.
Cost Sheet /CBS Codes	All rows which include CBS as well as Summary CBS codes along with the Breadown.
	Note: If the Cost Codes do not exist in the destination environment i.e if user has not packaged the Cost Codes by selecting the options of Data Structure > Cost Codes at the time of Package creation, then the cost codes used in the Cost sheet will be brought over. However the value/label pair defined in the Cost Code definitions will not be brought over.

Updating Shells - Cost Manager Node, Funding - Funding Sheet

Go to: Company Workspace > Admin mode > Templates > Shells > "Shell template" > Cost Manager > Funding > Funding Sheet

A CBS Shell template can have a Funding Manager which helps keep track of Funds. Shell Funding sheet can be used to specify the appropriation and assignment of funds from each funding source.

The Funding Sheet setup in shell template is included in the Configuration Package.

Conditions for Creating a Funding Sheet setup Configuration Package

When the Sheet Setup information is packaged for the first time, the Fund Attribute design must also be included in the package, which means that the design must be included in the Configuration Package. If this check fails, then the package creation will result in an error. The deployed version and the Published version of the design must match.

> **Note**: Although you are not packaging the Funding Rows, the Company Fund sheet depends on the deployed version of the design. Fund codes in the Company Fund sheet is used in order to create the fund codes in the shell templates.

This check will not be performed for customers who do not use Fund attribute forms. If the destination server has the Fund attribute form, but the Configuration Package does not include the Fund Attribute design, then the import will fail and an error will be displayed.

When the Sheet Setup information is packaged for the first time, the design of any data source used in the column definition of the sheet must be part of the package. This means that these designs must be included in the Configuration Package. If this check fails then the package creation will result in an error. For subsequent exports, check will be made to ensure that the design which uses the Data Element (ex: Status) that is specifically used in the setup is present in the Published package. As long as this condition is met, the package creation will be successful. If not, the latest design will have to be included in the package.

Funding Sheet Components in the Configuration Package

The system includes the following components of Funding Sheet in the Configuration Package (.zip file):

Component	Field / Option
Funding Sheet Properties / General	Title

Component	Field / Option
Funding Sheet Properties / General	Description
Funding Sheet Properties / General	Display Mode

Component	Field / Option
Funding Sheet Properties / Assignment / Project block	Process Contributing Assignable Funds

Component	Field / Option
Funding Sheet Properties / Assignment / CBS block	CBS Fund Source
Funding Sheet Properties/ Assignment / Assignment Levels block	Assignment Rules

Component	Field / Option
Funding Sheet / Rows	The Fund rows are the ones that existin t

Component	Field / Option
Funding Sheet / Columns	All columns

Component	Field / Option
Funding Sheet / Columns	All column properties. Since the data sourc...

Component	Field / Option
Funding Sheet / Fund assignment	Fund assignment order will not be carried o

Component	Field / Option
Funding Sheet / Filters	All filters set in Funding sheet.

Updating Shells - Cost Manager Node, Funding - Commitment Funding Sheet

Go to: Company Workspace > Admin mode > Templates > Shells > "Shell template" > Cost Manager > Funding > Commitment Funding Sheet

A commitment funding sheet is created for each base commit that has been designed for Commitment Funding Sheet.

Funds can be allocated from the Shell template Funding sheet to the Commitment Funding Sheet. This sheet works in conjunction with the Schedule of Values (SOV) sheet to track base commit and change commit line items and balances. Commitment Funding Sheet templates are created and set up in the Templates node, and are used to create the commitment funding sheet structure in a project or shell (or in a project or shell template).

This structure is then used when sheets are created for individual base commit records. A Commitment Funding Sheet in a shell template will be included in the Configuration Package.

The Structure option changes from Create Structure to Update Structure after a selection of the Commitment Funding sheet is made.

If the Structure has not yet been created then an error message will be seen.

This same behavior will be seen in the following logs:

- ▸ General Spends SOV
- ▸ Payment Applications SOV
- ▸ Summary Payment Applications SOV
- ▸ Document Manager (Structure creation is not applicable here)

Conditions for Creating a Commitment Funding setup Configuration Package

When the Sheet Setup information is packaged for the first time, the design of any data source used in the column definition of the sheet must be part of the package.

This means that these designs must be included in the Configuration Package. If this check fails then the package creation will result in an error.

For subsequent exports, check will be made to ensure that the design which uses the Data Element (ex: Status) that is specifically used in the setup is present in the Published package.

As long as this condition is met, the package creation will be successful. If not, the latest design will have to be included in the package.

Other dependency checks performed at the time of Import:

When the Sheet Setup information is imported for the first time, the Funding Sheet defined in the shell template must also be included in the package. If this check fails, then the package import will result in an error.

Commitment Funding Components in the Configuration Package

The system includes the following components of Commitment Funding in the Configuration Package (.zip file):

Component	Field / Option
Commitment Funding Sheet Properties / General	All fields
Commitment Funding Sheet Properties / Assignment	All selections

Updating Shells - Cost Manager Node, Schedule of Values - General Spends

Go to: Company Workspace > Admin mode > Templates > Shells > "Shell template" > Cost Manager > Schedule of Values > General Spends

The General Spends SOV structure setup,   existing in a shell template, will be included in the Configuration Package. The structure in the shell template can be created from the SOV templates that exist at the company level.

The Structure option changes from Create Structure to Update Structure after a selection of the SOV Structure is made.

Conditions for Creating a General Spends setup Configuration Package

When the SOV Setup is packaged for the first time, the design of any data source used in the column definition of the sheet must be part of the package. This means that these designs must be included in the Configuration Package. If this check fails then the package creation will result in an error. For subsequent exports, check will be made to ensure that the design which uses the Data Element (ex: Status) that is specifically used in the setup is present in the Published package. As long as this condition is met, the package creation will be successful. If not, the latest design will have to be included in the package.

General Spends Components in the Configuration Package

The system includes the following components of General Spends in the Configuration Package (.zip file):

Component	Field / Option
SOV Structure Properties/ General	All fields
SOV Structure Properties/ Options	All fields
SOV Structure / Columns	All columns including the data source and formula definitions

Updating Shells - Cost Manager Node, Schedule of Values - Payment Applications

Go to: Company Workspace > Admin mode > Templates > Shells > "Shell template" > Cost Manager > Schedule of Values > Payment Applications

Any Payment Application SOV structure setup existing in a shell template will be included in the Configuration Package.

The Structure option changes from Create Structure to Update Structure after a selection of the SOV Structure is made.

Conditions for Creating a Payment Applications setup Configuration Package

When the SOV Setup is packaged for the first time, the design of any data source used in the column definition of the sheet must be part of the package.

This means that these designs must be included in the Configuration Package. If this check fails then the package creation will result in an error.

For subsequent exports, check will be made to ensure that the design which uses the Data Element (ex: Status) that is specifically used in the setup is present in the Published package. As long as this condition is met, the package creation will be successful. If not, the latest design will have to be included in the package.

Other dependency checks performed at the time of Import:

When the Pay App SOV Setup done in a shell Template is imported for the first time, Cost sheet defined and setup in the shell template must also be included in the package. If this check fails then the package import will result in an error. For subsequent imports, the Cost sheet setup need not be part of the Import Package.

When the Pay App SOV Setup is packaged for the first time, the BP setup of the Payment Application BP must also be included in the package. If this check fails then the package import will result in an error. For subsequent imports, the Payment Application BP setup need not be part of the Import Package.

Payment Applications Components in the Configuration Package

The system includes the following components of Payment Applications in the Configuration Package (.zip file):

Component	Field / Option
Payment Application Properties / General	All fields
Payment Application Properties / Options	All fields
Payment Application Structure / Columns	All columns

Updating Shells - Cost Manager Node, Schedule of Values - Summary Payment Applications

Go to: Company Workspace > Admin mode > Templates > Shells > "Shell template" > Cost Manager > Schedule of Values > Summary Payment Applications

Any Summary Payment Application SOV structure setup existing in a shell template will be included in the Configuration Package.

The Structure option changes from Create Structure to Update Structure after a selection of the SOV Structure is made.

The content is same as the one mentioned in the "Payment Application" section.

Conditions for Creating a Summary Payment Applications setup Configuration Package

When the SOV Setup is packaged for the first time, the design of any data source used in the column definition of the sheet must be part of the package.

This means that these designs must be included in the Configuration Package. If this check fails then the package creation will result in an error.

For subsequent exports, check will be made to ensure that the design which uses the Data Element (ex: Status) that is specifically used in the setup is present in the Published package. As long as this condition is met, the package creation will be successful. If not, the latest design will have to be included in the package.

Other dependency checks performed at the time of Import:

When the Pay App SOV Setup done in a shell template is imported for the first time, Cost sheet defined and setup in the shell template must also be included in the package. If this check fails then the package import will result in an error. For subsequent imports, the Cost sheet setup need not be part of the Import Package.

When the Pay App SOV Setup is packaged for the first time, the BP setup of the Payment Application BP must also be included in the package. If this check fails then the package import will result in an error. For subsequent imports, the Payment Application BP setup need not be part of the Import Package.

Updating Shells - Cost Manager Node, Templates - Commitment Funding Sheet

Go to: **Company Workspace** > **Admin** mode > **Templates** > **Shells** > "Shell template" > **Cost Manager** > **Templates** > **Commitment Funding Sheet**

Commitment summaries contain data for all the Commit Cost BPs, and can be setup in a Shell template. Any Commitment Summaries setup included in the Configuration Package will be included as part of the Shell template Configuration Package.

Conditions for Creating a Commitment Summaries setup Configuration Package

When the Commitment Summaries setup is packaged for the first time, all the BP designs must also be included in the package, which means that the designs must be included in the Configuration Package. If this check fails, then the package creation will result in an error. For subsequent exports, check will be made to ensure that the design which uses the Data Element that is specifically used in the setup is present in the Published package. As long as this condition is met, the package creation will be successful. If not, the latest design will have to be included in the package.

Commitment Summaries Components in the Configuration Package

The system includes the following components of Commitment Summaries in the Configuration Package (.zip file):

Component	Field/Option
Commitment Summary	All columns
Commitment Summary / Columns / Column Properties	All Properties

Updating Shells - Document Manager Node

The Document Manager (DM), within a Shell template, contains the entire folder structure that a particular shell uses to manage all the relevant documents.

You can use the Document Manager template to update the structure and permissions, or just permissions across all shells or to selected shells of the same type. You can apply changes to a single or the entire folder hierarchy in the destination shell. Update rules apply to each sub-option – for example, in the Structure & Permissions option, if a folder does not exist, it will be added

To push DM template changes and update shells:

1) Navigate to **Company Workspace > Admin mode > Templates > Shells > "Shell template" > Document Manager > Documents.**
2) To update the structure and permission:
   a. From the **Update Shells** drop-down menu, select **Structure & Permissions**.
   b. To update all shells, select **All Shells**. To update selected shells, selects **Shells**. From the Shell picker, select the shells and click **Update Shell(s).**
3) To update the permissions:
   a. From the **Update Shells** drop-down menu, select **Permissions**.
   b. To update all shells, select **All Shells**. To update selected shells, selects **Shells**. From the Shell picker, select the shells and click **Update Shell(s).**

The tagged Document Manager with folders setup in a tagged Shell template will be included in the Configuration Package.

Conditions for Creating a Document Manager setup Configuration Package

When the Setup information is packaged for the first time, if the folder properties are based on a DM attribute form, then the DM Attribute design must also be included in the package.

This means that the design must be included in the Configuration Package. If this check fails, then the package creation will result in an error.

For subsequent exports, check will be made to ensure that the design which uses the Data Element that is specifically used in the setup is present in the Published package. As long as this condition is met, the package creation will be successful. If not, the latest design will have to be included in the package. This check will not be performed for customers who do not use DM attribute form.

Document Manager Components in the Configuration Package

The system includes the following components of Document Manager in the Configuration Package (.zip file):

Component	Field / Option
Document Manager	All Folders
Document Manager / Folder	All Permissions which includes users and groups
Document Manager / Folder	All Folder Properties
DM attributes	DM form attributes will get copied over.

Updating Shells - Space Manager Node, Levels Sheet

Go to: Company Workspace > Admin mode > Templates > Shells > "Shell template" > Space Manager > Levels Sheet

The Levels Sheet, in Space Manager, provides a sheet view of all the floors and associated spaces for a given Project/Shell. Tagged level sheet in a tagged Shell template will be included in the Configuration Package.

Conditions for Creating a Level Sheet setup Configuration Package

When the Setup information is packaged for the first time, the level design must also be included in the package.

This means that the design must be included in the configuration package. If this check fails, then the package creation will result in an error.

For subsequent exports, check will be made to ensure that the Data Element used in the setup is present in the Published package. As long as this condition is met, the package creation will be successful. If not, the latest design will have to be included in the package.

For Levels Sheet, no checks for inclusion of Configuration setup will be done either at the time of packaging the setup for Configuration Package or at the time of importing the setup in a destination environment. At the time of import, the setup information is brought over regardless of the Configuration status (Active/Inactive) of the design object. However as a best Practice, it is recommended that any time the configuration of design object has changed it must be included in the Configuration Package.

Level Sheet Components in the Configuration Package

The system includes the following components of Level Sheet in the Configuration Package (.zip file):

Component	Field / Option
Levels Sheet Properties	Name
Levels Sheet Properties	Description
Levels Sheet / Columns	All columns. Columns in Levels sheet are the Data Elements from the Levels. Check has to be made to ensure that the latest deployed version of Level design has also been included in the Configuration Package.
Levels Sheet / Columns	Group columns names

Updating Shells - Space Manager Node, Stack Plans

Go to: Company Workspace > Admin mode > Templates > Shells > "Shell template" > Space Manager > Stack Plans

The Stack Plan, which is a two-dimensional graphical display of facility or building data derived from Space records for levels, can be setup in a Shell template. The Stack Plans in a shell template will be included in the Configuration Package.

You can select multiple items to include in the Configuration Package.

Conditions for Creating a Stack Plans setup Configuration Package

When the Stack plan Setup information is packaged for the first time, the level and Space designs used in the setup must also be included in the package. This means that the designs must included in the Configuration Package. If this check fails, then the package creation will result in an error. For subsequent exports, check will be made to ensure that the design which uses the Data Element that is specifically used in the setup is present in the Published package. As long as this condition is met, the package creation will be successful. If not, the latest design will have to be included in the package.

Configuration Information:

For Stack Plans, no checks for inclusion of Configuration setup will be done either at the time of packaging the setup for Configuration Package or at the time of importing the setup in a destination environment. At the time of import, the setup information is brought over regardless of the Configuration status (Active/Inactive) of the design object. However as a best Practice, it is recommended that any time the configuration of design object has changed it must be included in the Configuration Package.

Stack Plans Components in the Configuration Package

The system includes the following components of Stack Plans in the Configuration Package (.zip file):

Component	Field / Option
Stack Plan Properties / General	Name
Stack Plan Properties / General	Description
Stack Plan Properties / General	Include levels option
Stack Plan Properties / Options	Space Type. Space type is a required field in Stack Plans. Tthe latest deployed version of the associated Space type must also be part of the Configuration Package.

Updating Shells - Schedule Manager Node, Schedule Sheets

Go to: Company Workspace > Admin mode > Templates > Shells > "Shell template" > Schedule Manager > Schedule Sheets

The selected Schedule Sheets in Schedule Manager, in the selected Shell template, will be included in the Configuration Package.

The Schedule Sheets can be created by using templates at the company-level.

Conditions for Creating a Schedule Sheets setup Configuration Package

When the Setup information is packaged for the first time, then the Schedule Attribute and the Resource Assignment attribute designs must also be included in the package.

This means that the design must be included in the Configuration Package. If this check fails, then the package creation will result in an error.

For subsequent exports, check will be made to ensure that the design which uses the Data Element that is specifically used in the setup is present in the Published package. As long as this condition is met, the package creation will be successful. If not, the latest design will have to be included in the package.

Schedule Sheets Components in the Configuration Package

The system includes the following components of Schedule Sheets in the Configuration Package (.zip file):

Component	Field / Option
Schedule Sheet Properties/ General	All fields. Custom calendars should also be included in the Package.
Schedule Sheet Properties / Gantt Chart	All fields
Schedule Sheet Properties / Tracking Gantt	All fields
Schedule Sheet Properties / Options	All fields
Schedule Sheet Properties / Schedule	All fields
Schedule Sheet / Activities	No activity related information will be packaged, meaning no rows will be included.
<Schedule Sheet Name> / Scope Management Setup (Applicable for shell templates)	No Scope setup will be brought over since the scope is tied to an activity.
Schedule Sheet / Data Mapping	All fields. Dependency checks for inclusion of Schedule Attribute and Resource Assignment forms will be performed to see if the relevant designs are part of the package.
Schedule Sheet / Budget and Progress Setup	All applicable options

Component	Field / Option
Schedule Sheet / Column	All columns defined in the sheet. If column definition is based on Cost Sheet definition, then the Cost Sheet must also be included in the configuration package. If cost sheet column does not exist, then an error will be displayed.

Updating Shells - Access Control Node

You can edit access control parameters and update across shells.

The Update Shell process runs in the background. Depending on the number of records and shells you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

Notes:

- Modules are identified by name.
- If the module exists in the shell, the module is updated, users/groups are created or updated, and permissions are updated for the module.
- If the module does not exist, the module is added to the shell. Users/groups are created and permissions are created for that module.

To update access control using Update Shells

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates > Shells** in the left Navigator.
3) Open the shell template to update.
4) In the shell-type template, navigate to **Access Control** and assign user or group permissions to the modules as needed.
5) Click the **Update Shells** button. The Update Shells window opens, displaying the list of modules for which the access control settings can be updated.
6) Select the module(s) that you wish to update.
7) Click **Update Shells** and choose one of the following:
   ▸ **Shells**: You can use this option to select one or more shells to update. When the update window opens, it lists all shells in the project. You can use Find to isolate the shells you want to update. The find window contains data elements from the Find form that was designed in uDesigner. When you have isolated the shells to update, click the Update button and select either Selected Shell(s) or All Filtered Shells.
   ▸ **All Shells**: You can use this option to update all shells of that shell type.
   ▸ **History**: You can view the update history from past updates or cancel a request before the update begins.

An Alert window opens letting you know that you are about to push changes to the selected shells; there is no undo for the update.

8) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Updating Cost Sheet Columns in a Shell

Cost sheet columns can be updated in CBS code-based shells.

The Update Shell process runs in the background. Depending on the number of records and shells you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

> **Notes**:
>
> About cost sheet columns:
>
> - A column is identified by a unique data source.
> - If the cost sheet does not exist in the shell, the column is not added.
> - If the shell cost sheet is present but the column does not exist, the column definition is created, and the column is added. Column restrictions are added. Users/Groups are created or updated.
> - For formula columns, be sure to first push the columns or data sources that make up the formula (if they don't already exist in the cost sheet), then push the formula column.
> - Any new column that is created will use the column to its immediate left as the reference point for positioning. When a column is added to the cost sheet via an update, this means: If the column to the left of the column that is being pushed exists in both the template and cost sheet, the column will be positioned in the cost sheet according to its position in the template. If the column to the left of the column being pushed exists in the template but does not exist in the cost sheet, then the column will be added to the end (far right) in the cost sheet.

Cost Column Shell Updating Rules

If a cost sheet column of the same name exists, it will be replaced according to the following matrix.

If this template (source):	Is used for this shell (destination):	The template will:
Single Date Source	Column exists	Update the column
	Column does not exist	Create column with the same definition
Logical Data source (Formula entry)	Logical Data source Column Exists (Formula entry)	Update and replace the formula
	Logical Data source column exists (Manual entry)	Not update the column or formula
	Column does not exist	Create column with same definition

Logical Data source (Manual entry)	Logical Data source Column Exists (Manual entry)	Update the column
	Logical Data source Column Exists (Formula entry)	Update the column and change it to manual entry
	Column does not exist	Create column with same definition

To add or update cost sheet columns using Update Shells

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates > Shells** in the left Navigator.
3) Open the template to update.
4) In the shell type template, navigate to **Cost Manager > Cost Sheet**. Create or open the Shell Cost Sheet.
5) From the cost sheet, click **Columns** to open the Columns log. Add or edit cost sheet columns as needed.
6) From the **Columns Log** window, select the column to push. Only one column can be updated at a time.
7) Click **Update Shells** and choose one of the following:
   ‣ **Shells**: You can use this option to select one or more shells to update. When the update window opens, it lists all shells in the project. You can use Find to isolate the shells you want to update. The find window contains data elements from the Find form that was designed in uDesigner. When you have isolated the shells to update, click the Update button and select either Selected Shell(s) or All Filtered Shells.
   ‣ **All Shells**: You can use this option to update all shells of that shell type.
   ‣ **History**: You can view the update history from past updates or cancel a request before the update begins.

   An Alert window opens letting you know that you are about to push changes to the selected shells; there is no undo for the update.
8) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Update schedule of values structure

You can update the SOV structure for general spends or payment applications in CBS code-based shells.

The Update Shell process runs in the background. Depending on the number of records and shells you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

Notes:

About updating the schedule of values structure:

▪ Update Shell can be used to create or update the SOV structure. If the structure already exists, it will be updated. If not, it will be created

(restrictions apply for payment applications; see below).

- When creating or updating the structure of Payment Applications SOV and Summary Payment Applications SOV, the Payment Application Business Process must be set up in the target shell first. If the business process has an active setup, then Update Shell will create or update the structure.

To update SOV structure using Update Shells

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates > Shell** in the left Navigator.
3) Open the shell template to update.
4) In the Shell Template, navigate to **Cost Manager > Schedule of Values**. Select one of these options: **General Spends**/**Payment Applications**/**Summary Payment Applications**.
5) Click **Update Shells** and choose one of the following:
    - **Shells**: You can use this option to select one or more shells to update. When the update window opens, it lists all shells in the project. You can use Find to isolate the shells you want to update. The find window contains data elements from the Find form that was designed in uDesigner. When you have isolated the shells to update, click the Update button and select either Selected Shell(s) or All Filtered Shells.
    - **All Shells**: You can use this option to update all shells of that shell type.
    - **History**: You can view the update history from past updates or cancel a request before the update begins.

    An Alert window opens letting you know that you are about to push changes to the selected shells; there is no undo for the update.
6) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Updating Shells - Reports Node

You can add and update user-defined reports.

The Update Shell process runs in the background. Depending on the number of records and shells you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

Important information about updating reports in Project/Shell:

- Reports are identified by the combination of Name and Data Type.
- Report names do not have to be unique.
- If the report name and data type does not exist, the new one will be added.
- - The original owner of the report is added to the Users or Groups of the report in the receiving Project/Shell (Permission tab).
- The administrator of the receiving Project/Shell becomes the report owner.
- If a report exists with the same name and data type in the receiving Project/Shell, the existing report will be replaced with the new report, and the following information will be according to the new report:
    - Report updates

▸ Added or changed Users or groups

▸ Added or changed permissions

To add or update user-defined reports using Update Shells

1) Go to the **Company Workspace** tab and switch to **Admin** mode.

2) Click **Templates > Shells** in the left Navigator.

3) Open the shell template to update.

4) In the shell type template, navigate to the **Reports > User-Defined Reports** log.

5) Add a UDR to the shell type template, or select UDR to edit. Define properties.

6) Select one or more reports from the User-Defined Reports log.

7) Click **Update Shells** and choose one of the following:

   ▸ **Shells**: You can use this option to select one or more shells to update. When the update window opens, it lists all shells in the project. You can use Find to isolate the shells you want to update. The find window contains data elements from the Find form that was designed in uDesigner. When you have isolated the shells to update, click the Update button and select either Selected Shell(s) or All Filtered Shells.

   ▸ **All Shells**: You can use this option to update all shells of that shell type.

   ▸ **History**:You can view the update history from past updates or cancel a request before the update begins.

   An Alert window opens letting you know that you are about to push changes to the selected shells; there is no undo for the update.

8) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Update commitment funding structure

You can update the structure used to create commitment funding sheets in CBS code-based shells.

The Update Shells process runs in the background. Depending on the number of records and projects you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

> **Notes**:
>
> About updating the commitment funding sheet structure:
>
> - Update Project can be used to create or update the commitment funding structure in the project. If the structure already exists, it will be updated. If not, it will be created.
>
> - Updating the structure in a project will not affect commitment funding sheets that already exist. New sheets will reflect the updated structure.

To update commitment funding structure using Update Shell

1) Go to the **Company Workspace** tab and switch to Admin mode.

2) Click **Templates > Shell** in the left Navigator.

3) Open the shell template to update.

4) In the shell template, navigate to **Cost Manager > Funding > Commitment Funding Sheet**.

5) Click **Update Shells** and choose one of the following:

   ‣ **Shells**: You can use this option to select one or more shells to update. When the update window opens, it lists all shells in the project. You can use Find to isolate the shells you want to update. The find window contains data elements from the Find form that was designed in uDesigner. When you have isolated the shells to update, click the Update button and select either Selected Shell(s) or All Filtered Shells.

   ‣ **All Shells**: You can use this option to update all shells of that shell type.

   ‣ **History**: You can view the update history from past updates or cancel a request before the update begins.

   An Alert window opens letting you know that you are about to push changes to the selected shells; there is no undo for the update.

6) Click **Yes** if you want to proceed with the update, or **No** to cancel.

Update cash flow properties and permissions

You can push cash flow detail curve properties and permissions from a shell template to a shell. This is available for CBS-code based shells and templates.

The Update Shell process runs in the background. Depending on the number of records and projects you are updating, it can take a considerable amount of time to complete. The process is complete when the End Date column in the Update History window shows the complete date.

Notes:

About updating cash flow curve properties:

- Both detail curve properties and permissions are pushed from the template to the project.
- Cash flow detail curves are identified by name.
- If a detail curve with the same name exists in the project, it will be replaced. All properties, including detail level and time scale, and permission settings will be updated.
- If a detail curve with the same name does not exist in the project, a new one will be created.
- Users and groups will be added if they do not exist. If a group is created, it will be empty.
- In order to push a curve, the destination project must have a cost sheet.
- Commitment detail level curves will not be pushed.
- A Summary CBS curve cannot be pushed to a project where the cost sheet is flat.
- After a successful update, the updated destination curves will be refreshed.

To update cash flow curve properties and permissions using Update Shell

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates > Shell** in the left Navigator.
3) Open the shell template to update.
4) In the shell template, navigate to **Cost Manager > Cash Flow**.
5) Add a cash flow curve to the shell template, or select one to edit. Define properties.
6) Select a curve from the Cash Flow log.
7) Click **Update Shells** and choose one of the following:

  ▸ **Shells**: You can use this option to select one or more shells to update. When the update window opens, it lists all shells in the project. You can use Find to isolate the shells you want to update. The find window contains data elements from the Find form that was designed in uDesigner. When you have isolated the shells to update, click the Update button and select either Selected Shell(s) or All Filtered Shells.

  ▸ **All Shells**: You can use this option to update all shells of that shell type.

  ▸ **History**: You can view the update history from past updates or cancel a request before the update begins.

  An Alert window opens letting you know that you are about to push changes to the selected shells; there is no undo for the update.

8) An Alert window opens, detailing the information that will be updated. Read the message carefully, as once a shell is updated, this action cannot be undone. Click **Yes** if you want to proceed with the update, or **No** to cancel.

Update generic cost sheet columns and rows

You may have a large number of codes that are used within the Generic Cost Manager. In addition you may have a large number of shells in your implementation. To update codes and columns in your generic cost manager sheets with a minimal effort, you can push columns in a project or shell template generic cost sheet from the Columns Log to cost sheets.

Notes:

About updating shell instance dashboards:

- A cost sheet must already exist in the destination shell. Pushing a column from a template will not create a cost sheet that can receive the column.
- You can push one column at a time.
- If a source column is a single data source, then the destination column will be created with that single data source if it does not already exist. (Column A or B in example below)
- If a source column is a formula with only single data sources, then pushing the source column will create that column in the destination cost sheet, if it does not already exist. (Column C in example below)
- If a source column is a formula with columns included in the formula, as long as all constituent columns contain single data sources, the source column can be pushed; for any columns that do not exist in the destination cost sheet, the formula will be changed to a single data source in the formula. (Column D in example below)
- If a source column is a formula with constituent columns that include logical data sources, the logical data source must exist in the destination cost sheet. The formula for the logical data source may be different in the destination cost sheet. Any column that contains a single data source will follow the rule above. (Column F in example below)

Column	A	B	C	D	E	F
Column Name	Original Commitment	Change Orders	Pending Commitments	Total Commitments	Trends	Forecast
Data Source	Purhcase_Order (Approved)	Change_Orders(Approved)	CM011	CM012	Trends(Open)	CM013
Formula			Purchase_Order (Pending) + Chanage_Orders (Pending)	Original Commitment + Change Orders		Total Commitments + Trends

To add or update generic cost sheet columns from a template

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Templates > Shells** in the left Navigator.
3) Open the shell-type template to update.
4) In the shell template, navigate to **Configurable Modules > Generic Cost Manager**.

5) Select the **Generic Cost Manager Sheet** template and click the **Structure** button.

6) In the Generic Cost Manager Sheet log, select the cost sheet template and then click the **Columns** button. The Columns Log window opens.

7) Select a cost sheet column.

8) Click **Update Shells** and choose one of the following:

   ‣ **Shells**: You can use this option to select one or more shells to update. When the update window opens, it lists all shells in the project. You can use Find to isolate the shells you want to update. The find window contains data elements from the Find form that was designed in uDesigner. When you have isolated the shells to update, click the Update button and select either Selected Shell(s) or All Filtered Shells.

   ‣ **All Shells**: You can use this option to update all shells of that shell type.

   ‣ **History**: You can view the update history from past updates or cancel a request before the update begins.

   An Alert window opens letting you know that you are about to push changes to the selected shells; there is no undo for the update.

9) Click **Yes** if you want to proceed with the update, or **No** to cancel.

To update generic cost sheet rows from a template

1) Go to the **Company Workspace** tab and switch to Admin mode.

2) Click **Templates > Shells** in the left Navigator.

3) Open the shell template you want to update.

4) In the template, navigate to **Configurable Modules > Generic Cost Manager**.

5) Select the template and click the **Structure** button.

6) Select a row or rows to push to the project/shell level generic cost sheet. You can select multiple rows by holding down the Shift or Ctrl keys as you click on the rows.

   Unifier will update leaf-level rows, but not summary rows.

7) Click **Update Shells** and choose one of the following:

   ‣ **Shells**: allows you to choose which shell(s) to update. You can use Find to search for specific shells to select from the complete list of shells. You can select as many shells as you want to update. The Page and Display fields display on the Shell Update window, but are disabled in this case.

   ‣ **All Shells**: updates all active and on-hold shells

   ‣ **History**: allows you to view the update history from past updates or cancel a request before the update begins.

   An Alert window opens, detailing the information that will be updated. Read the message carefully, as once a shell is updated, this action cannot be undone.

8) Click **Yes** if you want to proceed with the update, or **No** to cancel.

View update history

You can view details about previously updated shell modules.

To view Update Shell History

1) In the shell type template, navigate to the module to view the update history.

2) Click the **Update Shells** button and choose **History**. The Update Shells: History window opens. It lists any previous incidents of using Update Shells.

3) Select an instance from the list and click **Open**. The History Details window opens, detailing the module information that was updated. History Details displays:

   ▸ Requestor: User who initiated the update process

   ▸ Shells: Either user-selected or all shells

   ▸ Submitted date: When the update request was submitted

   ▸ Start date: When the update process started

   ▸ End date: When the update process ended

Cancel a shell update request

You can cancel an update request that has not yet started; that is, any request that does not have a status of **In Process** or **Finished**.

To cancel a shell update request

1) In the shell type template, navigate to the module in which you want to cancel the update request.

2) Click the **Update Shells** button and choose **History**. The Update Shells: History window opens.

3) Select an update that has not yet started.

4) Click **Cancel Request**.

Setting Up View Forms in Shell Attributes

The shell details page (**Details**) displays the **View Forms** tab. To access the shell details page, go to Company Workspace > Admin mode > Company Sponsored Shells > shell type > shell instance.

The **View Forms** tab is available in all shell types (single shell or multiple instance shell) details page, when there are View forms defined and deployed for that shell type. The **View Forms** tab is available in all shell types, when there are View forms defined and deployed for that shell type. The **View Forms** tab is available in all shell types, when there are View forms defined and deployed for that shell type.

The **View Forms** tab is not available:

▸ If the design does not have a View form.

▸ For shell designs deployed prior to this upgrade.

In the **View Forms** tab, click the add option (plus icon) to add the View forms (from a list of forms displayed in the **Select View Forms** window) that are associated with the shell. You, the administrator, can select multiple View forms to add. After adding the View forms, you can remove or change the forms sequence. You can use the gear menus to remove multiple View forms.

Once you add the View forms and click **Add**, the system opens the **User and Group Picker** window which displays all active users or groups that are associated with the Shell. Multiple users and groups can be added to the viewers list.

Click **Done** when finished. The Details page will split in two and the right side displays the **Permissions Settings** block along with the **Add Viewers** field.

If you assign users and groups to a View form, then the assigned users and groups can see the **General** tab of the form, only.

If the users or groups have permission to view multiple View forms, then they will see the View forms based on the sequence listed in the Details window, under the **Form Name** block.

Click **Done** when finished.

If a user or group has access to multiple View forms, then the user or group will see the first View form that they have access to, based on the sequence of the View forms listed.

For example, if user 'U1' has access to View Forms VF01 and VF02 both, and when U1 views the General tab of the shell details, then the VF01 is displayed if the VF01 is the first View form in the sequence order of forms displayed.

Setting Up the Automatic Update of Shell Status

At the Company level, you can define the setup of the automatic update of project statuses of active projects based on triggering conditions which are defined using various data sources as parameters. For example:

▶ A selected activity on the schedule sheet is in the Completed status
▶ A single-record business process record is set to a specified status
▶ A business process workflow reaches a specified status

Depending on the setup and the conditions that are set, the status of the shell can change from Active to a non-active status (On-Hold, View-Only, or Inactive). You can define multiple setups for each shell. After you define these setups, they can be used on shell instances, or on templates to enable the automatic update of shell status.

The data sources that you use in the triggering conditions can be either from shell level or from the Company level. This data sources can be business processes, sheets or attribute forms. You can define the frequency at which Unifier evaluates the conditions to see if a particular active shell should change its status, and can define a list of users or groups to be notified when the shell status is changed. The highest frequency is daily.

This automatic update of shell status can be useful for users that have a large number of shells and want many of these shells to change their status based on certain triggering conditions, and thus the users do not have to search for and modify these shells manually. For example, you can define a setup at the Company level that contains a triggering condition that changes of the status of an active shell On-Hold if the shell funds consumption exceeds the funds appropriated for that shell. This allows the shell manager to review the shell and take appropriate action. If, in this case, the shell manager is able to get additional funding for the shell, the Administrator can change the shell status back to Active to restart the shell activities.

> **Note**: Automatic shell status update can change the status of a shell from Active to an inactive status. If you want the inactive shell to status to revert to Active, you must activate the shell manually.

Step 1: Create setups - general information.

Step 2: Verify the order of shell statuses.

Step 3: Define shell status triggering conditions.

Step 4: Define the schedule for automatic update of shell status.

Step 5: Activate the automatic update of shell status.

Step 6: Define permissions.

Create an automatic shell status update setup

Multiple setups can be defined at the company level and then used to configure individual shells.

> **Note**: You must have imported a shell attribute form that contains the uuu_au_setup_picker data element to be able to setup the automatic update of shell status.

To create a new shell status update setup

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Company Workspace > Auto-update Status Setup**. The Auto-Update Status Setup log opens.
3) Click **New**. The Auto-update Status Setup window opens. There are three tabs: General, Settings, Schedule.
4) In the **General** tab, enter a Setup Name, which displays in the log, and an optional Description.
5) In the **Settings** tab, define the order of the non-active statuses and the status change query and trigger conditions. For details, see *Choose the order of non-active statuses (Settings tab)* (on page 258) and *Define status change query and trigger conditions (Settings tab)* (on page 259).
6) In the **Schedule** tab, you can schedule the shell status update. See *Define shell status update schedule (Schedule tab)* (on page 260).
7) Once you have defined the setup, you must activate it to be able to apply it to a shell. See *Activate or deactivate an auto-update status setup* (on page 260).

> **Note**: You must deactivate a setup to be able to modify it.

Choose the order of non-active statuses (Settings tab)

By default the order of the listed statuses is **On-Hold**, **View-Only**, and **Inactive**. These are listed on the left side of the **Settings** tab in the Status pane. You can change the order using the **Move Up** or **Move Down** buttons. You can change the order of the non-active statuses. The order of the statues is significant because the triggering conditions for the statuses are evaluated in the order in which they are listed on this tab, with the verification of the triggering conditions occurring for each condition listed in turn.

For example, if the conditions for the first listed status are not met, then the conditions for the next listed status are evaluated. If the conditions for that status are not met, then the triggering conditions for the third status conditions are evaluated. As soon as the first match occurs, Unifier will automatically change the shell status and does not perform further evaluation.

To reorder non-active shell statuses

1) Open the Auto-update Status Setup window and click the **Settings** tab.
2) In the Status pane, select the status you want to move.
3) Click the **Move Up** or **Move Down** button to reposition the selected status.
4) Click **Apply** to save changes, or **OK** to save changes and exit the window.

Define status change query and trigger conditions (Settings tab)

The **Conditions Elements** section allows you to define condition criteria per element. Elements can be selected from all Unifier data sources and modules available at the Company level.

In this field:	Do this:
Notify users and groups on Status change	Allows you to define the users and groups who will receive status change notification.
Email content	Enter the content of the email you want to send to notified users and groups. This content appears in the Additional Information section of the email.

To define query and trigger conditions

1) Under Conditions Elements, click **Add**.
2) Select a Data Type, and click **OK**. The Query Condition window opens.
3) Complete the **General** tab by entering a name for the query and a brief description. The Data type and Element is auto-populated from the selection you make on the Query tab.
4) Click the **Query** tab.
5) Click **Add**.
6) Complete the **Query** tab:
   ▸ **Data Element:** Click the Select button. The Data Element Picker opens. The list is generated from the data type you chose in the General tab. If the data element is a picker, pull-down or radio button, the Value field will display the values entered in the data set tab of for the data definition associated with the data element. For a full list of data elements and data types, refer to the *Unifier Reference Guide*.
   ▸ **Label:** The label defaults to the data element name. You can enter a different label.
   ▸ **Condition:** Define Gate Condition Element Condition. The condition options vary dynamically depending on the selected Data Element. The screen shots below list out the various options for different Data Element types. Examples include equals, does not equal.

> ‣ **Values:** Specify value. The Values field varies dynamically depending on the selected Data Element and Condition. (For example, if the element is a text box, the condition might be Contains, and value might be one or more letters to search for. If the element is a pull-down or other data definition with a data set, you will select a value from the data set.)

7) Select the trigger conditions.

8) Click **OK**.

Define shell status update schedule (Schedule tab)

You can define a schedule to check the conditions for the automatic update in the Auto-update Status Setup window, Schedule tab.

The maximum frequency that Unifier will verify whether triggering conditions are met is daily. If you have a need for greater frequency of verification, you must monitor the shell with the shell manager and then change the shell status manually as needed. For example, if the triggering condition verification is performed in the morning, and the shell funds are being spend during the course of the day, the shell could exceed its budget before the condition verification occurs the next morning, and the shell status is automatically changed.

In this field:	Do this:
Enable Scheduled Runs	Select this checkbox to enable scheduled evaluating of the automatic update status. Deselecting this checkbox will disable the scheduler, and any scheduled future runs will be canceled immediately. The scheduled evaluation is disabled for the last status in the list, provided all conditions are met, and the Enable Scheduled Runs checkbox is automatically deselected.
Frequency	Choose Frequency of the Scheduled Runs (Daily, weekly, monthly, quarterly, yearly)
Range of Recurrence	You can specify a date on which the Scheduled Runs will end, or no end date.

Activate or deactivate an auto-update status setup

You must activate a setup in order to be able to apply it to a shell.

> **Note**: You must deactivate a setup to be able to modify it.

To activate or deactivate a shell status update setup

1) To activate or deactivate a new setup to use in shells, go to the Company Workspace tab and switch to Admin mode.

2) Click **Company Workspace > Auto-update Status Setup**. The Auto-Update Status Setup log opens.

3) Select a setup in the log.

4) Click the **Status** button. You can choose **Active** or **Inactive**.

Set permissions for automatic update of shell status

To set permissions for automatic status update:

1) Go to the Company Workspace tab and switch to Admin mode.

2) Click **Access Control** in the left Navigator.

3) On the right pane, select **Administration Mode Access > Company Workspace > Auto-update Status Setup**. The permissions are:

   ▸ **Create:** Allows the creation of new auto-update status setups, edit existing auto-update status setups and activate or deactivate auto-update status setups.

   ▸ **Modify:** Allows the edit existing auto-update status setups and activate or deactivate auto-update status setups. This permission excludes the ability to create a new auto-update status setup.

   ▸ **View:** Allows viewing of existing auto-update status setups.

How to Set Up Gates

Before you begin: Verify the list of phases resides in the Phase data definition pull-down data set. This is the same list that is used when selecting a phase manually in the shell properties window. You can add or modify the default list as needed. This list makes the phases available for any shell instance or shell type template; for each shell or template, you select which of the phases to use. Create any business processes that you plan to use to drive gates conditions and phase completion.

Step 1: Define Phases. For each shell instance or shell type template, you define the list of phases to include in the setup, choosing from the entire list in the Phase data set.

Step 2: Define Gate Conditions. For each phase, define one or more gates conditions. A gate condition is a combination data element and trigger condition that enable transition to the next phase.

Step 3: Schedule Gates runs. The gates run the validation of gate conditions. You can schedule runs automatically. This is optional.

Step 4: Activate the Gates setup.

Step 5: Define permissions.

> **Notes**:
>
> If you create a new shell by copying a shell template or an existing shell, any existing gates setup in the source shell is copied into the new shell, including the gates status. The gates phases are restarted at the first phase in the new shell, and the scheduled gates run is activated.
>
> The DE of type Rich Text DE is not available to be added as a Gate Condition Element (Gates > Settings).

Example of a gates setup and conditions

You will be setting up phases in gates to represent the actual phases of a shell. For the shell to advance from one phase to another, certain conditions must be met. This example will discuss phases, conditions, and using business processes in the context of the conditions to advance a shell from one phase to another.

For example, phases for shell Zero could be:

▸ Preliminary
▸ Investigation
▸ Definition
▸ Measurement
▸ Analysis
▸ Start
▸ Control

Previously, you have set up two business processes to use in the conditions for your gates setup. These are:

▸ **Schedule:** A single record business process that is updated manually by a shell manager by checking checkboxes for the various phases such as Definition Phase Complete? or Measurement Phase Complete?
▸ **Funding:** a workflow business process that is automatically updated thorough the steps of the workflow.

As the shell manager checks the checkboxes in the phases as represented in the Schedule business process, the gates runs keep checking the statuses of the checkboxes. As they are checked off, the project advances to the next phase.

The exception to this procedure is the transition from the Analysis phase to the Start phase. Additional approval is needed for funding in order for the project to advance from Analysis to Start. The Funding business process is included in the conditions for the Analysis phase. This business process must have the status Construction Approved and have a value of greater than zero for the Analysis phase to be exited and the Start phase entered for the project.

Define the phase list

To view the phase list

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Data Structure > Data Definitions** in the left Navigator.
3) Click **Basic**.
4) Select the Phase data definition and click **Open**. The Modify Data Definitions window opens.
5) Click the **Data Set** tab. The active phases on this list will be available for phase setup.
6) Modify the list as needed. Any changes you make here will be reflected in new gates set ups. Current setups will not be affected.

Create a gates setup

You can create a gates setup in shell templates, and in individual shells. There can be one setup per shell instance.

To create a new gates setup

1) Do one of the following:
   ▸ To create the setup in a shell type template, go to the Company Workspace tab and switch to Admin mode. Click **Templates > Shells** in the left Navigator. Open the shell template.
   ▸ To create the setup in a shell instance, go to the Company Workspace tab and switch to Admin mode. Click **Company Sponsored Shells** in the left Navigator. Open the shell instance.
2) Choose **Setup > Gates**. The Gates Setup log opens.
3) Click **New**. The gate setup is created automatically. Double-click the setup, or select from the list and click **Open**. The Gates Setup window opens. There are three tabs: General, Settings, Schedule.
4) In the **General** tab, enter a Setup Name, which displays in the log, and an optional Description. At this point, Status is Inactive by default.
5) In the **Settings** tab, define phases and gates conditions.
6) In the **Schedule** tab, you can schedule regular gates.

Delete a Gates Setup

This section describes how to manually delete a gates setup from a shell.

> **Note**: You can delete a gates setup from a specific shell template but not from other Projects/Shells that have been created using the template.

In Administration mode:

1) Open the project or shell and in the left navigation pane, click **Setup** > **Gates**.
2) Select a Gates setup for deletion.
3) Click **Delete**.

> **Note**: System prompts the user asking to confirm deletion of the gates setup.

4) Click **Yes** to delete the Gates setup.

Add phases to the gates setup (Settings tab)

Select which of the phases to use in the shell or shell template from the available phase list. You can reorder them as necessary for the shell instance or shell type template.

To add phases to the new gates setup

1) Open the Gates Setup window and click the **Settings** tab.

2) In the **Phases** pane, click the **Add** button. The Select Phases window opens, displaying the list of available phases.

3) Select one or more phases to add to the list. To select multiple phases, hold down the **CTRL** or **SHIFT** keys while selecting.

4) Click **OK**. The phases appear in the Phases list.

   The order in which the phases appear on the list is the order they will be followed in the shell. The first phase on the list will be the first phase of the shell.

Access gate configuration view

To access the gate configuration view

Select a phase. The gate configure view opens in the right pane. See the following table for more information about the gate configuration view.

The **Phase Gate Configuration** section in the navigator lists the Phases for the current shell. The visual order of the Phases depends on the Order specified in the General tab.

The **Gates Conditions Elements** section allows you to define condition criteria per element. Gate Elements will be selected from all Unifier data sources and modules available in a particular shell (for the Sponsoring company).

In this field	Do this
Start Date	The Start date for a particular Phase can be manually set or auto populated from a Schedule Sheet by linking it to a particular activity or milestone (activity with zero duration and marked as milestone) where it will update dynamically based on the start date associated with this activity. If there are multiple Start dates, choose the Start date used to set Gantt Charts in Schedule Manager. The start date must fall within Shell date ranges.
Planned Completion	Can be manually set or auto populated from a Schedule Sheet by linking it to a particular activity or milestone (activity with zero duration and marked as milestone) where it will update dynamically based on the start date associated with this activity. If there are multiple End dates, choose the End date used to set Gantt Charts in Schedule Manager. **Note**: Dates are for reporting only. Phases cannot be date driven.
Advance to Next Phase...	This checkbox enables automatic phase advancement. Select the checkbox if you want the shell to move automatically to the next phase once all Gate Elements for a particular Phase have been checked.
Notify users on Phase Completion	Allows you to define users who receive phase completion notification. You can configure the body text in the notification (similar to the business process Setup on the End Step, where you can specify the message text content.
Reevaluate	When selected, this checkbox specifies that processing always starts

conditions on every Gates run	at the First phase during a scheduled Gates Run/Refresh. You might have to scroll down to see this checkbox.
	If the checkbox is not selected for a phase:
	▶ If the phase is currently incomplete, incomplete conditions are evaluated and completed conditions are skipped
	▶ If the phase is currently complete, phase processing is skipped
	If the checkbox is selected in a phase:
	▶ Every condition in that phase is reevaluated. Including conditions that were met
	▶ All conditions (except conditions that were marked as "ignore" manually) are marked as incomplete at the beginning of every Gates run and refresh.
	Saved Gates run (PDF) from prior runs persist. Processing will stop at a Phase where first un-met condition is encountered. By default this checkbox is deselected.

Configure gate elements

To add a Gate Condition Element

1) In the Gates Setup window, gate configuration view, select a phase and click **Add**. The Data Type window opens.
2) Select a **Data Type** from the drop down menu.
3) Click **OK.** The Edit Gate Condition window opens.
4) Complete the **General** tab: Enter a Name for the Gate Element. This can be the name of the data element or any descriptive name. This appears on the Gate Conditions Elements list. You can add an optional Description.
5) Click **Apply** to save changes, or **OK** to save changes and exit the window.

To define query and trigger conditions

1) In the Edit Gate Condition window, click the **Query** tab.
2) Under Query Conditions, click **Add**. The Query Condition window opens.
3) Complete the **Query** tab:

   Data Element: Click the Select button. The Data Element Picker opens. The list is generated from the data type you chose in the General tab. If the data element is a picker, pull-down or radio button, the Value field will display the values entered in the data set tab of for the data definition associated with the data element. For a full list of data elements and data types, refer to the *Unifier Reference Guide.*

   ▶ **Label**: The label defaults to the data element name. You can enter a different label.
   ▶ **Condition**: Define Gate Condition Element Condition. The condition options vary dynamically depending on the selected Data Element. The screen shots below list out the various options for different Data Element types. Examples include equals, does not equal.

▸ **Values**: Specify value. The Values field varies dynamically depending on the selected Data Element and Condition. (For example, if the element is a text box, the condition might be Contains, and value might be one or more letters to search for. If the element is a pull-down or other data definition with a data set, you will select a value from the data set.)

Change the order of phases

To change the order of the phases in a gates setup

Select a phase and click the **Move Up** or **Move Down** button.

Define gates runs schedule (Schedule tab)

You can define a gates run schedule in the Gates Setup window, Schedule tab. This run evaluates gates conditions, and marks completed conditions as Complete. The update process can also be invoked manually in user mode. The scheduler engine is a background process.

In this field:	Do this:
Enable Scheduled Gates Runs	Select this checkbox to enable scheduled updating of Gate Elements. Deselecting this checkbox will disable the scheduler, and any scheduled future runs will be canceled immediately. The scheduled gates runs are disabled in the last phase provided all conditions are met, and the Enable Scheduled Gates Runs checkbox is automatically deselected.
Frequency	Choose Frequency of the Scheduled Gates Runs (Daily, weekly, monthly, quarterly, yearly)
Range of Recurrence	You can specify a date on which the Gate Runs will end, or no end date.
Auto-email as PDF Attachment to Gates creator	Select this checkbox to enable automatic emailing of the scheduled run results as a PDF attachment. The report displays the current status of each phase and gate condition.

Activate or deactivate a gates setup

Activating a gates setup will enable the scheduled gates runs. After activation, if you need to edit the gates set up, you will need to deactivate it first.

You can make edits while the setup is inactive, including: adding or removing phases; reordering phases; add, modify or remove conditions within a phase.

Some notes about activating/deactivating gates setup:

▸ Reactivating an active shell: If you temporarily deactivate a shell that is in process, and then reactivate it, the gates check will start over at the first phase. This is because the setup needs to check all phases for new phase additions or new gate conditions that may have been added. You can manually update the phases by clicking the Refresh button for gates in User Mode. This will evaluate all phases starting from the first phase, even if the phase has been marked Complete, and mark the first phase as the current phase. Be aware this may trigger email notifications regarding gates advancement, as set up in the Settings tab (where the users who are notified are defined), and those users' email subscription settings (User Preferences).

▸ While a gates set up is Inactive: No scheduled gates run will be done. To manually advance phases in User Mode Gates for the shell, the gates setup must be active.

▸ View-Only and Inactive shells: If a shell has the View-Only or Inactive status, the gates setup is inactivated, and you must manually reactivate the setup.

Set user permissions for gates

To grant User Mode Gates permissions:

In Access Control or Permissions window, navigate to **User Mode > Shells/Projects (Standard) > Gates**. The permissions are:

▸ **Change Phase**: Allows the user to change gates phases.
▸ **Modify and Refresh**: Allows the use to modify gates and refresh gates.
▸ **Refresh**: Allows the user to refresh gates.
▸ **View**: Allows the user to view gates.

Editing Multiple Shells at once with Bulk Edit

If you have a large number of shells that need similar edits, you can use bulk edit to update all of them at once. You can update a maximum of 200 records using bulk shell edit. The bulk edit must be defined in uDesigner, and you must have the Allow Bulk Edit permission set on the shells in order to use the bulk edit.

The bulk edit function works only on fields from the action form (upper form) for the current step. It cannot be used to edit the following :

▸ Auto-populated fields
▸ Fields in a dynamic data set
▸ Read-only fields
▸ Fields from line items
▸ System-generated fields, such as record number, status, or due date

> **Notes:**
>
> - An Integration interface must be created for Bulk Edit to work with Shells.
> - You can use bulk processing to update users in shells. See Managing users in bulk for details.

To edit shells using bulk edit

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Company Sponsored Shells** in the left Navigator.
3) Select one or more shells, or perform a Find to search for a group of shells to work with. You can select the shells from the shell log or the Find log.
4) Choose **Edit > Update > Bulk Edit**. The Bulk Edit window displays. The fields displayed in this window depend what was specified in uDesigner for the shell.

   The Bulk Edit form includes all editable fields for the shell. All system-generated elements and formula columns are automatically recalculated during the bulk edit for each record.
5) Modify the Bulk Edit form as needed.
6) Select the **Update** checkbox for the fields you want to update. The checkbox is automatically selected when you type into or modify a field. You can deselect it if you do not want to modify the field at this time.
7) Click **Update**. This launches the bulk update of the selected records.

   The Bulk Actions Status window opens after you click **Update**. This window allows you to monitor the progress of the bulk update.
8) Click **OK** after all records have processed. Click **Cancel** if you want to cancel the bulk update in progress.

About Shell Dashboards

Shell dashboards display project data in an at-a-glance format. You can control the dashboard appearance and content and make it specific to the shell with which you are working; however, shell dashboards cannot pull data from across shell hierarchies. For example, consider two anchor shells, which are seen as tabs, one is labeled "Capital Projects," and one is labeled "Facilities." The Capital Projects dashboard can display data from all levels of the Capital Projects hierarchy; however, it cannot display Facilities data because Facilities is the root of a separate, independent hierarchy.

Two types of dashboards are available in project shells:

1) **My Dashboard:** All shells have a personal dashboard that a user can define if he or she has Setup permission. A user can configure My Dashboard in User Mode using the Edit Dashboard window. Users can select My Dashboard from the View Dashboard drop-down list on each shell.

2) **Shell dashboards:** Shell dashboards allow users to view shell and subordinate shell data. This differs from My Dashboard in that a user cannot share his or her personalized dashboard. Administrators can create multiple shell dashboards per shell and push them via templates. Users can select this type of dashboard to view from the View Dashboard drop-down list on each shell. These dashboards are maintained at the shell level and are available to any user to view (but not edit) provided the user has permissions.

Each shell dashboard has at least one tab and can have up to five tabs. The default tab name is Summary, which you can change. The default shell dashboard layout contains these four blocks:

▸ **Image**: Displays the image your company administrator uploaded for the shell.
  ▸ In the dashboards, if there are multiple images, then Unifier displays all of the images as rolling images.
  ▸ When a shell has multiple images, Unifier uses the first image from the list to print the shell image through custom prints and reports.
▸ **Items Requiring Your Attention**: Contains items that are generally listed on the Unifier Home page, such as tasks and messages.
▸ **Details**: Lists shell details, including shell number, shell name, administrator, and other details.
▸ **Links**: List of links configured for the shell by your company administrator.

On each tab, you can select a different layout to which you can add blocks of these types:

▸ **Standard**: Use this selection to view project data from, for example, business process, manager, users, and active tasks.
▸ **Portlet**: Use this selection to view an external URL, such as a web cam, a frequently visited website, or Analytics application.

  To view Analytics in the **Portlet** block, you need to perform additional and required configurations in OBIEE in order to allow the OBI analysis to render properly. Go to:
  ▸ Oracle Help Center: http://docs.oracle.com/en/
  ▸ Middleware > Middleware Documentation
  ▸ Oracle Fusion Middleware > Oracle Fusion Middleware Documentation
  ▸ Products > Oracle Business Intelligence Enterprise Edition
  ▸ Oracle Business Intelligence Enterprise Edition [latest edition] > Books
  ▸ Administration > System Administrator's Guide for Oracle Business Intelligence Enterprise Edition
  ▸ Advanced Configuration Reference > Making Advanced Configuration Changes for Presentation Services > Protecting Pages in Oracle BI EE from Attack
▸ **Drilldown**: Use this selection to slice and dice project-shell data.
▸ **Custom**: Use this selection to view data from the current shell, subordinate shells, or both (cannot cross hierarchies).
▸ **Analytics**: Use this selection to access the link to the Analytics application.

Setting shell instance dashboard permissions

To set shell instance dashboard permissions:

1) Go to the **Company Workspace** tab and switch to Admin mode.

2) Click **Access Control** in the left Navigator.

3) On the right pane, select **Administration Mode Access > Permissions for Shells / Projects (Standard) > Setup > Dashboards**.

4) Set the permissions as needed:

   ‣ Setup: Administrators can create a shell instance dashboard.

Creating a shell dashboard in a template

You can create new dashboards in shell templates and push them to shells.

To create a dashboard in a shell template

1) Go to the **Company Workspace** tab and switch to Admin mode.

2) Click **Templates > Shells > [shell name] > [project shell template] > Setup > Dashboards** in the left Navigator. The Dashboards log window opens.

3) Click **New**. The Dashboard Properties window opens.

4) Enter the dashboard name and an optional description. The dashboard name must be unique within the shell.

5) Click **OK**. The dashboard is listed in the log.

6) Select the dashboard in the log and click **Open**. The default view of the shell dashboard opens.

7) Choose **Edit > Dashboard**. The Edit Dashboard window opens.

> **Note**: You might not see data in parts of the dashboard if you do not have specific permissions to access data cubes.

You can edit a dashboard in an established project shell. For details, refer to the *Unifier User Guide*.

Copy a shell dashboard

You can create new shell dashboards by copying and modifying existing dashboards. Copying a shell dashboard does not copy the permissions associated with the dashboard, but will copy all other dashboard information.

To copy a shell dashboard

1) Go to the **Company Workspace** tab and switch to Admin mode.

2) Click **Company Sponsored Shells > [shell name] > [project shell name] > Setup > Dashboards** in the left Navigator. The Dashboards log window opens.

3) Select a shell dashboard.

4) Click **Copy**.

5) Enter the name of the new dashboard and an optional description.

6) Click **OK**. The dashboard is listed in the log.

7) Select the dashboard in the log and click **Open**. The shell dashboard opens.

8) Choose **Edit > Dashboard**. The Edit Dashboard window opens.

9) Modify the new dashboard as needed and **OK**.

Modify shell instance dashboard properties

To modify shell instance dashboard properties:

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Company Sponsored Shells > [shell type] > [shell instance] > Setup > Dashboards** in the left Navigator. The Dashboards log window opens.
3) Select a shell instance dashboard.
4) Click **Properties**.
5) Modify the dashboard name or description as needed.
6) Click **OK**.

Delete a shell instance dashboard

To delete a shell instance dashboard

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Company Sponsored Shells > [shell type] > [shellinstance] > Setup > Dashboards** in the left Navigator. The Dashboards log window opens.
3) Select a shell instance dashboard.
4) Click **Delete**.

Find a shell instance dashboard

To find a shell instance dashboard

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Company Sponsored Shells > [shell type] > [shell instance] > Setup > Dashboards** in the left Navigator. The Dashboards log window opens.
3) Click **Find**.
4) Enter the search criteria and click **Search** (or press Enter). Unifier displays all the dashboards that met the search criteria you entered.

Set user or group permission for a shell instance dashboard

To set user or group permission for a shell instance dashboard:

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) Click **Company Sponsored Shells > [shell type] > [shell instance] > Setup > Dashboards** in the left Navigator. The Dashboards log window opens.
3) Select a shell instance dashboard.
4) Click **Permissions**.
5) Add users or groups as needed. Select the **View** permission.
6) Click **Apply** to save or **OK** to save and exit.

Migrating standard projects to CBS shells

You can migrate one or multiple standard projects to CBS shell types that you specify. After migration, the new CBS shell is created in the shell hierarchy in the location you specify, and the standard project is no longer listed in the project log in Unifier. All of the data that existed under the standard project can then be accessed from the newly-created CBS shell.

> **Note**: When you migrate a standard project to a CBS shell, you cannot undo the migration and return the shell to the standard project form. The migration cannot be reversed, so be sure that you want to perform the project-to-shell migration.

After you migrate standard projects to CBS shells, you can use the features that shells offer, such as:

▶ Hierarchical distribution, visualization and navigation of capital projects when organized under shell hierarchies based on business needs
▶ Configurable dashboards
▶ Roll up of cost data across the shell hierarchy

Migration limitations

The following are some migration limitations for you to consider:

▶ The shell type must be a CBS shell. You cannot migrate standard projects to generic shells, only to CBS shells.
▶ Shell name is limited to 128 characters, and shell description is limited to 250 characters. However, standard project name is limited to 250 characters, and the project description is limited to 2000 characters. In order for the migration from project to CBS shell to be successful, you must modify the project name and description to be within the limits for these fields that exist for the shells (128 characters for a shell name, and 250 characters for a shell description).
▶ The standard project name cannot contain any special characters, such as:
  /\:*?"<>|
▶ You cannot migrate a standard project to a single instance (top level) shell. You can only migrate to multiple-instance shells.
▶ Even if the destination CBS shell type has auto-numbering setup, the migration cannot incorporate the new shell into the shell auto-numbering, but instead copies the project number while creating shell. The new shell is identified by the project number of the original project.
▶ You will have to set up a new configurable shell dashboard for the new shell that is created by the migration. Any existing project summary set up does not migrate to the new shell.
▶ If any business processes, planning items, assets, and configurable managers in the original project use project pickers, then you will have to recreate the link between these objects and the new shell.
▶ Migration from a standard project to a CBS shell cannot be reversed. Once the migration is complete, the standard project is converted to a CBS shell, and the information from that project resides in the newly-created CBS shell.

Migration Considerations

Before you migrate:

▶ Be sure that you have Integration defined for the CBS shells you plan to use for migration

▶ Examine the shell hierarchy of your CBS shells and determine the location for the new migrated shells. You can migrate several projects at once into a shell type, creating a new shell instance under that shell type for each migrated project.

▶ Examine the set ups for the original projects and also for the destination shells, and think about the mapping from the project to the shell. You might have to add data elements on the project side or the shell side to ensure that the data you need is migrated correctly and completely. For example, the shell name is limited to 128 characters, and shell description is limited to 250 characters. However, standard project name is limited to 250 characters, and the project description is limited to 2000 characters. In order for the migration from project to CBS shell to be successful, you must modify the project name and description to be within the limits for these fields that exist for the shells (128 characters for a shell name, and 250 characters for a shell description).

▶ As a best practice, do not migrate projects that have the Active status. Modify the projects as needed to get them as finished as possible and then put them in the Inactive status before migration. Make your project as complete as you can before you migrate it to a CBS shell.

▶ Test your migration in your **Test** environment before implementing it in your **Production** environment to ensure that the migration is successful and yields the desired result.

▶ You can use user-defined reports to gather data regarding which projects to migrate and the location they should occupy in the shell hierarchy.

▶ Understand that migration cannot be undone; when you migrate a project to a CBS shell, you cannot go back to that project. The project is converted completely to a CBS shell when the migration completes successfully.

Migration mapping of project data elements to shell data elements

The following table shows the automatic mapping of original project data elements to destination CBS shell data elements. These data elements define the fields shown on the project or shell setup window tabs. This mapping occurs automatically during the migration. When a standard project is migrated to a CBS shell, the project's data element values are automatically populated in the equivalent shell data element as listed in the table:

Standard project data element	CBS shell data element	Comments on action during migration
General tab of CBS shell		
Project Number	Shell Number	One-to-one mapping occurs.
Project Name	Shell Name	One-to-one mapping occurs.
Description	Description	One-to-one mapping occurs.
Administrator	Administrator	One-to-one mapping occurs.
Project Status	Shell Status	One-to-one mapping occurs.

Auto-update Status Setup	Auto-update Status Setup	Optional on the Shell Attribute form; if not present on the Shell form, is ignored during migration.
Currency tab of CBS shell		
Currency Name	Currency Name	One-to-one mapping occurs for all defined currencies.
Rate	Rate	One-to-one mapping occurs for all defined currencies.
Type	Type	One-to-one mapping occurs for all defined currencies.
Hedge Rate	Hedge Rate	One-to-one mapping occurs for all defined currencies.
Hedge Amount	Hedge Amount	One-to-one mapping occurs for all defined currencies.
Default Currency	Default Currency	One-to-one mapping occurs.
Options tab of CBS shell		
Project Image	Image	One-to-one mapping occurs.
Project Phase	Phase	One-to-one mapping occurs.
Links tab of CBS shell		
Name	Name	One-to-one mapping occurs for all defined links.
URL	URL	One-to-one mapping occurs for all defined links.

Migrate projects to shells

Before you begin: See the considerations and mapping discussed in Creating a Business Process record from a template.

Step 1: Export the migration template. Export the CSV template. This template will vary depending on the data elements included in the configuration of a particular shell type. This template contains the fields and format that the system needs to migrate the standard projects to CBS shells. See *Export the migration template* (on page 275).

Step 2: Modify the exported CSV template. Be sure that you have the correct project information ready to enter into the template. After you convert a standard project into a CBS shell, you cannot reverse the conversion. See *Modify the exported csv template* (on page 275).

Step 3: Initiate migration. Import the completed CSV file. See *Initiate migration of standard projects to CBS shells* (on page 276)

Step 4: View migration history. See *View migration history* (on page 277).

Step 5: Test for shell creation. See *Test for CBS shell creation* (on page 278).

You export the template, then modify it and import it. You will export the template from a selected CBS shell, and then import the modified template back into the same CBS shell to complete the migration.

Export the migration template

To export the migration template

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Company Sponsored Shells > <CBS shell type>**.

> **Note**: The shell type must be for a CBS shell. You cannot migrate standard projects to generic shells, only to CBS shells. You cannot migrate a standard project to a single instance (top level) shell, only multiple-instance shells.

3) In the shell type log, choose **Export Template > Project Migration Template**.
4) Download the template to the desired location. The template you download will be specific to the shell type of the log from which you exported the template.

Modify the exported csv template

Be sure that you have the correct project information ready to enter into the template. After you convert a standard project into a CBS shell, you cannot reverse the conversion.

> **Note**: You can use user-defined reports to gather data regarding which projects to migrate and where they should be in the shell hierarchy.

To modify the template

1) Open and edit the CSV template, per the template content, and the description of the template content in this section. It is recommended that you migrate projects that are not in the Active status. The content of the migration template will vary depending on the shell type into which you choose to migrate.

The exported template is organized in three sections:

‣ Instructions: This section at the top of the template explains how to fill in the template to initiate the migration. Do not modify this text.

▸ Mapping: This section maps the available standard project attributes with the user-defined CBS shell attributes. Use this section to create mapping for data elements that you have added in addition to the data elements listed in the table in **_Migration mapping of project data elements to shell data elements_** (on page 273). The Mapping section lists all the project attributes which are not automatically mapped. If you use custom project attributes, these attributes be listed and mapped in this section. The project data elements are static; you add the shell data elements to complete the mapping. The values in this section are overwritten by any literal values that you add in the Project section.

▸ Project: This section lists the Project Number and Location, and the use- defined CBS shell attributes as column headings. Project Number and Location are mandatory; the other columns are not, and are based on the attributes listed in the Mapping section. This list does not include the automatically-mapped shell attributes such as Shell Name or Shell Number. Add a row for each project you want to migrate, and enter the Project Number and the Location. The location should be delimited with /. For example: /Capital Project/Buildings/Tool Sheds. Add the literal values that are to be changed during the migration.

> **Note:** Projects are identified by the Project Number for migration. Be sure that you enter the correct project numbers for standard projects you want to migrate to CBS shells.

2) Save the template CSV file.

Initiate migration of standard projects to CBS shells

You can migrate several projects at once into a shell type, creating a new shell instance under that shell type for each migrated project. Before you initiate the migration, ensure that you have the Create permission on the destination shell type, in order to create the shell instances from the migrated projects. You exported the template from a selected CBS shell, and then import the modified template back into the same CBS shell to complete the migration.

> **Note**: You cannot undo the migration of standard projects to CBS shells after the migration completes successfully. Verify that you have completed the CSV migration template correctly, especially in terms of the Project Number.

To initiate migration

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Company Sponsored Shells > [CBS shell type]** in the left Navigator.
3) In the shell type log, choose Import > Migrate Projects into Shells.
4) Browse for the CSV file and click **OK**.

This imports the migration template and performs validations on the data. The migration is a background process. Each project listed in the CSV file is migrated into a CBS shell based on the mapping and values provided in the CSV. Project migration is either successful or not successful. Validation is performed before migration, and if there are any errors, a project is not migrated. Errors can include incorrect mapping or invalid format of the project rows (including changing column order or adding or removing columns).

View migration history

You can view the status of each submitted migration by using the Migration History.

To view migration history

1) Go to the **Company Workspace** tab and switch to Admin mode.
2) Click **Company Sponsored Shells > [CBS shell type]** in the left Navigator.
3) In the shell type log, choose **Import > Migration History**.

   Each submitted migration is listed in Migration History with one of these statuses:

   ▸ **Not Started**: The migration process has not started.
   ▸ **In Progress**: The migration process is in progress.
   ▸ **Completed Successfully**: The migration of all standard projects completed, and the corresponding CBS shells have been created.
   ▸ **Completed with Errors**: The migration of standard projects has completed, however, there were some errors that prevented the migration of some of the projects to CBS shells.

   Potential migration errors:

   ▸ Location entered is invalid. This error can occur if the location does not exist or is inactive in the shell hierarchy.
   ▸ Cannot create an instance of the shell type under the location entered; does not exist in the shell hierarchy.
   ▸ Project number could happen to be the same as the number of an existing shell in the hierarchy. Shell numbers must be unique.
   ▸ String values are entered incorrectly. Enter the labels for sting values.
   ▸ The standard project name is limited to 250 characters, and the project description is limited to 2000 characters. In order for the migration from project to CBS shell to be successful, you must modify the project name and description to be within the limits for these fields that exist for the shells (128 characters for a shell name, and 250 characters for a shell description). Any error can result if the project name or project description are longer than the character limits for the shell name and shell description.

4) If any of the projects did not migrate due to errors, you can view the CSV with the rows that have errors by clicking the Completed with Errors status hyperlink.

   This link allows you to download the CSV containing any errors. This file is in the same format as the submitted CSV, with all mapping information retained. However, in the Project section, only the rows which have errors in them are shown with an additional column added containing error comments. You can use this CSV file to review the errors and then re-import the file after you correct the errors.

5) Click **Close** to close the Project Migration History window.

Test for CBS shell creation

Ensure that your new CBS shell is created correctly and contains the attributes that you expect:

▶ The shell instance should be accessible in Administrator and User Mode (for Unifier and Unifier Mobile) under the parent shell it was migrated to.

▶ Users should be able to navigate to the business process and other manager data under the new CBS shell.

▶ Shell creation will trigger email notification.

▶ User/groups membership should remain same as on the original standard project.

▶ All the auto-population, reverse auto-population, linked elements, and other settings should work as they did on the original standard project.

Internationalization and CSV Files

Importing and exporting data in Unifier can be done by using a Comma-Separated Values (CSV) data file or a CSV template file. This section explains how the availability of different languages (Internationalization) impact the various CSV files created, used, imported, or exported.

> **Note**: Number formatting is not supported for Symbols that are based on a right-to-left language such as official languages of Afghanistan or Hebrew.

Generic CSV files

Language preferences are detected from the **Preferences** settings (**Region Format**), for both CSV data files and CSV template in:

▶ All column headers

▶ All informational text

If importing a CSV file fails, the import error file displays the system generated error messages in the preferred language.

If importing a CSV file fails because of form validation errors, then the custom error message displays the message in the preferred language.

Notes:

- If translation is not available for a custom error message, then the source string is displayed.
- Before importing a CSV file, always check the **Preferences** settings to see the allowed format and number formatting.
- When importing, or exporting, a CSV file, the date format follows the **Preferences** window (**Region Format**) Date Format settings.

Additional information about exporting and importing CSV files

When importing and exporting of a CSV file is conducted by users with two different language settings (for example, French and German), the data entered into an exported file must match the original language set.

Example

The CSV template Export has been done in French and the template is being used by a German User. If the German User enters data without changing the column structure and Import the file, the Import action will fail and an error message will appear in German, indicating the error.

Internationalization and Web Services

About Web Services

New records can be created and line items added using Integration through Web Services. Also, the Unifier Schedule Manager integrates with Primavera scheduling software by way of Web Services.

> **Note**: Integration through Web Services must be coordinated with an Oracle Primavera representative.

As Project Administrator, you can receive email notification of the successful creation of a shell instance, for shells that are created manually, through Web Services or a CSV file upload, or through auto-creation. This notification can be set up in email notifications in uDesigner. Also, you can set your **Preferences** to control whether you receive these notifications.

Refer to the *Unifier Reference Guide* for data elements you can use with Web Services.

Web Services and Internationalization

The output data generated by Web Services is always in the source language.

> **Note**: If a record (Example: Business Process) is created by using Web Services and the Data Definition (DD) label includes a non-ASCII string, then the record creation will fail.

Number formatting of data

When you enter numeric data in XML, you can use the decimal point (period) and negative sign (dash), only.

Examples

XML Tag: <Committed_Amount>100.99</Committed_Amount>

XML Tag: <Credited_Amount>-1423.99</Credited_Amount>

Get Web Services

You can use the Get Web Services call methods to get various attributes of Shell, CBS, and the list of Business Process records, Shells, and User defined data.

When you run a Get call, the input content in the response XML will be in the language of the source strings.

Number formatting does not apply to the numeric data and the decimal point is a period. The negative numbers are displayed with the minus sign before the numeric data, for example, -12345.99.

> **Note**: Number formatting is not supported for Symbols that are based on a right-to-left language such as official languages of Afghanistan or Hebrew.

Internationalization (Email Notifications)

When Unifier generates an email notification, the language used for that email is based on the recipient's in **Preferences**.

Email notifications for scheduled User-Defined Reports (UDRs), Gates, and so forth, have two components:

▶ Text
▶ Attachments

If a Business Process (BP) email notification contains an attachment with the record information, then the Custom Strings and number formatting in the attachment is according to the **Preferences**.

If a scheduled UDR is sent as a part of an email attachment, the language in the PDF attachment is according to the **Preferences** of the UDR owner; however, the email text content is according to the recipient's User Preferences.

When a UDR is generated manually and saved by a User, the language in the PDF attachment is according to the **Preferences** of the User who generated, or ran, the UDR.

If a scheduled job such as Project Gates, where the "Auto-email as PDF attachment to users and groups" option is selected, the language in the PDF attachment is according to the User Preferences of the creator of the job (Project Gates creator).

When a manual refresh of the Gates is requested, the language in the PDF attachment is according to the **Preferences** of the User who requested the refresh.

Internationalization (Support for Tools)

When used within Unifier,the following tools support internationalization:

▶ Oracle Map, AutoVue Server, Flex replacement (O charts)

> **Note**: The Unifier Plug-ins do not support internationalization.

Oracle Map viewer supports internationalization for Tier 1 languages. Refer to the *Oracle Map Viewer User Guide* for more details.

The language displayed in the map, and the following subsequent areas, is according to the language selected in the **Preferences** of the user:

▶ View map for BP records from log
▶ Shell Landing Page
▶ Map Picker in Log Find
▶ Map Picker in Bulk Edit
▶ View Map when invoked from the BP record

> **Note**: eLocation services, which is used for geocoding, does not support internationalization. As a result, the map labels are displayed in English. If a User enters a label in a different language, then the Find feature does not provide the desired results.

Internationalization (BI Publisher Custom Reports)

The Oracle Business Intelligence Publisher (BI Publisher or BIP) Reports support internationalization as follows:

Custom Report (Report File tab) window

If there are no templates available for the report,the Custom Report window (Report File tab) displays according to the default settings.

To upload the translated XLIFF files and report layout, click **Add** to open the Add Template and Files window, enter data in the required fields, and click **OK**.

> **Notes**:
> - The non-RTF templates do not support internationalization.
> - You can change the template type when the template is in Creation stage, only. Once you create a template, you cannot change the template type. Use the report designer to create a new template with the desired template type and remove the template that is no longer needed.

In the Custom Report window (Report File tab), the only editable column is the Default column, which allows you to set the default template by selecting (check-box) the corresponding template.

> **Note**: The system sets the first template, or XLIFF file, that you upload as the default template.

Use **Modify** in the Custom Report window (Report File tab) to modify an existing template. Once you click Modify, the Modify Template and Files window opens which allows you to modify the template and the translated XLIFF file for that template. When finished, click **OK**.

Use **Download** in the Custom Report window (Report File tab) to download a template and the corresponding translated XLIFF file, in a zip file.

External Data Model BI Publisher Reports

If you want to download the data model of a template, select the template and click **Download** in the Custom Report window (Report File tab). When the download is complete for an External BIP report, the data model is included.

Non-RTF type template

BIP supports RTF templates and XLIFF files. If the report designer selects a non-RTF type template, the Browse option in the Modify Template and Files window (Translated XLIFF files for the Template section) will be disabled.

Custom Report (Query tab) window

Queries based on Data Definition (DD) support internationalization and number formatting associated with internationalization according to the **Preferences** settings.

Queries based on Data Views do not support internationalization and formatting because raw data is being used.

Queries based on Ad-Hoc support internationalization and number formatting associated with internationalization according to the **Preferences** settings.

Internationalization (Dashboards)

Shell Dashboards

The Shell Dashboards support Internationalization and number formatting for System Strings as well as Custom Strings according to the **Preferences** settings.

Custom Dashboards

Custom Dashboards have two components:

▶ Data cube
▶ SWF file

The SWF file uses the data cube and the labels are created when the user selects the Download XML option from the Custom Dashboard log and downloads the generated XML. The language used in the generated XML is based on the **Preferences** settings for both System Strings and Custom Strings.

> **Note**: If you change the language, you need to recreate the SWF (Small Web Format) file in order to generate a translated XML. If there are no caching of data in the Dashboard, the translation takes place, but if there caching of data in the Dashboard, then there will be no translation.

Internationalization (Help Files)

Unifier Help files do not support Internationalization and are not translated.

> **Note**: You can translate the Help files, using a third party translator, and display the files based on the your **Preferences** settings. This includes uploading a single PDF with multiple language help information.

Internationalization (Spell Check)

The Spell Check feature does not support Internationalization.

> **Note**: If the language selected in your **Preferences** is not English, the Spell Check option will not be available.

Internationalization (Date and Time Zone Formats)

Date formats

The following additional date formats support Internationalization:

- MM/DD/YYYY
- DD/MM/YYYY
- MM/DD/YY
- DD/MM/YY
- MM-DD-YYYY
- DD-MM-YYYY
- MM-DD-YY
- DD-MM-YY
- DD.MM.YYYY
- YYYY-MM-DD
- MMM/DD/YYYY
- DD/MMM/YYYY
- YYYY/MMM/DD
- M/D/YYYY
- M/D/YY
- D/M/YYYY
- D/M/YY
- YY/M/D
- YYYY/M/D
- YY/MM/DD
- YYYY/MM/DD

Time Zone formats

The Time Zone setting is based on the Coordinated Universal Time (UTC) and support Internationalization.

> **Note**: The time format for all dates is: HH:MM AM.

Internationalization (Audit Log)

Within the Audit log, the following columns support Internationalization according to the **Preferences**:

- Event
- Description
- Field

For Event, Description, and Field columns, System Strings are and Custom Strings can be translated.

Unifier Activity Manager

Unifier enables you to create, consolidate, and monitor activities that must be completed on a schedule by way of the **Activity Manager**.

> **Note**: Unifier also 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**.

Activity Manager Module

To access the **Activity Manager** module, go to your project or shell in user mode and from the left-hand Navigator click **Activity Manager**.

For details about the Activity Manager, Rate Sheet, and Master Rate Sheet, refer to the *Unifier Managers User Guide*.

In This Section

Activity Manager Permissions

You can use the following options to grant permission to **Activity Sheet** under **Activity Manager** node.

Access Control

For **Activity Sheet**, go to **Company Workspace** > **Admin** mode > **Access Control** > **User Mode Access** > **Shells / Projects (Standard)** > **Activity Sheet**.

Grant any of the following available permissions:

- **Get Data**

  If enabled, the user will be able to take action 'Get Data' for system **Activity Sheet** which will update the system **Activity Sheet** from P6.

  When enable, the **View** permission will be enabled, automatically. If you deselect the **View** permission, Unifier deselects the **Get Data** permission. You cannot assign the **Get Data** permission without the **View** permission, but you can assign the **View** permission without the **Get Data** permission.

- **Send Data**
- **View**

  If enabled, the user will be able to view the **Activity Sheet** node along with the activity sheets present in that node (if any).

For **Rate Sheet**, go to **Company Workspace** > **Admin** mode > **Access Control** > **User Mode Access** > **Shells / Projects (Standard)** > **Rate Sheet**.

Grant any of the following available permissions:

- ▸ **Full Access**
- ▸ **Create**

  If enabled, the user can create a **Rate Sheet**.

- ▸ **View**

  If enabled, the user will be able to view the **Rate Sheet** node at Company Workspace along with the **Master Rate Sheet** present in that node (if any).

Permission Templates

For **Activity Sheet**, go to **Company Workspace** > **Admin** mode > **Standards & Libraries** > **Permission Templates**.

Open the template, click the **Permissions** tab, and assign permissions.

Under **Modules For** section, scroll to **User Mode Access** > **Shells / Projects (Standard)** > **Activity Sheet**, and assign permissions. See the description of permissions under Access Control, above.

For **Rate Sheet**, go to **Company Workspace** > **Admin** mode > **Standards & Libraries** > **Permission Templates**.

Open the template, click the **Permissions** tab.

Under **Modules For** section, scroll to **User Mode Access** > **Shells / Projects (Standard)** > **Rate Sheet**, and assign permissions. See the description of permissions under Access Control, above.

Managing Personal Information in Unifier

In This Section

About Consent Notices (Administrator)

Consent notices inform users how personal information (PI) is collected, processed, stored, and transmitted along with details related to applicable regulations and policies. Consent notices also alert users that the action they are taking may risk exposing PI. Unifier helps you to ensure that you have requested the appropriate consent to collect, process, store, and transmit the PI your organization holds as part of Unifier data. Consent notices are switched *off* by default in Unifier.

Consent notices should:

▶ be written in clear language which is easy to understand.
▶ provide the right level of detail.
▶ identify the purpose and legal basis for your collection, processing, storage, and transmission of PI.
▶ identify whether data will be transferred to named third parties.
▶ identify PI categories and list the data which will be collected, processed, stored, and transmitted.

> **Note**: If an administrator provides consent on behalf of other users, it is the administrator's responsibility to ensure the consent has been provided by the users through other means.

About Personal Information

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

In Unifier, the custom data, which might include personal information, is also stored when a customer:

▶ Configures Unifier to store, or collect, data in a business process form (BP form).
▶ Configures Unifier to store, or collect, data in other modules.

▶ Adds additional fields to the forms that collects the users' information, during the user creation process.
▶ Uploads documents that contain user information.

Personal information may be visible in multiple areas of Unifier, including but not limited to:

▶ User administration
▶ Records in various business processes
▶ Tasks
▶ Documents
▶ Reports
▶ Dashboards

Personal information may be at risk of exposure in multiple areas of Unifier, including but not limited to:

▶ Dashboard or custom prints
▶ Reports
▶ Documents
▶ Unifier Web Services
▶ Unifier mobile

Cookies in Unifier

When using Unifier, the server may generate cookies and send them to the user's browser. The user's machine stores the cookies, either temporarily by the browser, or permanently until they expire or are removed manually.

Each user that signs in to Unifier web will see a notification banner (Cookies in Unifier) that notifies the user that Unifier uses cookies. This banner has a link to the Unifier cookie policy which explains what information is being tracked by way of cookies. The user must click **Got It** in order to access the rest of the Unifier application.

Oracle might use cookies for authentication, session management, remembering application behavior preferences and performance characteristics, and to provide documentation support. Also, Oracle might use cookies to remember your log-in details, collect statistics to optimize site functionality, and deliver marketing based on your interests.

Permission Control for Consent Notice

You can assign **Consent Notice** permissions in the following permissions-related modules:

▶ **Access Control**
  1. Go to **Company Workspace** (**Admin** mode) and click the **Access Control** node.
  2. Click to expand **Administration Mode Access**.
  3. Click to expand **Consent Notice**.
▶ **User Administration**
  1. Go to **Company Workspace** (**Admin** mode) and click the **Access Control** node.
  2. Click to expand the **User Administration**.

3. Assign through **Company Users**, **Partner Users**, or **Groups** sub-nodes.

▸ **Standards & Libraries**
1. Go to **Company Workspace** (**Admin** mode) and click the **Access Control** node.
2. Click to expand **Standards & Libraries**.
3. Assign through **Permission Templates** sub-node.

Permissions can be given by anyone who has access to the nodes.

Users who have the **Modify** permission will be able to modify the setup and other details related to **Consent Notice**, for either user consent or bidder consent.

If a user has only the **View** permission for the **Consent Notice** node, then the user will have only permission to view the setup and will not be able to make any edits to the consent notice setup or other details.

Your Responsibilities

Information security and privacy laws can carry heavy penalties and fines for organizations which do not adequately protect PI they gather and store. If these laws apply to your organization, it is your responsibility to configure consent notices before they are required. You should work with your data security and legal teams to determine the wording of the consent notices you will configure in Unifier.

If a consent notice is declined, it is your responsibility to take any necessary action. For example, you may be required to ensure that data is not stored or shared.

Personal Information (PI) Data in Unifier

PI may be visible in multiple areas of Unifier, including but not limited to user administration, business process workflows, assignments, work products and documents, reports, user defined fields, codes, calendars, project websites, and timesheets.

PI may be at risk of exposure in multiple areas of Unifier, including but not limited to business process workflows, assignments, work products and documents, reports, user defined fields, codes, calendars, project websites, and timesheets.

As part of Unifier Cloud Services, you may be using Oracle Identity Cloud Service ("Oracle IDCS") to manage your user access and entitlements across a number of cloud and on-premises applications and services. If you are using or accessing Oracle IDCS, you are responsible for deleting your details and data from the Oracle IDCS environment. You are responsible for retrieving your content in Oracle IDCS during your applicable services period.

Configuring Consent Notices for Unifier

To configure Consent Notices for Unifier:

1) Go to the **Company Workspace**.
2) Switch to **Admin** mode.
3) Click **Consent Notice** to expand the node.

The **Consent Notice** node can be seen by the site administrator (on-premises customers only and in the system admin mode) and by the default company contact (in the respective company).

You can manage the **Consent Notice** in all Unifier environments (Development, Test, and Production), independently.

You can see the status of consent acceptance for users. You can also reset consent acceptance for all users if there is a need to regain consent after a consent notice has changed.

The **Consent Notice** node has the following sub-nodes:

▶ **User Consent**

Use this sub-node to set up consent notice for the web, mobile, self-service, portal, and Unifier /m sign-ins.

   ▸ **Consent Status**

   Use this sub-node to audit and track the users who have accepted the terms.

▶ **Bidder Consent**

Use this sub-node to set up consent notice for the bidder portal sign-in.

   ▸ **Consent Status**

   Use this sub-node to audit and track the bidders who have accepted the terms.

If you enable consent notices, you must enter consent notice text. Work with your data security and legal teams to determine the wording of the consent notices. If no content is detected, then Unifier displays the message: *The default consent notice is required if the consent notice option is enabled.*

Configuring Consent Notices for User Signing In through Web

1) Go to the **Company Workspace**.
2) Switch to **Admin** mode.
3) Click **Consent Notice** and then click **User Consent**.

   The **Setup** tab, which is open by default, has the following options:

Enable Consent Notice

This option is selected by default. You can use this option to enable the consent notice for signing in to Unifier through the web, self-service portal, and mobile device.

Default Consent Notice

This option enables you to enter the default consent notice for the environment when the consent notice is enabled. You should work with your data security and legal teams to determine the wording of the consent notices you will configure in Unifier. You can enter the consent message (text) into the system directly as formatted text or HTML text.

> **Note**: Oracle does not recommend direct copy-paste of text from external sources in the provided editor for consent notices because direct copy-paste from external sources impacts the behavior of text seen for users. Copy-paste of text from a Word document or a pdf file is supported in the provided editor.

If you click **Save** without entering the consent notice, Unifier displays the message: *The default consent notice is required if the consent notice option is enabled.*

> **Note**: When you set the consent notice in this node, the consent notice will be applicable to both the web and mobile sign-ins.

Send notifications when users reject the consent notice

This option enables you to set users or groups to be notified when a user rejects the consent notice.

Cancel

Enables you to undo all the changes that you have made across all tabs. Users who have View permission will not see this option.

Save

Enables you to save all the changes that you have made across all tabs. Users who have View permission will not see this option.

Preview

Enables you to preview the content of the consent agreement.

Other tabs are language specific consent notices that are supported in Unifier. If you enter content for a specific language then the language specific consent notice will be displayed to the users based on the user preferences for language. For example, when the language preference (Preferences) is set to Dutch, and the Dutch consent notice is not entered, the user will see the default consent notice content when signing in to Unifier (web or mobile). The Dutch consent notice will be seen by the user only when a Dutch consent is entered.

Auditing Consent Notices for Unifier Users Signing In through Web

To audit consent status for users signing in through web:

1) Go to the **Company Workspace**.
2) Switch to **Admin** mode.
3) Click **Consent Status** sub-node to display the log.
4) Review the status for each user.

You can use the **Consent Status** sub-node to track user acceptance.

Unifier tracks users based on the following responses to the consent notice:

▶ Accepted
▶ Rejected
▶ Not Responded

By default, all users are tracked as *Not Responded*. When users sign in to Unifier through web/mobile and accept or reject the consent notice, Unifier tracks their responses and assigns a status accordingly.

If you disable the consent notice option after it was enabled in an environment, Unifier will not reset the tracking status for web/mobile consent and tracking statuses will remain as they were.

The following toolbar options are displayed on the **Consent Status** log:

View

Enables you to see the following out-of-the-box (OOTB) views:

‣ All
‣ Group by Consent Status

When the view is changed to Group by Consent Status, by default the groups will be collapsed and an additional toolbar option of Expand/collapse will be displayed.

Search

Enables you to find information about any user or group by way of:

‣ Name
‣ Email Address
‣ Title
‣ Company
‣ Status
‣ Record Number

Find on page

Enables you to filter the contents of the log.

Print

Enables you to print the contents of the log. Select from the following options:

‣ Print
‣ Export to CSV
‣ Export to Excel

Reset Accepted Consent

This option is available when the consent notice option is enabled. This option enables you to reset the **Accepted** consent status to **Not Responded** when there are changes in the agreement. Users who have View permission will not see this option.

The following columns are displayed on the **Consent Status** log:

‣ Name
‣ Email Address
‣ Title
‣ Company
‣ Record Number
‣ Status
‣ Time

Configuring Consent Notices for Bidders Signing In through Web

The site administrator (in the system admin mode) and the default company contact (in the respective company) can enable the consent notice for bidders by using the **Bidder Consent** node. If you enable consent notices, you must enter consent notice text. If no content is detected Unifier displays the message: *The default consent notice is required if the consent notice option is enabled.*

1) Go to the **Company Workspace**.
2) Switch to **Admin** mode.
3) Click **Consent Notice** to expand the node.
4) Click **Bidder Consent** sub-node to display the log.

   The **Setup** tab, which is open by default, has the following options:

   Enable Consent Notice

   This option is selected by default. You can use this option to enable the consent notice for signing in to Unifier through the Bidder portal.

   Default Consent Notice

   This option enables you to enter the default consent notice for the environment when the consent notice is enabled. You can enter the consent message (text) into the system directly, as formatted text or HTML text. This is a required field and you must enter the consent notice. If you click **Save** without entering the consent notice, Unifier displays the message: The default consent notice is required if the consent notice option is enabled.

   > **Note**: When you set the consent notice it will be applicable to both the web and mobile sign-ins.

   Send notifications when users reject the consent notice

   This option is selected by default. This option enables you to set users or groups to be notified when a user rejects the consent notice.

   Cancel

   Enables you to undo all the changes that you have made across all tabs. Users who have View permission will not see this option.

   Save

   Enables you to save all the changes that you have made across all tabs. Users who have View permission will not see this option.

   Preview

   Enables you to preview the content of the consent agreement.

Other tabs are language specific consent notices that are supported in Unifier. If you enter content for a specific language, then the language specific consent notice will be displayed to the users, based on the user preferences for language. For example, when the language preference (Preferences) is set to Dutch, and the Dutch consent notice is not entered, the user will see the default consent notice content when signing in to Unifier (web or mobile). The Dutch consent notice will be seen by the user only when a Dutch consent is entered.

Auditing Consent Notices for Unifier Bidders Signing In through Web

To audit consent status for bidders signing in through web:

1) Go to the **Company Workspace**.
2) Switch to **Admin** mode.
3) Click the **Consent Status** sub-node to display the log.
4) Review the status for each user.

You can use the **Consent Status** sub-node to track the bidders who have accepted the terms through signing in by way of bidder sign-in.

Unifier tracks bidders based on the following responses to the consent notice:

▸ Accepted
▸ Rejected
▸ Not Responded

By default all the bidders seen are tracked as Not Responded. The bidders listed have been invited to bid by way of invitations. For existing and upgrade users, all bidders who received an invitation to bid are listed in the log.

When users sign in to Unifier through bidder portal and accept or reject the consent notice, Unifier tracks their responses and assigns a status accordingly.

The log shows all bidders with Not Responded status before the web consent is enabled for first time.

The following toolbar options are displayed on the **Consent Status** log:

View

Enables you to see the following out-of-the-box (OOTB) views:

▸ All
▸ Group by Consent Status

When view is changed to Group by Consent Status, by default the groups will be collapsed and an additional toolbar option of Expand/collapse will be displayed.

Search

Enables you to find information about a user or group by way of:

▸ Name
▸ Email Address
▸ Title
▸ Company
▸ Status
▸ Record Number

Find on page

Enables you to filter the contents of the log.

Print

Enables you to print the contents of the log by way of the following options:

▸ Print

‣ Export to CSV

‣ Export to Excel

Reset Accepted Consent

This option is available when the consent notice option is enabled. This option enables you to reset the **Accepted** consent status to **Not Responded**, for example if there are changes in the agreement.

The following examples explain how Unifier administers consent notices in the case of an email address or user ID changes:

Example One

The email address of vendor record V1 was changed from Email1 to Email2, and the user id Email1 was assigned to vendor record V2.

Unifier displays a new entry for the user ID (in the Consent Status log) after the invitation is sent to the new email address. Unifier *retains* the consent agreement provided to the previous user ID.

Example Two

The email address of vendor record V1 was changed from Email1 to Email2, and the user id Email1 has left the organization.

Unifier displays a new entry for the user ID (in the Consent Status log) after the invitation is sent to the new email address. Unifier *removes* the consent agreement provided to the previous user ID, and the entry for that user ID is not displayed in the Consent Status log.

The following columns are displayed on the **Consent Status** log:

‣ Name

‣ Email Address

‣ Title

‣ Company

‣ Record Number

‣ Status

‣ Time

Translating Custom Strings (Internationalization)

The content of the material created by the Users (also known as custom strings) can be translated into different languages.

Examples

Business Process (BP) name, Data Element (DE) label, drop-down labels, radio button, navigation log names, and multi select values

> **Note**: The user input data in Business Processes (BPs), attribute forms of various Managers, and other similar elements, when entered at runtime, cannot be translated.

The Internationalization node (a sub-node of Configuration node) contains the custom strings that the users have developed. The custom strings that are listed in the Internationalization Log window are set to provide the necessary details for translators.

In This Section

Internationalization Node Properties

To access the Internationalization node:

1) Sign in to **Unifier**.
2) Go to **Company Workspace**.
3) Switch to **Admin** mode.
4) Click **Configuration** node to expand.
5) Click **Internationalization** to open the **Configuration - Internationalization** log window.

Within the log, you can:

▸ Determine which log item qualify for custom strings translation.
▸ Select to see 100 or 200 items per page.
  Use the **Display** drop-down list on top right-hand side of the log window.
▸ Change the order of the items in the **Source Type** column.
▸ Change the sequence of the languages displayed in the log as explained in the following section.
▸ See the list of all Custom Strings available for translation.

To select which languages must be displayed in the log list:

1) From the **Configuration - Internationalization** log window toolbar, click **Language Log** to open the **Internationalization Log - Default Language** window. This window has the following tabs:

1. **Languages**

   Displays the following information:

   - Columns: Displays the column number (in the **Configuration - Internationalization** log) corresponding to a particular language.
   - Language: Displays the name of the language.
   - Status: Active (for languages that are available for use) or Inactive (for languages that are not available for use). Click on the cell to change the status. The **General** tab in the **Modify Translation String** window will list languages with Status = Active to enable you to modify the translation strings for each of those languages.
   - Default: Enables you to select one language as the default language for Unifier.

2. **Columns**

   In this tab, only languages that have been marked as **Active**, in the **Languages** tab, will be displayed.

   - Column: Displays the column number (in the **Configuration - Internationalization** log) corresponding to a particular language.
   - Language: Displays the name of the language.
   - Show Language: Enables you to select which languages will be displayed in **Configuration - Internationalization** log and elsewhere where the language is available for use.

To change the sequence of the languages displayed in the log:

1) To rearrange the order of languages displayed on each row in the log list, click to select the language, and click **Move Up** or click **Move Down**.

   Alternatively, you can double-click the number next to the language, edit the number, and click Update Order.

2) When finished, click **Update Order**, **Apply**, and **OK**.

3) Use **Refresh** to update the list in the Internationalization Log window. The following explains the refresh options:

   ▸ *Strings*: Use this option to refresh the Internationalization log with the source strings belonging to a particular source type. The system prompts you to select the Source Type of the strings that need to be refreshed.

   When you select Strings, the Refresh Strings window opens, which allows you to select, or deselect the source types that you want the system to display. Click OK to save your changes, Cancel to terminate the change.

   ▸ *All Strings*: Use this option to refresh the Internationalization log with *all* custom strings from *all* source types. This operation might take a few minutes.

   When you select All Strings, a Confirmation message window opens explaining the system status. Review the message and proceed as desired.

▸ History: Use this option to see the history of refresh requests: Requestor, Source Type, Submit Date, End Date, and Status. You can view History details after the refresh is complete.

The following explains the function of each toolbar option in the Internationalization Log window:

▸ **Open**: This option allows you to open the translated custom string.

▸ **Export**: This option allows you to export strings for bulk translation.

▸ **Import**: This option allows you to import a file that is ready (translated) into Unifier, or log.

▸ **Delete**: This option allows you to delete translated custom strings.

   Note: You can delete a custom string *only* if it has not been used elsewhere.

▸ **Find**: This option allows you to filter out the custom strings that are available in the log.

> **Note**: When you select this option, you must select a source type and provide search operator for the string that you want to find.

▸ **Columns**: This option allows you to set the sequence of log columns.

▸ **Refresh**: This option allows you to refresh the items in the log with new or modified custom strings that qualify for custom translation.

The following explains the function of each menu option in the Internationalization Log window:

> **Note**: You can perform the functions of menu options using the toolbar.

▸ **File**: This option allows you to perform: Open, Export, Import, and Refresh

▸ **Edit**: This option allows you to perform: Delete

▸ **View**: This option allows you to conduct a search: All, Find

▸ **Help**: This option allows you to access: Unifier Help, Unifier Library (documentation), and About Unifier information

Displaying Custom Strings and System Strings

The following describes how Custom Strings and System Strings display in Administration mode and while defining Sheets and User Define Reports (UDRs).

The contents that appear in the Unifier application UI (also known as System Strings) cannot be modified by the Users. The System Strings are available in different languages, per user preferences.

Example

Sign In and Terms and Condition pages, Menus, Alerts, and Errors

In contrast, the content of the material created by the Users (also known as Custom Strings) can be translated into different languages.

Example

Business Process (BP) name, Data Element (DE) label, pull-down values, radio button, text in lines, navigation log names, and multi select values

System Strings are translated according to the user preferences, set in the User Preferences window.

Custom Strings are translated according to the specifications added to the source string, set in the XLIFF file.

When a combination of System and Custom strings are used (concatenation), for example, in a form, the System String portion is translated according to the user preferences, set in the User Preferences window, and the Custom String portion is translated according to the specifications added to the source string, set in the XLIFF file. As a result, it is possible to see an object having one field displayed in one language and another field displayed in another language.

In general, the translated Custom Strings *cannot* be displayed, or seen, while in the user is in Admin mode, except for:

▶ Translated Custom Strings for Attribute forms.

   Example

   If there is a Data Element (DE) called, "Building Name" in an Attribute form (Shell), and if the German translation of the DE exists, then the details page displays the German translation in Admin mode.

▶ Pages that are shared between the User mode and Admin mode.

   Example

   If translated Custom Strings are available, then the pages display the translated Custom Strings in Admin mode and are synchronized when switching to the User mode, as is the case with:

   - Code-based Configurable Manager- sheet templates
   - Record-based Configurable Manager - sheet templates
   - Asset Class templates
   - Shell Dashboard templates
   - User Define Reports (UDRs) templates

Administration Mode

Administration mode

When in the Administration mode, the contents that appear in the Unifier application UI (also known as System Strings) cannot be modified by the Users. The System Strings are available in different languages, per user preferences.

   Example

   Sign In and Terms and Condition pages, Menus, Alerts, and Errors

In contrast, the content of the material created by the Users (also known as Custom Strings) can be translated into different languages.

   Example

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Custom Strings are translated according to the specifications added to the source string, set in the XLIFF file.

When a combination of System and Custom strings are used (concatenation), for example, in a form, the System String portion is translated according to the user preferences, set in the User Preferences window, and the Custom String portion is translated according to the specifications added to the source string, set in the XLIFF file. As a result, it is possible to see an object having one field displayed in one language and another field displayed in another language.

In general, the translated Custom Strings *cannot* be displayed, or seen, while in the user is in Admin mode, except for:

▸ Translated Custom Strings for Attribute forms.

   Example

   If there is a Data Element (DE) called, "Building Name" in an Attribute form (Shell), and if the German translation of the DE exists, then the details page displays the German translation in Admin mode.

▸ Pages that are shared between the User mode and Admin mode.

   Example

   If translated Custom Strings are available, then the pages display the translated Custom Strings in Admin mode and are synchronized when switching to the User mode, as is the case with:

   ▪ Code-based Configurable Manager- sheet templates

   ▪ Record-based Configurable Manager - sheet templates

   ▪ Asset Class templates

   ▪ Shell Dashboard templates

   ▪ User Define Reports (UDRs) templates

Assigning Permissions

The Company Administrator assigns access permissions to the Internationalization node, and the permissions can be set for both Users and Groups.

To proceed with assigning permissions, go to **Configuration** node > **Access Control** (Admin mode), and select the Internationalization module to change the access settings. Alternatively, you can use the Permission tab of the User properties, also.

There are two types of permissions available for the Internationalization node:

▸ Configure
▸ View

Users who have *Configure* permission can translate the custom strings, and Users who have *View* permission can view the translated custom strings, *only*.

To assign View permission to a User, *disable* the following options in the Modify Translation String window:

1) **Import**, in the toolbar and menu.
2) **Delete**, in the toolbar and menu.

3) **Columns**, in the toolbar and menu.

4) When finished, click **Apply** and then **OK**.

Translating Methods

There are two methods available in Unifier for translating custom strings:

▶ User Interface

Use this translation method when you add or modify a limited number of custom strings, only.

▶ Export/Import

Use this translation method when you need to translate a large number of custom strings. This method is particularly useful to professional product-translator because the system provides a file format (.XLIFF) that streamlines the translation efforts (Export). After the translations are completed, the Company Administrator, or a User with appropriate permissions, can access the Internationalization node and import the translated file back into Unifier (Import). The translation is done for one language at a time.

To use the User Interface translation method

1) Go to the **Internationalization** node.

2) Select the custom string that you want to translate.

3) Click **Open** from the toolbar to open the Modify Translation String window. The **Source Type** and **Source String** fields are read only.

4) In the **Note** field enter a description explaining the context and usage of the custom string that you are about to translate.

5) Modify, or add to, the existing translations. You can enter multiple languages for the custom string.

6) When finished, click **Apply** and then **OK**.

About Source Type and Source String

Each custom string is unique according to the custom string Source Type and Source String. The Source Type displays the Source String category. Data Structure, uDesigner, and Reports are some of the options under Source Type.

Example

A designers designs a Data Element (DE) with the label: Vendors. The Business Process is also name: Vendors. Since both the DE and BP constitute a design element, the Source Type is: uDesigner.

Language codes

Use the following information to match the language settings:

▶ Chinese (Simplified): zh_CH

▶ Chinese (Traditional): zh_TW

▶ English: en

▶ French: fr

▶ German: de

➤ Italian: it
➤ Japanese: ja
➤ Korean: ko
➤ Portuguese (Brazil): pt_BR
➤ Russian: ru
➤ Spanish: es

To use the Export/Import translation method

1) Go to the **Internationalization** node.

2) Select the custom string that you want to translate.

3) Click **Export** from the toolbar to open the Export Options window.

4) Select values for the following fields:

   ➤ Source Language

   The current language of the custom string. (Example: English)

   ➤ Target Language

   The language that the source custom string has to be translated into. You can select one language, only. (Example: German)

   ➤ Source Type

   To allow you to filter the custom string for export base on a particular Source Type. The drop-down list contains values such as: Data Structure, Reports, etc. (Example: Business Process Setup)

   ➤ Include Translated Strings

   This is an optional parameter. By default, this option is selected.

   - If *selected*, the custom strings (source strings) that are currently translated into the selected language will be exported, also.

   - If *deselected*, only the custom strings (source strings) that are not translated into the selected language will be exported.

5) Click **Export** to open the **File Download** window. The file download operation follows the Unifier standard file download process.

   The exported file is in ".XLIFF" format and the file name contains "Unifier" (Unifier+-+<Language Name>.XLIFF).

   The number of characters allowed in the file name is based on Unifier standard. For supported version of the "XLIFF" file refer to the *Primavera Unifier Tested Configurations* in the Primavera Unifier Documentation Library.

   The exported file contains the following information: ID, Source String, Target Language, and Note.

   The Source String is the base for all translations, the Target Language is the language selected, and the Note is a placeholder, which stores notes for the translators. The source language attribute for the exported file originates from the Source language selection at the time of export.

6) Save the file in your local folder and open the file using a program such as Notepad or WordPad.

7) Open the saved XLIFF file, review the declaration information, and search for <source>. Example:

<source>Assets</source>

8) Enter a new line, include the target language information, and save the file. Example:

<target>Aktiva</target>

9) Change the value of "approved" to "yes." Example:

<trans-unit id="o8oRKk8ZYDv+BJodINqTIBpmz+fhygs3" approved="yes">

10) Proceed to import the file back to Unifier.

When the file is ready, use the Import option to bring the translated file back into Unifier.

1) Go to the **Internationalization** node.
2) Click **Import** from the toolbar to open the Unifier standard File Upload window.
3) Click **Browse**, and import the translated file (Unifier-,Language Name.XLIFF). Basic file replacement and override apply.

At this point, the translated custom strings map to the appropriate language settings and ready to be used.

> **Note**: The Oracle Database column size must not exceed the storage size of 4000 bytes.

Internationalizing Unifier Environments

A translated custom string can be used in Unifier **Development** environment, **Test** environment, and **Production** environment.

You can use the "XLIFF" file across the two environments using the export and import functions.

Workflow

First, export the custom string (translated) using the Export option out of one environment. Then, using the Import option, import the exported custom string (translated) into the other environment.

> **Notes**:
> - The transfer of translated custom strings can be done one language at a time.
> - If a custom string does not exist in the destination environment, then that custom string cannot be used; however, the custom string will be available in the Internationalization Log window.
> - If you add a source string to your source type in the **Development/Test** environment, but this source string does not exist in the **Production** environment, upon exporting the XLIFF file to the **Production** environment, the source string will carry over.

Unifier Mobile Application

The Oracle Primavera Unifier Mobile Application is built specifically for installation and use on mobile devices that use iOS or Android operating system. To get the Unifier Mobile App, you have the following options:

▶ Download it from App Store or Play Store, or

▶ Launch Unifier, click User login name (user ▼), click **Get Unifier Mobile App**, and follow the prompts.

After download, you can scan the QR code to set up Unifier Server URL and user name on your Oracle Primavera Unifier Mobile Application.

> **Note**: If you are in a region without access to the Google Play Store, Apple App Store, or your organization is using a Content Security Service or Mobile Device Management solution and requires that users do not download from the Apple Store or Play Store, submit a Service Request in My Oracle Support to request versions of the Oracle Primavera Unifier Mobile Application for those scenarios.

Important sign in information for on-premises users on non-SSO servers

For on-premises customers on non-SSO server (prior to 19.12.2):

The Unifier mobile app used the Basic Authentication for login while connecting to the Unifier web application deployed on a non-SSO server.

For on-premises customers on non-SSO server (on or after 19.12.2):

Unifier mobile app now uses the Form-based Authentication while connecting to the Unifier web application deployed on a non-SSO server. As a result, you must use the latest version of Unifier mobile app to access app data on your device.

> **Note**: The user preferences, in the Unifier web application, will be effective when you sign in to the Unifier mobile app.

Unifier and Other Oracle Applications

Unifier objects can be integrated with other Oracle applications by way of:

▶ Web Services

Client and server applications that communicate over the World Wide Web's (WWW) HyperText Transfer Protocol (HTTP) and provide a standard means for operation between software applications running on a variety of platforms and frameworks, using XML. For more information about Web Services integration, refer to the *Unifier Integration Interface Guide*.

▶ Oracle Database Gateways

Addressing the needs of disparate data access and making it possible to integrate with any number of non-Oracle systems from an Oracle application. Oracle Database Gateways enable integration with data stores such as IBM DB2, Microsoft SQL Server, Excel and transaction managers like IBM CICS.

Unifier is integrated with the following enterprise applications via Primavera Gateway:

▶ Oracle Primavera Analytics
▶ Oracle Primavera P6
▶ Oracle E-Business Suite (also known as Applications/Apps or EB-Suite/EBS)

As shown below, once all the objects are created and linked to each other, data flows to Unifier (business flows/synchronizations) in this formation: Oracle application/external application > Oracle application/external Provider > Gateway > Unifier Provider > Unifier

Unifier integration with other applications via Gateway
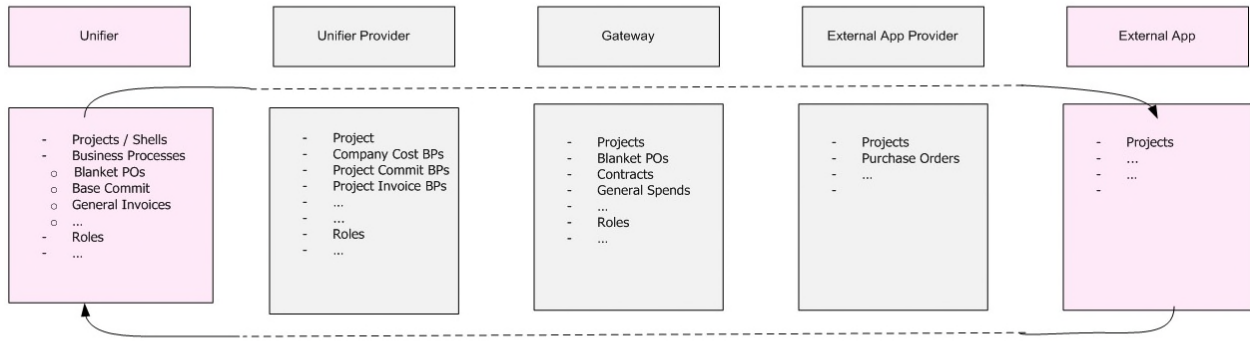
Provider must have a hard-coded (Java-code) link to the corresponding object in Gateway
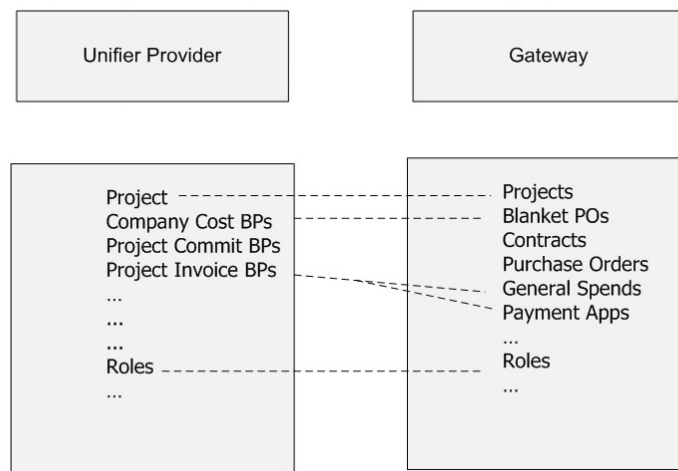
The following sections describe the process in details.

In This Section

Unifier and Primavera Analytics

Analytics provides an in-depth and comprehensive method for analyzing and evaluating:

- Shells
- Project performance
- Project history
- Business Processes (including Vendor analysis)
- Cost Sheet
- Cash Flow
- P6 Summary Sheets
- Generic Cost Sheet
- Space Utilization (from Space Manager)

Configure this section in Unifier for users to ensure they are able to see data within Analytics.

If the **Analytics** module is enabled, the Company administrator can access the **Analytics** module by signing into Unifier and navigating to the **System Modules** node (**Data Structure** > **Administration** mode > **System Modules**).

> **Note**: The System Administrator has to load the Analytics module.

Users can use the Analytics for data input and must have permission in order to be able to access the **Analytics** node. Permissions set in Unifier (**Access Control**) enable users to view the data in Oracle Business Intelligence (OBI) server. Users ability to access OBI server is also set in Unifier.

In This Section

Analytics Node

The Analytics node is located under the Administration node, above the Custom Dashboard node. In Analytics node, you can select publication of Unifier data to Unifier staging tables, map data, and set schedule for periodic publication of Unifier data into Analytics.

> **Note**: A separate ETL process pushes the staging data into STAR which then becomes available in Analytics.

When you click the Analytics node, the log displays predefined set of Unifier modules such as:

▶ Business Processes
▶ Cash Flow
▶ Cost Sheet
▶ Generic Cost Sheet
▶ P6 Summary Sheets
▶ Shells
▶ Space Manager
▶ Vendors

Analytics Log Properties

The Analytics log has two columns which display the Name and the Last Modified Date of the records.

The Analytics log toolbar has the following options:

▶ Open
▶ Schedule
▶ Run History

The Open and Run History options can be accessed from the File menu. The Schedule option can accessed from the Edit menu.

Analytics Log (Business Process) Setup

You can set up Dashboards and Analyses, for Unifier Business Process, in Oracle Business Intelligence Enterprise (OBIE) analyses and select the Business Process data that you want to use for analyses.

When you open a Business Process in the **Analytics** node, you will see the **Analytics - Business Process Setup** window with the following tabs:

▶ Business Processes tab
▶ Custom Fields tab
▶ Data Mapping tab

Business Processes tab

Select Business Processes for Analytics

The **Business Processes** tab allows you to select the Business Process that you want to use in Analytics.

Use the **Add** or **Remove** buttons to add or remove the Business Processes for Analytics. To add a new Business Process for use in Analytics:

1. Click **Add** to open the Select Business Processes for Analytics window that lists all the company-level, Shell-level, and Project-level Business Processes, in alphabetical order.

   Note: This list includes Active and Inactive Business Processes.

2. Select one Business Process, or select as many as you need, and click **OK** to add the Business Process to the log.

> **Note**: After you added the Business Process, that Business Process will no longer be available in the Select Business Processes for Analytics list.

You can remove a Business Process that is published for Analytics. To remove a Business Process for use in Analytics, select the Business Process from the Select Business Processes for Analytics list and click **Remove**. You can delete multiple Business Processes from the list. You can add a removed Business Process for Analytics reporting.   Click **Add** if you want to add a removed Business Process to the list.

If Company Administrator inactivates a Business Process that has been used for Analytics, then this Business Process continues to remain in the Business Processes tab. If you remove a Business Process from the Business Processes tab, data that exists in Analytics, for the removed Business process, remains as is; however, the new data will not be published.

To save space, you can decide not to track the history of facts and dimensions, on a Business Process.

In the **Analytics - Business Processes Setup** window (**Business Processes** tab) you can select a business process and mark to not track the history of the business process data elements (**Track History of Data Elements?** column). By default, all BPs in this tab are selected to have their history tracked. After your initial selection in the **Track History of Data Elements?** column for a BP, if you open the **Analytics - Business Processes Setup** window and go to the **Business Processes** tab and deselect the track history option for a BP, then Unifier will notify you that the BP will no longer maintain the historical data in Analytics.

For a BP with track history option selected, all data mapping changes for the elements of the BP will be recorded as errors in the historical data in Analytics.

> **Note**: The **Track History of Data Elements?** column values will be included in the Configuration Package during export or import.

Custom Fields tab

The Custom Fields tab is available after you add your Business Processes in the Business Processes tab. The Custom Fields tab has two sections:

- ‣ Main Form Elements
- ‣ Line Item Elements

You can specify values in each field to set the number of user-defined fields for Data Mapping. The default values displayed are based on the existing user-defined fields limit that is currently set in Unifier.

The total number of Main Form custom fields cannot exceed 900. Similarly the total number of Line Item custom fields cannot exceed 900.

When entering values in the fields:

- ‣ Use numeric values.
- ‣ Do not use decimal points.
- ‣ Use numbers greater than the default values.

> **Note**: The number of fields specified are bundled as a part of configuration package, if the component has been tagged.

Data Mapping tab

The Data Mapping tab allows you to map the predefined Analytic Business Process fields to a corresponding Unifier Data Element (DE) in the Business Process.

> **Notes**:
>
> - The Data Mapping tab is available after you have added a Business Process, in the Business Processes tab, and clicked Apply or OK.
> - The Data Mapping is done per DE and not per Business Process. All Business Processes added in the Business Processes list tab are included and you do not need to select a specific Business Process for mapping.
> - The fields from both Upper and Detail forms can be mapped in the Data Mapping tab, and you can change mapping of the fields.
> - The workflow data (Steps and tasks), related to any Workflow BP, is also sent to Analytics.
> - The DE of type Rich Text is not available to be mapped to the UDFs from Analytics.

The Data Mapping tab displays the following information:

- Name
- Source
- Data Source
- User Defined Attributes
  - Name
  - Data Type
  - Source
  - Data Source
  - Label

> **Note**: In addition to the system defined fields for Analytics, you can define additional custom fields for Analytics in the User Defined Attribute section.

Name

The Name column is pre-populated and displays the following names:

- Contract Type
- Reason
- Specification Section
- Vendor ID
- Quantity

▶ Spend Category
▶ Unit Cost
▶ Unit of Measure

The names above represent the fields used in OBI. These are read-only fields and you cannot modify them.

All the "Main Form" fields are listed first and are sorted alphabetically within the source.

All the "Line Item" fields are listed after the Main form fields and are sorted alphabetically within the source.

Source

The Source column displays the location of the Data Element (DE) seen in the Data Source. For Business Processes, the DEs can either be from the "Main Form" or the "Line Item."

Data Source

The Data Source column contains a consolidated list of all DEs for all of the selected Business Processes in the Business Processes tab. In addition:

▶ The list of values displayed upon clicking the Data Source drop-down will be those that have a matching data definition as the Name field. When you click the Data Source drop-down list contains a list of values that have a matching Data Definition (DD) as the Name field.

▶ The drop-down list, which requires the Upper form mapping, contains a consolidated list of all Upper form DEs. For example, if there are ten Upper forms from all the Business Processes, and each Upper form has 10 DEs, then the list of DEs displayed in the drop-down list will be a consolidated and unique list of DEs from all the Business Processes.

▶ The drop-down list, which requires the Detail form mapping, contains a consolidated list of all Detail form DEs. For example, if there are twenty Detail forms, and each Detail form has 10 DEs, then the list of DEs displayed in the drop-down list will be a consolidated and unique list of DEs from the Detail forms of all the Business Processes.

▶ The fields displayed in the Data Source drop-down list is a concatenation of DE Label and DE Name, and the DE Name is displayed within parenthesis. For example, `Department(contract_department)`

User Defined Attributes

The User Defined Attributes section of the Data Mapping tab lists the following columns:

▶ Name
▶ Data Type
▶ Source
▶ Data Source
▶ Label

The Label will be based on the selected DE label, but you can change it.

Use the Add, Modify, and Remove to add, modify, or remove user defined attributes.

To modify a user-defined attribute, click to select the attribute, click **Modify**, and modify the fields.

To remove a user-defined attribute, click to select the attribute, click **Remove**, and modify the fields.

To add a user-defined attribute, read the following information:

When you click **Add**, the **Add User Defined Attribute** window opens. This window allows you to select the following mandatory fields:

- **Data Type**
- **Source**
- **Name**
- **Data Source**
- **Label**

> **Notes**:
>
> - A value for the mandatory Label field will be selected by the system.
> - The Label field is populated based on the Data Element that you have selected from the Data Source drop-down list.
> - The Label field is editable and required. You will receive an error message if you leave the Label field blank.
> - If you notice that the value in the Label field has changed, it means that other fields have been updated at one point.
> - Analytics displays the value, if the label is absent.
> - Analytics displays the label, which has the Value/Label pair, in the case of Data Elements (DEs).

The **Data Type** that you select impacts the Name and the Data Source of the user-defined attribute. The **Data Type** field allows you to select the following attributes, only:

- String (default)
- Date
- Numeric

For example, if you select **String** as your Data Type, you can:

- Select from a predefined set of sources from Source drop-down list (Main Form or Line Item).
- Add up to 30 names (User Defined String Fields 1 - 30) as the Name.
- Select from a predefined set of data sources from Data Source drop-down list.
- The content of the Label filed will be selected by the system and according to your other selections.

Analytics Dimension and Fact

The Data Type that you select corresponds to the Analytics fields as follows:

- If the Data Type that you select is String/Date, then your selection corresponds to a Dimension object in Analytics.
- If the Data Type that you select is Numeric, then your selection corresponds to a Fact object in Analytics and are available in the Primavera - Project User Defined, only.

Additional information

▶ If the same DE exists in both Upper form and Detail form, then the DE is displayed for the Upper form fields, as well as the Line Item fields.

▶ If you map a DE for one field, you can map the same DE to another field. You can choose the DEs, per your Company business needs, when setting up the mapping.

▶ If you change the mapping of the fields, for the new records, then the next time the data is published to OBI, the values will be as per the updated fields. If you need to refresh, for all the records, then you need to click the checkbox option in the Schedule tab.

▶ If you delete a DE mapped to an Analytic field, then the Data Source field displays the DE name, only.

▶ If there are any un-mapped fields in the Data Mapping tab, the un-mapped fields appear in the DE list, based on the updated design.

▶ If you delete a Business Process, and click Apply, then the Data Source field displays the DE name, only.

▶ The allowed user-defined attributes is driven by the number that is set in the Custom Fields tab.

▶ Pickers are available for String field mappings for both canned and user defined attributes are as follows:

  ▸ BP Data Picker
  ▸ Shell Data Picker
  ▸ Space Data Picker
  ▸ User Data Picker
  ▸ BP Picker
  ▸ User Picker
  ▸ Shell Picker
  ▸ Space Picker
  ▸ BP Creator
  ▸ P6 Activity Picker

Summary Payment Application (SPA) SOV type BPs

You can perform data reporting in Analytics for Base Commit, Change Commit, and Payment Application Business Processes of SPA SOV type. The system sends the following Cost allocation Line Item details to Analytics:

▶ Cost Code
▶ Cost Name
▶ Short Description
▶ Quantity
▶ Unit Price
▶ Amount

If you need to transfer data from any field (at the Summary level) to Analytics, then you must map the field to a User Defined Field in Line Items of the Business Process. The system sends the mapped field to Analytics as a part of Cost allocation Line Item.

Note: Users can map any field that exist in the Detail form.

The values of the fields in the existing Cost allocation Line Items are retained for the fields that are common to both the Summary and Cost allocation Line Items. The following explains the details:

▶ **Cost Code**

The value of the field in the Cost allocation Line Item is retained. The CBS Picker field does not exist in the Detail Form design.

▶ **Cost Name**

The value of the field in the Cost allocation Line Item is retained. The bi_item field does not exist in the Detail Form design.

▶ **Short Description**

The value of the field in the Cost allocation Line Item is retained.

▶ **Quantity**

The value of the field in the Cost allocation Line Item is retained.

▶ **Unit Price**

The value of the field in the Cost allocation Line Item is retained. The Unit price is auto-populated from the value of the field in the Detail Form and is a read-only field in the Cost allocation Line Item. The value of the field in the Cost allocation Line Item will match the value of the field in the Detail Form.

▶ **Amount**

The value of the field in the Cost allocation Line Item is retained.

Analytics Log (Cash Flow) Setup

You can set up Dashboards and Analyses, for Unifier Cash Flow data, in Oracle Business Intelligence Enterprise (OBIE) analyses and:

▶ Select the Cash Flow names that you want to use for analyses.
▶ Set up the data for the fields related to Cash Flow in the Cash Flow record.

When you open a Cash Flow record in the Analytics node, you will see the Cash Flow Setup window that contains the Cash Flow names defined in Shells. In this window, you can add a Cash Flow record and click Apply to see the Data Mapping tab.

In addition to the system-generated Cash Flow Curves, you can add additional user-defined Cash Flow Curves (total of 10). The User Defined Curves section, in Data Mapping tab of the Cash Flow Setup, displays the additional 5 Cash Flow Curves (User Defined Curves from 6 to 10).

Cash Flow tab

Use the Cash Flow tab to select the Cash Flow names that you want to use in Analytics. Once selected, you can use Add to add the name or Remove to remove a Cash Flow.

To add a new Cash Flow:

1) In the Analytics - Cash Flow Setup window, Cash Flow tab, click Add to open the Cash Flow window, Select Cash Flow for Analytics.

> **Note**: This list includes the available Cash Flow items, from all CBS Shells with Detail Levels of CBS, Summary CBS, and Commitment   in alphabetical order.

2) Select one Cash Flow, or select as many as you need, and click OK to add the Cash Flow to the log.

> **Note**: After you add a Cash Flow, that Cash Flow will no longer be available in the Select Cash Flow for Analytics list.

You can remove a Cash Flow item that is published for Analytics. To remove a Cash Flow item for use in Analytics, select the Cash Flow item from the Select Cash Flow item for Analytics list and click **Remove**. You can delete multiple Cash Flow items from the list. You can add a removed Cash Flow item for Analytics reporting. Click **Add** if you want to add a removed Cash Flow item to the list.

Data Mapping tab (Cash Flow)

The Data Mapping tab allows you to map the predefined Analytic Cash Flow fields to a corresponding Unifier Cash Flow Curve type.

> **Note**: The Data Mapping tab is available after you have added a Cash Flow item, in the Cash Flow tab, and clicked Apply or OK.

The Data Mapping tab displays the following information:

- **Name**: Predefined and represents the fields used in OBI.
  - The names are grouped logically and sorted based on Initial Baseline, Current Baseline, Actuals, Forecast, and User Defined Curves (1 through 10).
  - The drop-down list for the Initial Baseline and Current Baseline includes the items that are based on the Baseline Cash Flow curve type, defined under the Cash Flow data sources (Cashflow Datasources window) in the Standard & Libraries.
  - The drop-down list for the Actuals includes the items that are based on the Spends curve type.
  - The drop-down list for the Forecast includes the items that are based on the Forecast curve type.
  - The drop-down list for the User Defined Curves (1 through 10) includes all the Cash Flow data sources. The items listed are based on the Cash Flow curve type and sorted in alphabetical order.
- **Data Source**: The Cash Flow data sources defined under the Cash Flow > Data Sources node of the Standards & Libraries.
  - The fields displayed in the Data Source drop-down list is a concatenation of the Cash Flow data source name and Cash Flow curve type.

The Analytic field name can be the same as the Data Source name. For example, you can map a User Defined Curve to data source named, "Initial Baseline."

The following is a list of fields that need mapping for Cash Flow:

▶ Initial Baseline
▶ Current Baseline
▶ Actuals (Spends)
▶ Forecast
▶ User Defined Curve 1
▶ ...
▶ User Defined Curve 10

> **Note**: Cash Flow Derive curve is not supported.

Analytics Log (Cost Sheet) Setup

You can set up Dashboards and Analyses, for Unifier Cost Sheet data, in Oracle Business Intelligence Enterprise (OBIE) analyses and select the Cost Sheet column data that you want to use for analyses.

This section explains the following topics:

▶ **Data Mapping - Columns**
▶ **Data Mapping - Cost Attributes**

When you open a Cost Sheet record in the Analytics node, the **Analytics - Cost Sheet Setup** window opens with the following tabs:

▶ **Data Mapping - Columns**
▶ **Data Mapping - Cost Attributes**

The following explains each tab and their respective fields.

Data Mapping - Columns

The **Data Mapping - Columns** tab is divided in two sections:

▶ System-defined columns: Listed on top of the window.
▶ User-defined Columns: Listed under **User Define Columns** section of the window.

The system-defined columns of the **Data Mapping - Columns** tab allows you to map the Cost Sheet Analytic fields to a corresponding Cost Sheet Data Source defined in Unifier.

In addition to the system-defined Cost Sheet columns, you can add additional user-defined columns (total of 20). The **User Defined Columns** section, in **Data Mapping - Columns** tab of the Cost Sheet Setup, displays the additional 10 columns (User Defined Columns from 11 to 20).

The top section of **Data Mapping - Columns** tab (system-defined columns) has the following columns:

▶ **Name**
▶ **Data Source**

The following explains each column.

Name

Lists a series of predefined fields which correspond to the fields used in OBI.

> **Note**: Since the fields under Name are grouped logically, the order displayed are according to the list of fields that need mapping for Cost Sheet.

This is a list of predefined fields:

▶ Estimate
▶ Original Budget
▶ Pending Budget Revisions
▶ Approved Budget Revisions
▶ Revised Budget
▶ Contracts
▶ Purchase Orders
▶ Original Commitments
▶ Forecast
▶ Pending Change Orders
▶ Pending PO Amendments
▶ Pending Commitment Changes
▶ Approved Change Orders
▶ Approved PO Amendments
▶ Approved Commitment Changes
▶ Revised Commitments
▶ Pending Payment Applications
▶ Pending Invoices
▶ Pending Spends
▶ Approved Payment Applications
▶ Approved Invoices
▶ Approved Spends
▶ Actuals Received
▶ Journal Entries
▶ Risks & Issues
▶ Forecast Adjustments
▶ Budget Variance
▶ Remaining Budget
▶ Budget Percent
▶ Commitment Percent

Data Source

Lists the corresponding data source to each field that is listed in the **Name** column. The values in the **Data Source** fields:

▶ Are divided into two sources (*Single Sources* and the *Logical Sources*).
▶ Are sorted in alphabetic order.

➤ Exist in the Cost Sheet for all CBS type Shells.

The lower section of **Data Mapping - Columns** tab (under the **User Defined Columns** section) has the following columns:

➤ **Name**
➤ **Data Source**
➤ **Label**

The following explains each column.

Name

This is a list of predefined columns:

➤ User Defined Column 1
➤ ...
➤ User Defined Column 20

The Analytic field name can be the same as the Data Source name. For example, you can map a User Defined Curve to data source named, "Initial Baseline."

Data Source

➤ The P6 data sources are included under the Single Sources, and the element is included within the parenthesis of the P6 Data Source. For example, `Current Baseline (Planned Cost)`.

➤ In addition to the predefined list displayed, you can add up to 10 additional mappings for the Cost Sheet data sources.

➤ You can pick the same data source for multiple fields.

Label

➤ Labels are required for the User Defined Columns. A red-color asterisk (*/star symbol) appears for the columns that have been mapped to a data source.

> **Note**: Asterisk (*/star symbol) does not appear for a column that has not been mapped to a data source.

➤ For existing mappings of user-defined Cost Sheet columns, the labels are populated based on the data source name.

➤ Labels support non-ISO characters (UTF-8 characters).

➤ If there are no labels, then the data source names will be sent to OBIEE.

> **Note**: Custom String translation is not applied.

➤ When you select a data source for the first time, the label is populated based on the data source name. You can modify the label according to your business need.

➤ The maximum characters allowed in the label field is 50, same as the Cost Sheet Data Source Name.

> **Note**: The system does not perform Label Uniqueness test.

Data Mapping - Cost Attributes

The **Data Mapping - Cost Attributes** tab contains user-defined Attributes, listed under the **User Defined Attributes** section.

To add a new field, click **Add** to open the **Add User Defined Attribute** window. Enter name, source, and label in the following fields:

- **Name**
- **Data Source**
- **Label**

The **Data Type** field is read-only and set as "String" by default. The value in the **Data Type** field determines if the selected field is a Dimension object or a Fact object in Analytics. If the **Data Type** field is "String," then the field is a Dimension object in Analytics.

> **Note**: Only the "String" type field is supported for Cost Code Attributes data mapping in Analytics.

You can add up to 20 String type Data Elements (DEs) from the *Cost Code Attributes Detail Form* as User Defined Attributes.

The **Name** field is a required field and lists User Defined String Field 1 through 20.

- If a name has been selected, for example, User Defined String Field 1, then the list does not include User Defined String Field 1 and starts with User Defined String Field 2.
- If an existing name has been deleted, the name will appear in the list.

The **Data Source** field lists Data Elements (DEs) in the *Cost Code Attributes Detail Form*.

Only DEs with the "String" type Data Definitions (DDs) are displayed in the **Data Source** field. The "String" type DDs in the list are:

- Text Box
- Multiple Text Lines
- Pull-Down Menu
- Radio Buttons
- Multi-select Input

The DDs in the **Data Source** field include the DEs. For example, Description (uuu_cost_description). If a DE that has already been added is deleted from the deployed design, then the DE name will be seen, only.

Unifier populates the **Label** field based on the DE that has been selected in the **Data Source** drop-down list. The **Label** field is a required and editable field, and it will accept non-ISO characters (UTF-8), to support internationalization.

The maximum allowed length is the same as the DE label, and Unifier does not check for label name uniqueness.

Analytics Log (Generic Cost Sheet) Setup

Analytics supports reporting and analyses of data from the various cost attributes in the Generic Cost Sheet of Shells with Generic Cost Codes.

> **Note**: You work with a Generic Cost Sheet in the same way that you work with Cost Sheet (CBS Shells); however, the difference is that the data in the Generic Cost Sheet comes from Generic Shells and sub-shells, but the data for Cost Sheet comes from the CBS Shells.

You can access your Generic Cost Sheet from the Analytics node in Unifier (**Shell** > **Admin** mode > **Analytics** > **Generic Cost Sheet**) and map your Analytics fields to the corresponding Generic Cost Sheet columns.

Double click **Generic Cost Sheet** to open the **Analytics – Generic Cost Sheet Setup** window.

The **Data Mapping** tab (in the **Analytics – Generic Cost Sheet Setup** window) enables you to map the Generic Cost sheet Analytic fields to the corresponding Generic Cost Sheet columns, defined in Unifier. The **Data Mapping** tab has the following fields:

▶ Name
▶ Data Source
▶ Label

The **Data Source** values are the Single Sources and Logical Sources existing in the Generic Cost Sheets of all the Generic type Shells. You can pick the same data source for multiple fields.

The **Label** field is required field for the user-defined columns. The system supports a total of **40** user-defined columns, for the Generic Cost Sheet.

> **Note**: An asterisk (*) appears for columns where mapping has been completed. The asterisk (*) does not appear if the column is not mapped to any data source.

The system populates the **Label** column with the Name column for the data source, as set in the Generic Cost sheet column definition. You can modify the values in the Label column, based on your business needs. The Label column supports non-ISO and UTF-8 characters.

The maximum number of characters allowed for this field is 50, same as the maximum number of characters in the Generic Cost Sheet Data Source Name.

> **Notes**:
> - The system does not support Custom String translation.
> - The system does not perform label uniqueness verification.

Analytics Log (P6 Summary Sheets)

You can set up Dashboards and Analyses, for P6 Summary Sheets, in Oracle Business Intelligence Enterprise (OBIE) analyses and select the P6 Summary Sheets data that you want to use for analyses.

When you open P6 Summary Sheets in the Analytics node, you will see the Analytics – P6 Summary Sheets Setup window with the following tab: P6 Data Sources.

P6 Data Sources tab

The P6 Data Sources tab allows you to select the P6 Data Sources that you want to use in Analytics (P6 Data Sources for Analytics).

Use the Add or Remove buttons to add or remove the P6 Data Sources that you want to use in Analytics.

To add a P6 Data Sources for Analytics:

Click **Add** to open the Select P6 Data Sources for Analytics window and select a P6 data source for Analytics. The following data sources are available to select:

> **Note**: The P6 Data Sources that need to send data to OBIEE are set up here.

- ▸ Current Schedule
- ▸ Customer Sign-Off Baseline
- ▸ Initial Planning Baseline
- ▸ Management Sign-Off Baseline
- ▸ New P6 Data Source for Analytics Testing
- ▸ P6 Testing datasource

These are all the published P6 data sources defined under Standards & Libraries.

When finished, click **Apply** and then **OK**.

You can select more than one data source. To select more than one data source, click one source, click OK, and click to add additional data sources.

> **Note**: Once you add a data source, that data source will not be shown in the Select P6 Data Sources for Analytics window.

Additional information

- ▸ You can use the P6 Summary Sheets that are included in the following types of Unifier CBS Shells for Analytics:
  - ▸ Duration
  - ▸ Resource loaded
  - ▸ Cost loaded

> **Note**: The P6 Summary Sheets for the above data sources will send data to Analytics.

▶ If fields overlap between the CBS Shells and the existing P6 Summary Sheets, then the system-defined fields in the P6 Summary Sheets will be used.

    Example:

    Planned Start and Planned Finish are mapped fields in Unifier CBS Shells; however, these fields will be replaced by the system-defined fields in the P6 Summary Sheets.

▶ Data analysis can be performed on P6-Unifier integrated data. Since there is no user interface (UI) component for the P6 Summary Sheets in Unifier, when Unifier sends data to OBIEE, the details of the P6 Summary Sheets of the selected P6 data source is sent to Analytics. In Analytics, views are created based on the details of the P6 Summary Sheets and the user can see the daily-level data.

Analytics Log (Shells)

You can set up Dashboards and Analyses, for Unifier Shells, in Oracle Business Intelligence Enterprise (OBIE) analyses and select the Shell data that you want to use for analyses.

When you open a Shell in the Analytics node, you will see the Analytics - Shells Setup window with one tab:

    Data Mapping.

The Data Mapping tab is divided in two sections:

▶ System defined and User defined attributes
▶ User Defined Columns

The system defined columns of the Data Mapping tab allows you to map the Shells (called "Projects" in Analytics) Analytic fields to a corresponding Shell attribute Data Element (DE) defined in Unifier.

The top section of the Data Mapping tab displays all the system defined fields in the following columns:

▶ Name
▶ Data Source

Name

Lists a series of predefined, read-only fields, which represent the fields used in OBI.

> **Note**: When the user adds a new user-defined field on a Shell mapping page, the "Name" field displays fields up to 100 (minus the ones used already).

▶ Shell Phase
▶ Anticipated Start
▶ Anticipated Finish
▶ Start

- ▶ Finish
- ▶ Forecast Start Date
- ▶ Forecast Finish Date
- ▶ Planned Start
- ▶ Planned Finish
- ▶ Scheduled Finish
- ▶ Current Budget
- ▶ Original Budget
- ▶ Proposed Budget
- ▶ Address 1
- ▶ Address 2
- ▶ City
- ▶ State
- ▶ State Code
- ▶ Country
- ▶ Country Code
- ▶ Postal code

Data Source

- ▶ Lists all of the Data Elements (DEs), in the Shell attributes, with matching Data Definitions (DDs).
- ▶ The DEs are listed in alphabetical order.
- ▶ The values listed in the drop-down list have a matching DD as in the Name field and includes a consolidated list of all the DEs across all Shell attribute forms. For example, when you select the "Project Start Date," the drop-down list will include all the date fields in all of the Shell attribute forms.

The bottom section of the Analytics - Shells Setup window includes the User Defined attributes/fields presented in the following columns:

- ▶ Name
- ▶ Data Type
- ▶ Data Source
- ▶ Label

Use the Add, Modify, and Remove to add, modify, or remove user defined attributes.

To modify a user-defined attribute, click to select the attribute, click **Modify**, and modify the fields.

To remove a user-defined attribute, click to select the attribute, click **Remove**, and modify the fields.

> **Note**: If you remove a user-defined attribute, the DE name will remain in the list for future use.

To add a user-defined attribute, read the following information:

When you click **Add**, the Add User Defined Attribute window opens. This window allows you to select the following mandatory fields:

‣ Data Type
‣ Name
‣ Data Source
‣ Label

> **Notes**:
>
> ▪ The Label field is populated based on the Data Element that you have selected from the Data Source drop-down list.
> ▪ The Label field is editable and required. You will receive an error message if you leave the Label field blank.
> ▪ If you notice that the value in the Label field has changed, it means that other fields have been updated at one point.

The Data Type that you select impacts the Name and the Data Source of the user-defined attribute. The **Data Type** field allows you to select the following attributes, only:

‣ String (default)
‣ Date
‣ Numeric

For example, if you select **String** as your Data Type, you can:

‣ Add up to 20 names (User Defined String Fields 1 - 20) as the Name.
‣ Select from a predefined set of data sources from Data Source drop-down list.
‣ The content of the Label filed will be selected by the system and according to your other selections.

Dimension and *Fact*

The Data Type that you select corresponds to the Analytics fields as follows:

‣ If the Data Type that you select is String/Date, then your selection corresponds to a Dimension object in Analytics.
‣ If the   Data Type that you select is Numeric, then your selection corresponds to a Fact object in Analytics.

Additional Information

Pickers are available for String field mappings for both canned and user defined attributes are as follows:

‣ BP Data Picker
‣ User Data Picker
‣ Planning Data Picker
‣ User Picker
‣ Location Picker
‣ P6 Activity Picker

▶ Auto-update Status Setup Picker

Analytics Log (Space Manager)

You can set up Dashboards and Analyses, for Space Manager, in Oracle Business Intelligence Enterprise (OBIE) analyses and select the Space Manager data that you want to use for analyses.

When you open the **Space Manager** in the **Analytics** node, you will see the **Analytics - Space Manager Setup** window with one tab: **Space Types**.

The **Space Types** tab contains a list of space type names under the **Space Types for Analysis** section. You can add and remove a Space type using the **Add** and **Remove** buttons on this tab and below the **Space Types for Analysis** section. When finished, click **Apply** and **Ok** to complete the operation.

Adding Space Types

To add new Space Types click **Add** to open the **Select Space Types for Analytics** window. If available, a list of available Space Types that have been deployed in the Company appear in the window, in alphabetical order. The list contains all Active and Inactive Space Types.

Click to select one, or more, Space Types.

Click **OK** to add the selected Space Types to the Space Types log.

Once added:

▶ The selected Space Types do not appear in the Select Space Types for Analytics window.
▶ The Data Mapping - Space Types tab appear.

Click **Apply** to complete the adding operation.

Removing Space Types

You can remove the Space Types that have been published for Analytics. To remove the Space Types, click to select one, or more, Space Types and click **Remove**. Once removed:

The selected Space Types do not appear in the Select Space Types for Analytics window.

If you want to add removed Space Types, read the instructions in the Adding Space Types topic.

Working with Space Types

If you (Company Administrator) inactivate a space type, and the inactivated space type was used for Analytics, then the inactivated space type remains in the Space Types tab.

If a published space type is removed from the Space Types tab, the data that exists in Analytics (for the removed space type) remains as is.

> **Note**: Added new data will not be published.

If an unpublished space type is removed from the Space Types tab, then no information related to the space type, and Level, is sent to Analytics.

The following sections explain the following tabs that appear after you add Space Types:

▶ Data Mapping - Space Types tab
▶ Data Mapping - Level tab

Data Mapping - Space Types Tab

The **Data Mapping - Space Types** tab appears after you add **Space Types**, and it enables you to add custom fields, from various Space Types, to use in Analytics. You can use this tab to map the Analytics field to the corresponding **Space Types** field. The **Data Mapping - Space Types** tab contains a list of user-defined attributes under the **User Defined Attributes** section. The **User Defined Attributes** section is a log that lists the following fields for each user-defined attributes:

▶ **Name**
▶ **Data Type**
▶ **Data Source**
▶ **Label**

All the fields mentioned above are read-only fields. You can add, modify, and remove user-defined attributes using the **Add**, **Modify** and **Remove** buttons on this tab.

Adding new user-defined fields

To add new user-defined fields, click **Add** to open the **Add User Defined Attribute** window and enter values in the following required fields:

▶ **Data Type**
▶ **Name**
▶ **Data Source**
▶ **Label**

About Data Type

The values for Data Type field are:

▶ *String*
▶ *Date*
▶ *Numeric*

When you select a Data Type, you set the value of the of the field as either a **Dimension** or a **Fact**. If you select the Data Type as **String**, or **Timestamp**, then the field will be a **Dimension** object in Analytics. If you select the Data Type as **Numeric**, then the field will be a **Fact** object in Analytics.

Data Type	Analytics
String	Dimension
Date	Dimension
Numeric	Fact

Adding new user-defined fields (custom fields) for Data Type: String

If you select the Data Type as **String**, then up to 20 String type Data Elements can be added from the Space Detail Form, as user-defined attributes.

To add new user-defined fields (custom fields) for **String** Data Type, click **Add** to open the **User Defined Attribute** window and enter values in the following required fields:

Name

The **Name** drop-down list contains values from "User Defined String Field 1" to "User Defined String Field 20." If a name has already been selected, then the name is not listed in the Name drop-down list.

> Example
>
> If the "Department" field has been added as a "User Defined String Field 1," then the "Name" drop-down list does not display the "User Defined String Field 1."
>
> If a previously added field has been deleted, then that Name is displayed in the Name drop-down list.

Data Source

The **Data Source** drop-down list contains a list of Data Elements from the Space Detail Form.

If you select the Data Type as **String**, the Data Elements in the Data Source drop-down list are:

- ▸ Strings and Integer Pull Downs
- ▸ Integer and String Radio Buttons
- ▸ Check Boxes
- ▸ Test Data Elements

There are no Pickers listed/available. The Data Source field displays a series of interconnected Data Element names and Data Element labels in the following format: DE Label(DE name). For example, `Project Type(prjt_type)`. If a previously added Data Element is deleted from the Deployed design, then the Data Element name is displayed, only.

Label

The **Label** field is populated based on the Data Element that you select in the Data Source. You can modify the value of this field with non-ISO characters (UTF-8), in order to support internationalization, only. The maximum allowed length is similar to Data Element label. The system does not perform a label uniqueness verification.

Adding new user-defined fields (custom fields) for Data Type: Date

If you select the Data Type as **Date**, then up to 10 "Date" Data Elements can be added from the Space Detail Form, as user-defined attributes.

To add new user-defined fields (custom fields) for **Date** Data Type, click **Add** to open the **User Defined Attribute** window and enter values in the following required fields:

Name

The **Name** drop-down list contains values from "User Defined Date Field 1" to "User Defined Date Field 20." If a name has already been selected, then the name is not listed in the Name drop-down list.

Example

If the "Project Commission Date" field has been added as a "User Defined Date Field 1," then the "Name" drop-down list does not display the "User Defined Date Field 1."

If a previously added field has been deleted, then that Name is displayed in the Name drop-down list.

Data Source

If you select the Data Type as **Date**, the Data Elements in the Data Source drop-down list are:

▶ Date
▶ Date only Picker

The Data Source field displays a series of interconnected Data Element names and Data Element labels in the following format: DE Label(DE name). For example, `Project Archive Date(prjt_arc_date)`. If a previously added Data Element is deleted from the Deployed design, then the Data Element name is displayed, only.

Label

The **Label** field is populated based on the Data Element that you select in the Data Source. You can modify the value of this field with non-ISO characters (UTF-8), in order to support internationalization, only. The system does not perform a label uniqueness verification.

Adding new user-defined fields (custom fields) for Data Type: Numeric

If you select the Data Type as **Numeric**, then up to 40 numeric data elements can be added from the Level Detail Form, as user-defined attributes.

To add new user-defined fields (custom fields) for **Numeric** Data Type, click **Add** to open the **User Defined Attribute** window and enter values in the following required fields:

Name

The **Name** drop-down list contains values from "User Defined Date Field 1" to "User Defined Date Field 40." If a name has already been selected, then the name is not listed in the Name drop-down list. For example, if the "Total Count" field has been added as a "User Defined Date Field 1," then the Name drop-down list does not display "User Defined Date Field 1." If a previously added field has been deleted, then that Name is displayed in the Name drop-down list.

Data Source

If you select the Data Type as **Numeric**, the Data Elements in the Data Source drop-down list are the Data Elements found on the Space Detail Forms and are:

▶ Integer
▶ Currency
▶ Decimal Amount

There a no Integer Pull Downs, Integer Radio Buttons, and Integer Check Boxes. The Data Source field displays a series of interconnected Data Element names and Data Element labels in the following format: DE Label(DE name). For example, `Contract Amount(con_amt)`. If a previously added Data Element is deleted from the Deployed design, then the Data Element name is displayed, only.

Label

The **Label** field is populated based on the Data Element that you select in the Data Source. You can modify the value of this field with non-ISO characters (UTF-8), in order to support internationalization, only. The maximum allowed length is similar to Data Element label. The system does not perform a label uniqueness verification.

Data Mapping - Level Tab

The **Data Mapping - Level** tab appears after you add **Space Types**, and it enables you to add custom level/floor fields, from various Levels, to use in Analytics. You can use this tab to map the Analytics field to the corresponding **Levels** field.

The **Data Mapping - Level** tab contains a list of user-defined attributes under the **User Defined Attributes** section. The **User Defined Attributes** section is a log that lists the following fields for each user-defined attributes:

▶ **Name**
▶ **Data Type**
▶ **Data Source**
▶ **Label**

All the fields mentioned above are read-only fields. You can add, modify, and remove user-defined attributes using the **Add**, **Modify** and **Remove** buttons on this tab.

Adding new user-defined fields

To add new user-defined fields, click **Add** to open the **Add User Defined Attribute** window and enter values in the following required fields:

▶ **Data Type**
▶ **Name**
▶ **Data Source**
▶ **Label**

About Data Type

The values for Data Type field are:

▶ *String*
▶ *Date*
▶ *Numeric*

When you select a Data Type, you set the value of the of the field as either a **Dimension** or a **Fact**. If you select the Data Type as **String**, or **Timestamp**, then the field will be a **Dimension** object in Analytics. If you select the Data Type as **Numeric**, then the field will be a **Fact** object in Analytics.

Data Type	Analytics
String	Dimension

Data Type	Analytics
Date	Dimension
Numeric	Fact

Adding new user-defined fields (custom fields) for Data Type: String

If you select the Data Type as **String**, then up to 20 String type Data Elements can be added from the *Level Detail Form*, as user-defined attributes.

To add new user-defined fields (custom fields) for **String** Data Type, click **Add** to open the **User Defined Attribute** window and enter values in the following required fields:

Name

The **Name** drop-down list contains values from "User Defined String Field 1" to "User Defined String Field 15." If a name has already been selected, then the name is not listed in the Name drop-down list. For example, if the "Department" field has been added as a "User Defined String Field 1," then the Name drop-down list does not display "User Defined String Field 1." If a previously added field has been deleted, then that Name is displayed in the Name drop-down list.

Data Source

The **Data Source** drop-down list contains a list of Data Elements from the *Level Detail Form*.

If you select the Data Type as **String**, the Data Elements in the Data Source drop-down list are:

▸ Strings and Integer Pull Downs
▸ Integer and String Radio Buttons
▸ Check Boxes
▸ Test Data Elements

There are no Pickers listed/available. The Data Source field displays a series of interconnected Data Element names and Data Element labels in the following format: DE Label(DE name). For example, `Project Type(prjt_type)`. If a previously added Data Element is deleted from the Deployed design, then the Data Element name is displayed, only.

Label

The **Label** field is populated based on the Data Element that you select in the Data Source. You can modify the value of this field with non-ISO characters (UTF-8), in order to support internationalization, only. The maximum allowed length is similar to Data Element label. The system does not perform a label uniqueness verification.

Adding new user-defined fields (custom fields) for Data Type: Date

If you select the Data Type as **Date**, then up to 10 "Date" Data Elements can be added from the *Level Detail Form*, as user-defined attributes.

To add new user-defined fields (custom fields) for **Date** Data Type, click **Add** to open the **User Defined Attribute** window and enter values in the following required fields:

Name

The **Name** drop-down list contains values from "User Defined Date Field 1" to "User Defined Date Field 10." If a name has already been selected, then the name is not listed in the Name drop-down list. For example, if the "Project Commission Date" field has been added as a "User Defined Date Field 1," then the Name drop-down list does not display "User Defined Date Field 1." If a previously added field has been deleted, then that Name is displayed in the Name drop-down list.

Data Source

The **Data Source** drop-down list contains a list of Data Elements from the *Level Detail Form*.

If you select the Data Type as **Date**, the Data Elements in the Data Source drop-down list are:

▶ Date
▶ Date only Picker

The Data Source field displays a series of interconnected Data Element names and Data Element labels in the following format: DE Label(DE name). For example, `Project Archive Date(prjt_arc_date)`. If a previously added Data Element is deleted from the Deployed design, then the Data Element name is displayed, only.

Label

The **Label** field is populated based on the Data Element that you select in the Data Source. You can modify the value of this field with non-ISO characters (UTF-8), in order to support internationalization, only. The system does not perform a label uniqueness verification.

Adding new user-defined fields (custom fields) for Data Type: Numeric

If you select the Data Type as **Numeric**, then up to 30 numeric data elements can be added from the Space Detail Form, as user-defined attributes.

To add new user-defined fields (custom fields) for **Numeric** Data Type, click **Add** to open the **User Defined Attribute** window and enter values in the following required fields:

Name

The **Name** drop-down list contains values from "User Defined Date Field 1" to "User Defined Date Field 30." If a name has already been selected, then the name is not listed in the Name drop-down list. For example, if the "# of Spaces" field has been added as a "User Defined Date Field 1," then the Name drop-down list does not display "User Defined Date Field 1." If a previously added field has been deleted, then that Name is displayed in the Name drop-down list.

Data Source

If you select the Data Type as **Numeric**, the Data Elements in the Data Source drop-down list are the Data Elements found on the Level Detail Forms and are:

▶ Integer
▶ Currency
▶ Decimal Amount

There a no Integer Pull Downs, Integer Radio Buttons, and Integer Check Boxes. The Data Source field displays a series of interconnected Data Element names and Data Element labels in the following format: DE Label(DE name). For example, `Contract Amount(con_amt)`. If a previously added Data Element is deleted from the Deployed design, then the Data Element name is displayed, only.

Label

The **Label** field is populated based on the Data Element that you select in the Data Source. You can modify the value of this field with non-ISO characters (UTF-8), in order to support internationalization, only. The maximum allowed length is similar to Data Element label. The system does not perform a label uniqueness verification.

Analytics Log (Vendors)

You can set up Dashboards and Analyses, for Unifier Vendors data, in Oracle Business Intelligence Enterprise (OBIE) analyses.

When you open a Vendors record in the Analytics node, you will see the Analytics - Vendors Setup window that contains the following tabs, after you add a Vendor record and click Apply:

- Vendors tab
- Data Mapping tab

Vendors tab

> **Note**: You need to first select the Business Processes that you want to set as Vendor Business Processes for use in Analytics.

In the Vendors tab, click **Add** to open the Select a Business Process as Vendor for Analytics window. The list of Business Processes in this window is in alphabetic order.

> **Note**: Only one Business Process can be marked as Vendor, so the Add option is disabled after your selection.

Select a Business Process (Company and Shell level - Active and Inactive), then click **OK**. You can select one Business Process, only.

You can remove a Vendor Business Process by selecting the item and clicking Remove.

Use the Vendors tab to select the Vendors names that you want to use in Analytics. Once selected, you can use Add to add the name or Remove to remove a Vendors.

You can remove a Vendor Business Process that is published for Analytics. To remove an item for use in Analytics, select the item from the list in the Select a Business Process as Vendor for Analytics window and click **Remove**. You can add a removed item for Analytics reporting. Click **Add** if you want to add a removed item to the list.

If the Company Administrator inactivates a Business Process marked as Vendor, and if the item is used for Analytics, then this Vendor Business Process remains in the Vendors tab.

If a Vendor is removed from the Vendors tab, data that exists in Analytics (for the removed Vendor Business Process) remains as is; however, the new data will not be published.

Data Mapping tab

The Data Mapping tab allows you to map the predefined Analytic Vendor related fields to a corresponding Unifier Data Element (DE) in the Business Process. As mentioned earlier, this tab is available after you have added a Business Process in the Vendors tab and clicked Apply or OK.

In the Data Mapping tab, the following columns, or fields, are present:

▶ Name
▶ Source
▶ Data Source

Name

Pre-populated and represents the fields used in OBI. These are read-only fields and you cannot modify them.

Source

Displays the location of the Data Element (DE) seen in the Data Source. The DEs for Vendor mapping are the Upper form DEs.

Data Source

Allows you to select from a list of   all Upper form DEs, for the selected Vendor Business Process in the Vendors tab. The list is filtered based on the Data Definition (DD) match. You can change the mapping of the fields.

The following is a list of fields that need mapping for Vendors:

▶ Vendor ID
▶ Name
▶ Type

The fields displayed in the Data Source drop-down list is a concatenation of DE Label and DE Name, and the DE Name is displayed within parenthesis. For example,
`Department(contract_department)`

Rules for Data Mapping

▶ If the Analytic field is of a String type, then all pull-downs (Integer and String), Radio Boxes (Integer and String), check boxes, and text DEs are displayed. No pickers will be seen.
▶ If the Analytic field is of a Pull-down type, then the list of DEs displayed in the Data Source drop-down list are filtered and only the DEs of Pull-down type are displayed. This list includes both Integer and String Pull-downs.
▶ If the Analytic field is of a Numeric type, then the list of values displayed is a consolidated list of all numeric data elements, which include DEs of type Integer Amount, Currency Amount, and Decimal Amount. No integer pull-downs or Radio boxes will be seen.

Scheduling Setup

Unifier sends data from all Shells, regardless of the Shell status. If you need to filter the data, based on the Shell status, you (the Administrator responsible for setting up the Analytics Schedule) must set up filter condition on the data and set up a schedule to send the data to OBI.

You can set up Scheduling by clicking the Schedule (on the log toolbar). The Schedule Setup window allows you to set the following:

▶ **Frequency**

▶ **Filters**

> **Note**: If you change the filter setup, the change only applies to the subsequent runs. Since the scheduled runs sends incremental data (Data that has changed between runs) only, the filter change is applicable to the sent incremental data.

The default option is: Include data from all Shells.

If you select to set up a filter to include data from Shells with a particular status (Include data from Shells with Statuses), the system provides the following Shell statuses:

  ▸ Active

  ▸ On-Hold

  ▸ View Only

  ▸ Inactive

You can exclude data, also. Include the Shell that you want its data to be excluded (Exclude data from selected Shells) to prevent the data in that Shell to be sent to OBI.

▶ **Data Refresh**

Select the **Refresh all data** button if you made changes to data mappings and data definitions, and want the system to apply your filtering to the existing data in OBI.

▶ **Additional Information**

In the **Send error notification to** field, specifywho must receive the error notifications. Notifications are emails that contain failure of data exchange between Unifier and Analytics server.The Administrator can set up Users and Groups to receive these notifications.

Unifier sends data to Analytics periodically. To accommodate your business needs, the following additional granularity, for sending the data, is available.

A user can send Unifier data to OBIE every 4, 6, 8, or 12 hours so that the dashboards and reports in Analytics get the latest data. You can set up Scheduling by clicking the **Schedule** (on the log toolbar). The **Schedule Setup** window allows you to set the **Frequency**. Furthermore, you can update the **Publish at** values according to the frequency.

In addition, since the Company-level data that is seen in Analytics is determined by permissions (see Granting Permissions for Analytics), user permissions impact the data that is being available to the users. An administrator can set permissions in terms of who can view the *Company-level* information from the respective level Business Processes that are enabled for Analytics.

The **Run Now** option (toolbar), in the Analytics setup page, enables the admin to run the data publish at-will, for Analytics.

Upon selecting the **Run Now** option, Unifier displays the following message: "This action will only publish the Unifier data for Analytics and will not update the data seen in Dashboards and Analyses. You must run Analytics ETL to update them. Do you want to proceed?"

This option is available for the users only if the **Modify** permission has been granted.

When Unifier is already running a job of data publish based on the schedule setup, an alert is displayed to inform the user that the job for data publish is already in progress: "Unifier data is already being published based on the schedule. You must wait for this to be complete before performing this action."

Access Control Changes for Analytics Node in User Mode Access

Use this access control to:

▶ Give permission to view or visit analytics or OBIEE at the company or shell levels
▶ Provide data level access for analytics or OBIEE dashboards

User Mode Access > Company Workspace

The root node "Non-navigational Nodes" (under Company Workspace section of the Access Control), contains the Analytics node, and the administrator can assign permissions to the root node "Non-navigational Nodes." The View option is the only permission option available for Analytics node.

When users have view permissions at Company Workspace level, the users can see the executive dashboard tab and the "Analytics" link, after opening the tab.

User Mode Access > Shells/Projects (Standard)

The Analytics node is available under the "Non-navigational Nodes." The administrator can assign permissions to both users and groups.

Analytics Subject Areas and Unifier Data

Analytics subject areas use the following Unifier data:

▶ Generic cost sheet
▶ P6 Summary Sheets
▶ Shells
▶ Space Manager
▶ Vendors
▶ Business Process

  Analytics uses this subject area to analyze cost and non-cost line items in business processes.

▶ Business Process History

  Analytics uses this subject area to analyze weekly historical business process facts to better understand changes over time. Note that dimensional business process history is not supported.

▶ Cash Flow

  Analytics uses this subject area to analyze CBS-level cash flows. You can map columns to predefined company-level cash flow curves. Five generic columns are included to support custom labels from Primavera Unifier. Any Cash Flow families will be designated in Primavera Unifier (based on Cash Flow 'Name' value).

▶ Cash Flow History

Analytics uses this subject area to analyze weekly historical cash flow facts to better understand changes over time. Note that dimensional cash flow history is not supported.

▶ Cost Sheet

Analytics uses this subject area to analyze cost sheets. You can map your data source to a predefined list of cost sheet columns. Ten generic columns are included to support custom labels from Primavera Unifier.

▶ Cost Sheet History

Analytics uses this subject area to analyze weekly historical cost sheet facts to better understand changes over time.

> **Note**: Dimensional cost sheet history is not supported.

Granting Permissions to Setup Analytics

To initially setup the Analytics node within Unifier, permissions must be enabled in the Administration mode and User mode

To grant permission for Analytics (Administration Mode Access)

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) Click **Access Control** in the left Navigator.
3) On the right pane, select **Administration Mode Access** > **Analytics**. The **Permission Settings for: Analytics** window opens. Here you can add, modify, or remove permission settings.
4) Click **Add** to open a new **Permission Settings for: Analytics** window.
5) Click **Add Users/Groups**. The **Users/Group Picker** window opens.
6) Select the intended users and/or groups and click **Add**.
7) Click **OK** to return to the Permission Settings window.
8) Select the users or groups in Select Users/Groups, located in the upper portion of the window, and select the appropriate level of access for the user or group in Permissions Settings, located in the lower portion of the window.

   View: This option allows users and groups to open and view the contents in **Analytics** node. Users with View permission cannot make any changes.

   Modify: This option allows users and groups to configure and modify the data required for Analytics. This setting includes View permission. Users are also able to set schedule for publishing data, for various areas in Unifier, to the Oracle Business Intelligence (OBI) server.
9) Click **OK**.
10) Click **Apply** to save changes and keep the window open, or click **OK** to save changes and close the window.

To grant permission for Unifier data in Analytics (User Mode Access)

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) Click **User Mode Access** to expand.

3) Click **Company Workspace** to expand.

4) Click **Non-navigational Nodes** to expand.

5) Click **Analytics** to open the **Permission Settings for: Analytics** window.

6) Click **Add** to open a new **Permission Settings for: Analytics** window.

7) Click **Add Users/Groups**. The **Users/Group Picker** window opens.

8) Select the intended users and/or groups and click **Add**.

9) Click **OK** to return to the Permission Settings window.

10) Select the users or groups in Select Users/Groups, located in the upper portion of the window, and select the appropriate level of access for the user or group in Permissions Settings, located in the lower portion of the window.

View All Records: This option allows users and groups to open and view Company level Business process data and all the available project level data in Analytics . Users with **View All Records** permission cannot make any changes.

View All Company Records: This option allows users and groups to open and view only the *Company-level* information from the respective level Business Processes that are enabled for Analytics. Users with **View All Company Records** permission cannot make any changes.

View All Shell Records: This option allows users and groups to open and view all the available/mapped shell level data in Analytics, like Cost, Cashflow etc. Users with **View All Shell Records** permission cannot make any changes.

> **Note**: For existing users, the first checkbox option (View All Records) is automatically selected, after upgrade.

Analytics and Dashboards

Each of the following dashboards has filter selections, or prompts, to help you narrow the results in the sections by the date, project, location, and so on. You can access the Analytics node in **Company Workspace** > **Administration** mode > **Analytics**.

▶ Business Process

The Business Processes dashboard enables you to view business process data, including business process overview analyses, business process data by geographic location, and business process history analyses.

▶ Cash Flow

The Cash Flow dashboard enables you to view cash flow data, including comparisons of actuals vs. forecast and forecast vs. baseline, cash flow data by geographic location, and cash flow history analyses.

▶ Cost Sheet

The Cost Sheet dashboard enables you to view cost data, including a comparison of original and revised budget details, and cost history analyses.

Accessing the Unifier Analytics Dashboard in OBI

Users can access the Unifier Analytics dashboard designed in Oracle Business Intelligence (OBI) platform by using the link provided in Unifier.

With Single Sign On (SSO)

When accessing the Unifier Analytics dashboard *with Single Sign On (SSO) enabled*, you navigate from Unifier to the OBI, directly.

If a user goes to the OBI landing page, the accessibility of the landing page, dashboards, analyses, and so forth are controlled by the settings for the user that is logged in OBI.

If a Shell analytics user cannot go to the corresponding dashboard, the system will take the user to the default landing page set in OBI.

Without Single Sign On (SSO)

To access the Unifier Analytics dashboard *without Single Sign On (SSO) enabled*, you need to login to the OBI server.

Accessing Unifier from OBI server

You can access Unifier from OBI server by way of Action Links. Action Links are a way of providing easy and seamless navigation from an Analysis to other local content (such as other Analyses or Dashboards) or external content (such as websites). The Action Links in Analytics allows you to view the data in Unifier.

Action Links (from OBI to Unifier)

The following is a list of available Action Links:

- Link to BP Log
- Link to BP Record
- Link to Cash Flow log
- Link to Cost Sheet log
- Link to Shell landing page
- Link to P6 Summary Sheet log
- Link to Spaces log (Space Manager)
- Link to Level log (Space Manager)

With Single Sign On (SSO)

When accessing from OBI server *with Single Sign On (SSO) enabled*, you must have appropriate permission to access a particular page, and pertinent navigation, in Unifier. For example, if you want to access a Cost Sheet using the Cost Sheet Action Link, you must have permission to access that particular Cost Sheet, for the selected project (Project Cost Sheet).

If you do not have permission to a Unifier page that is linked to an Action Link, then the system will take you to the default landing page.

Without Single Sign On (SSO)

To access the Unifier Analytics dashboard *without Single Sign On (SSO) enabled*, when using an Action Link, you need to login to the OBI server and enter your credentials.

If a Unifier session is already in progress and you click an Action Link, the system will take you to the Unifier page, directly.

Users must have appropriate permission to access a particular page, and pertinent navigation, in Unifier. For example, if you want to access a Cost Sheet using the Cost Sheet Action Link, you must have permission to access that particular Cost Sheet, for the selected project (Project Cost Sheet).

If you do not have permission to a Unifier page that is linked to an Action Link, then the system will take you to the default landing page.

About Link to BP Record

With Single Sign On (SSO) enabled, if you click the Link to BP Record (Action Link), you can launch Unifier application and open the Business Process Record, provided that you have the appropriate permissions to the Business Process record. If you do not have the required permissions to the Business Process record, then the system will take you to the Business Process Log.

Without Single Sign On (SSO) enabled, if you click the Link to BP Record (Action Link), the system displays the Sign In page or Unifier landing page (depending on whether the session is expired or not). If you click the Link to BP Record (Action Link), you can launch Unifier application and open the Business Process Record, provided that you have the appropriate permissions to the Business Process record. If you do not have the required permissions to the Business Process record, then the system will take you to the Business Process Log.

Accessing Analytics from Unifier

You can access Analytics from the following places in Unifier:

Company level Dashboards

The company level access is typically provided to executive level users who want to view the Analytics dashboards at a Company level. These users will be able to access data from all Shells.

Dashboards

You can access the executive Analytics Dashboards by clicking the Analytic Dashboards icon. This icon will be in place of the existing Custom Dashboard tab. Clicking the Analytic Dashboards icon, on the top left-hand corner of the screen, allows you to open the Analytic Dashboards in OBIE.

The Analytic Dashboards icon can be seen by users who have access to Company level Analytics (Company Workspace > Non Navigational Nodes: View access).

When a user has access to both Custom dashboards (Small Web Format (SWF) Dashboard) and Analytics, the existing Custom Dashboards tab remains as is; however, an additional button called "Analytics Dashboards…" will be seen in the Dashboards page.

When a user has access to Custom SWF Dashboards, only, there are no changes to the existing User Interface (UI).

When a user has no access to the Custom SWF Dashboards or Analytics, the Analytic Dashboards icon will be hidden.

Shell-level Dashboards

The Shell members can configure Custom Shell dashboards.

In the Source Details section of the Edit Dashboard window, the Analytics option for the Block Type supports Analytics for Shell details.

Any user with the Edit Dashboard permissions can add the Analytics option for the Block Type.

Publishing Unifier Data to Analytics

You must send Unifier data to Analytics periodically on an incremental basis. To send data to analytics ,you will need to:

1) Publish Unifier data to staging tables
2) Run ETL Using the Primavera Analytics Administration Web Application to send data to the STAR schema of Primavera Data Warehouse

   For more details on how to use the Primavera Analytics Administration Web Application, see *Primavera Analytics Cloud Service Administration Guide*.

You can set the frequency of sending data to Analytics to Oracle Business Intelligence (OBI), by using the **Schedule** option in the toolbar.

> **Note**: If you need location-specific details for Spatial Data in Analytics, ensure that the values for Country and State Data Elements (DEs) are according to the ISO standards. These values can be pulldowns or plain text fields.

Schedule Setup

The frequency for the data publication can be Daily, Weekly or None. The default value is **Daily**.

You can set the frequency to **Daily**, **Weekly**, or **None**.

The default frequency is **Daily**.

If you select **Weekly**, the system sets the day to Sunday. You can change the day.

If you select **None**, there will be no periodic publication of Unifier data to Analytics.

You can set the time for the publication of data.

You must set the time format to 24-hour notation in the form hh:mm, for the publication of data. The **Hour** drop-down lists hours from 0 to 23 for hour and 0 to 59 for minute. The default option for time is set to 00:00. The system displays the server time zone after the minute.

You must select the checkbox for the **Data Refresh** option if you made changes to the DD value or labels. By default, the checkbox is unchecked.

You must select the checkbox for the **Data Refresh** option if you made changes to the data mapping fields. After the run is complete, the system resets the checkbox for the **Data Refresh** option and the checkbox will be unchecked.

Mapping Linked Elements

The linked elements can be mapped to Analytics fields. The values of linked elements from the source are rendered at run-time in the destination record. However, if there are any changes to the value of the linked elements in the source record, then you need to conduct a full refresh of data in order for Analytics to display these values. As a result, you must select **Refresh All data** for this purpose.

Run History

The **Run History** option allows you to see the status of the scheduled runs of the Unifier data publication to the Analytics server. When you select the **Run History** option, by clicking **Run History** on the toolbar, the Run History window opens and displays the following information:

▶ **Requestor**: Is always "System"
▶ **Submit Date**: The date entered by user
▶ **Start Data**: The date entered by user
▶ **End Date**: The date entered by user
▶ **Status**: The run status

You can view the Run History details   by opening a record in the Run History log.

The history details window includes the Start Date, End Date, and a message.

▶ Success message: *Data was sent to Analytics, successfully*.
▶ Failure message: For example, *An error occurred and data was not published to Analytics successfully. Contact System Administrator.* The system then displays the actual error after the generic failure message.

Unifier Configurator and OBI Server for On-Premises

The Unifier Configurator has an additional option for users to enter the URL to the OBI server. Refer to the *Unifier Installation Guide (WebLogic)* for details.

Analytics Block

The following provides detailed information about the Analytics Block window:

▶ Block Title: This field contains the title of the Analytics Block.
▶ Name: This field contains the name (as a hyperlink) of the Analytics Block.
▶ URL: This field contains the URL, entered by the user, and it must match the URL specified in the Configurator.

> **Note**: The URL protocol, server path, and port must all match; otherwise, the validation fails.

Example

If the URL is: `http://slc44.us.oracle.com:7001/analytics`, then the Analytics URL must be: `http://slc44.us.oracle.com:7001/analytics`.

> **Note**: The system does not validate the other URL parameters, for example, the Dashboard name.

When you post the Analytics Block, it appears in the Source Details log and provides the following information:

▶ Block Title: Title entered by the user.
▶ Source Name: Same as the name entered in the Name field.
▶ Block Type: Analytics
▶ Result Type: Blank
▶ Display Type: Blank

The Analytics Block is also displayed in the Shell landing page. In the Unifier Analytics pane, you can click Analytics Dashboards to go to the shell dashboard in the Analytics server.

If a user does not have permissions to access the Shell dashboards defined in OBIEE server, then the link is disabled and displays as plain text.

You can add Analytics block to "My Dashboards". However, the link connecting Unifier to the Analytics server, from this "My Dashboards" is completely driven by the Access Control > Mode Access > Shells/Projects (Standard) > Non-Navigation Nodes > Analytics.

Analytics Block and Shell Templates

The Analytics Block that is defined in the Shell dashboard of the Shell templates can be pushed to Shell instances.

Unifier and Primavera P6

Unifier receives the integrated data, from P6, and uses the data for the following **Cost** modules:

- Cost Sheet
- Cash Flow
- Earned Value (EV)

As a part of integration, you can capture the "summarized" P6 data within the Cost modules and view the information in a columnar and comparative format, for example, Cost Sheet columns, Cash Flow Curves, and Earned Value Curves). In addition, the Reporting functionality within Unifier enables you to create "User-Defined" or "Custom" reports using the "summarized" P6 data.

Prerequisites for a Successful Integration

- Use CBS type Shells to use Unifier cost modules with data integrated from P6.
- Use the system Data Element `uuu_int_schedule_type` within the Integration -> Detail section of Shell attribute form definition.
- Create and Publish P6 Data Sources to pull P6 data into Cost Sheet.
- Create Shell instances corresponding to each P6 Schedule that needs to be integrated with Unifier by following these instructions:
  - Each Shell instance must have the same 'Shell Number' as the corresponding P6 Project ID.
  - To bring the P6 internal Project id to Unifier, you need to add the P6 Internal Project ID field (`uuu_int_internal_proj_id`) to the Attribute form and the Integration Detail form (Company Workspace > Admin mode > uDesigner > Shell Manager > Integration > Detail)
  - Create or use separate Shell Templates for Duration Based and Resource or Cost Loaded integrated Shells in Unifier because the Cost Sheet for Duration Based schedules will not contain columns rolling up from P6 Summary Sheets (when the other two types of schedules will have columns rolling up from P6 Summary Sheets)
- Include the following in the Role attribute form, if the integration will be Resource or Cost Loaded:
  - `uuu_role_imported_from_p6`
  - `uuu_role_type, uuu_role_id`
  - `uuu_role_uom`
- For correct cost calculations in Resource Loaded schedules, update all imported roles with Rate values.
- If you create Unifier Roles via integration, include the Roles above the Data Elements (DEs) in the integration detail section in uDesigner Role attribute design.
- For Resource Loaded or Cost Loaded schedules:
  - (Recommended) Do not change or update the ID of Roles created via integration manually because when you create Roles via integration the Role ID is used as the identifier by means of which the integration interface maps the P6 Resource to Unifier Role.

▸ If you want to integrate the CBS codes with P6, do the following:

  ▸ Include `uuu_cost_imported_from_p6` and `uuu_int_hidden_from_p6` in the CBS attribute form

  ▸ Define the default CBS segment values within Data Structure Setup -> Data Definitions -> Cost Codes

▸ If you want to create Cost Codes for a Shell using the P6 CBS structure, ensure that the Cost Sheet structure in P6 is Tree.

  ▸ Do not include Unifier Cost Code separators ("-", ".",) in P6 CBS Codes if you are creating Cost Codes in Unifier using P6 data.

▸ When working with P6 data sources or Cost Sheet columns:

  ▸ You can create or publish P6 data sources via integration and when the "Send Summary data" integration is used.

  ▸ You can add published P6 data sources, as columns, in Cost Sheet Templates, only.

  ▸ If you create P6 data sources via integration, and not manually, then you can add columns to Cost Sheet after the "Send Summary data to Unifier" is used, only.

  ▸ If you create P6 data sources manually, and not via integration, then create or publish P6 data sources by:

    ▪ Creating or publishing one P6 Data Source called "Current Schedule." This datasource is used by the system to define the "Type" of all Master Summary sheets (Summary sheets which contain summary data from the main P6 project which is integrated with Unifier).

    ▪ Creating or publishing all "Baseline Type" values defined within P6 Enterprise Data as P6 Data Sources in Unifier.

    ▪ Once you created or published the P6 data sources, you can use the P6 data sources to create columns in the Cost Sheet Template and push the information to the Shell instances.

In This Section

P6 Data Sources node

The **P6 Data Sources** node is located under the **Standards &Libraries** node. The **P6 Data Sources** node enables you to access the following information, based on your permissions:

▸ Data source

  Captured from P6 Summary Sheets, for use in Cost Sheets or Cost Sheets Templates.

  Examples of P6 Data Sources: Current Schedule Summary, Original Baseline Summary, Sanctioned Baseline Summary

▸ Dataset for the attribute "Type" for P6 Summary Sheets

> **Note**: Unifier allow a maximum of 12 P6 Data Sources to be integrated, with `"Current Schedule"` as one of the 12 P6 Data Sources must be named.

P6 Data Sources Permissions

The P6 Data Sources node appears under the Standards &Libraries node, when in Administration mode. The following permissions are available for the P6 Data Sources:

▶ Create

User with Create permission have full access to the P6 Data Sources node and is allowed to create new data sources, modify existing data sources, and delete and view all data sources.

If a   user has "Create" permission, the remaining two permissions is enabled automatically.

▶ Delete/Modify

User with Delete/Modify permission will not be able to Create new data sources.

If a user has "Delete/Modify" permission, the "View" permission is enabled automatically.

▶ View

User having View Permission will not be able to Create, Modify or Delete, but will only be able to View the different data sources.

P6 Data Sources Log Window (Main menu)

File

New: To create a new Data Source

Copy: To copy a Data Source

Open: To open a Data Source

> **Note**: Data Sources must have unique names.

Edit

Delete: To delete a P6 Data Source

If the P6 Data Source has been published already, you cannot delete.

Properties: To edit the Data Source properties

> **Note**: You cannot edit the name of a Data Source.

View

To find a Data Source.

Help

To access online hep and documents.

P6 Data Sources Log Window (Toolbar menu)

New

To define a new P6 Data Source, using the New window.

Open

To open a defined P6 Data Source.

Delete

To delete an existing Data Source, one record at a time.

Publish

To make the P6 Data Source available to be added as Cost Sheet columns. You can select and Publish more than one Data Source at a time.

> **Note**: Once a Data source is published, it appears as a "single" Data Sources within a Cost Sheet or Cost Sheet Template that have the option of "Enable P6 Sources" selected in the properties. Unpublished Data Sources are not be available as Cost Sheet "Single" Data Sources.

Find

To find a Data Source

P6 Data Sources Properties Window

▸ **Name**

Text (maximum 120 characters). This content of this field is from P6 and maps to the P6 Project Name.

▸ **Description**

Editable field allowing you to enter a description (maximum 500 characters).

P6 Activity Data

If you are using both Unifier and P6, you can link the two applications using Primavera Gateway and send data from a P6 Schedule to Unifier Projects. You can "pick" activities and Auto-populate (AP) or Reverse Auto-populate (RAP) from the corresponding P6 project.

Corresponding P6 Project

The term "Corresponding P6 project" refers to that P6 project which has the:

▶ Same ID as Unifier Project

   or

▶ Same ID as captured in a system element in Unifier project attributes

Maintaining Projects (Unifier and P6)

Maintain projects between the two applications by ensuring that the:

▶ ID of the projects match in both applications

   or

▶ System Data Element (DE) (`uuu_int_p6_project_id`) is present on the Shell Attribute form, and the value is the same as the corresponding P6 project ID.

If only when one of the conditions above is met that the Gateway - Unifier Provider can determine which P6 project corresponds to which Unifier project.

> **Note**: Integration with P6 application applies to Unifier CBS type Shell only. The integration does not apply to the Unifier Project (Standard).

P6 Activity Picker Query Configuration

You can query the P6 Activity Picker elements by using the fields associated with the P6 Activity Attribute form.

To define query conditions for P6 Activity Picker elements, from the same place as Data Picker query conditions in Unifier, switch to the **Admin** mode > **uDesigner** > **Business Processes** > **Open** > **Data picker**.

In the **Query Condition** window, you can add query conditions under the **Add Query Condition** section:

▶ **Data Element**

   A drop-down list that contains all the elements (pre-defined or custom) from the P6 Activity Attribute form. Yo can use the Data Element to create any query to filter out P6 Schedule activities from the P6 Activity Picker.

▶ **Condition**

   To set conditions for the query.

P6 Data and Cash Flow Templates

You can use a Cash Flow Shell template (Shell instances and Shell templates) to select the Summary Sheets by selecting the associated P6 data sources. As a result, when you use a Cash Flow Shell template to push the Cash Flow settings, the system updates the Shell instance with the Cash Flow settings of the template.

> **Note**: The following applies to both Distribution, Cost, and Schedule sections.

At runtime, the system uses the data from Summary Sheets, associated with the P6 data source, to render the Cash Flow curves.

Distribution and Schedule

Admin mode > **Templates** > **Shells** > **Building** > **Template** > **Cost Manager** > **Cash Flow**

In the Distribution or Schedule sections of the Cash Flow templates (with Detail level CBS), click **Select** from the Use data from P6 Sources option to open the Select Data sources window. This window displays all the data sources listed in the Standards & Libraries.

> **Note**: The Data Type option (under the P6 Source selection option) is a required field, if you select Use data from P6 Sources option. Use the drop-down list in the Data Type field to see a list of all the data types available for the selected P6 data source.

Since the Schedule type will be blank, the Cash Flow template displays all the options available regardless of the Schedule type.

The P6 sources in Distribution, Cost (only for Actuals), and Schedule sections are always enabled in the Cash Flow templates.

The P6 Sources window (source selection) lists all the Published data sources, in alphabetical order. You can click on a source name to select that source. To find a source, go to Find, click the drop-down list, and follow the prompts. Depending on the type of the Cash Flow curve, this option is available only if you select the Distribution/Schedule/cost option as Use data/dates from P6 Sources.

The Data type options for the Baseline curves are:

▶ At Completion
▶ Planned

The Data type options for the Forecast curves are:

▶ At Completion
▶ Remaining

You can copy the Cash Flow curve properties that exist in a Shell template to the Cash Flow curves that exist in instances if:

▶ The Shell template push is done
▶ The Shell template is used to create new instances

Unifier and Primavera Gateway

Gateway allows data to be moved between two applications (at least one of them is a Primavera application) on schedule or on demand. It is a single integration hub where all the data integration happens with Primavera applications.

For a Unifier object to exchange data with an object in another application via Gateway, the object must be pre-defined within:

- Unifier Provider
- Gateway
- Oracle application/external application Provider

Additionally, objects within each Provider must have a hard-coded (Java code) link to the corresponding object (with which it exchanges data) in Gateway.

Example

To expose Unifier Project object for integration with another application via Gateway, there must be:

- Project object defined in Unifier Provider
- Project object defined in Gateway
- Project object defined in Unifier Provider must be hard-coded (Java code) to link to Gateway Project object

Correspondingly, to exchange data with Unifier Project object, the Oracle application/external application Provider must have a Project object within it and that object must be hard coded (via java coding) to link to Gateway Project object.

Unifier Objects and Gateway

Unifier sends data to the Oracle application through Gateway. The following Unifier objects can be integrated with Oracle applications via Gateway:

- **Projects/Shells**

    You can create and update Projects in Unifier using project data from an external application via Gateway. The exchange of information is bi-directional, from the Oracle application to Unifier and from Unifier to the Oracle application.

    > **Note**: Integration with an Oracle application/external application does not apply to the **Unifier Project (Standard)**.

- **Business Processes**

You can create and update Business Process records using data from external applications sent to Unifier via Gateway. The exchange of information is bi-directional, from the Oracle application to Unifier and from Unifier to the Oracle application.

- **Roles**

    You can create and update Unifier Roles using data sent over from Gateway. The exchange of information is bi-directional, from Oracle application to Unifier and from Unifier to the Oracle application.

▶ **CBS Codes**

You can create CBS codes, within a Cost Sheet, using data sent over from Gateway. The exchange of information is one-directional, from the Oracle application to Unifier.

> **Note**: Integration with P6 application applies to Unifier CBS Shell-type only.

Document exchange support through Gateway

Unifier supports exchanging documents attached to BP records, or Line Items, through Gateway. In particular, through integration between Unifier and Gateway, Gateway performs as an intermediary and supports:

Attaching documents to the respective BP records, or Line Items, while importing the documents into Unifier.

Exporting documents (attached to BP records, or Line Items,) out of Unifier and to any Oracle application which is receiving the BP records, or Line Items.

> **Notes**:
> - The Oracle application must support receiving and exporting documents.
> - Once the documents are sent across to the Oracle application, the system deletes the documents from Gateway.

Gateway Objects and Unifier Provider Objects

Business Processes

When you deploy a BP design to Gateway, the system maps to the BP design, in Gateway, in two ways:

▶ Mapping to the existing, predefined, objects in Gateway.
▶ Mapping to a newly created object in Gateway, under Unifier Provider.

Mapping to a newly created object in Gateway requires that you:

▶ Use the dynamic object mapping, in Gateway, to map the newly created objects from Unifier Provider to an existing object in Gateway.
▶ or
▶ Create a new object in Gateway and map the Unifier Provider object to newly created object in Gateway.

The new objects created in Unifier Provider contain the following default information:

▶ Object name.
▶ Description that is added in the Unifier.
▶ Fields (including respective properties) associated with the design

Before you can use the object, you must configure the remaining information for the newly created object:

▶ Data related to Flow Type

▶ Cross-reference to the Gateway object

Once you complete mapping the object in Gateway, you can use the object for creating business flows in Gateway and use the data.

Configuring Unifier Objects on Gateway

By default, the mapping of data involves the following applications in order:

1) Unifier

2) Unifier Provider on Gateway

3) Gateway Provider on Gateway

Mapping to a newly created object in Gateway requires that you match the information of that object in Gateway to the information of the object that you deployed from Unifier. In Gateway, once you find and select an object that you can use (i.e., an object that has matching information), you can proceed by cross-referencing the object in Unifier to the selected object in Gateway.

Default Gateway Objects

The following table lists the object names that are available for mapping in Gateway, by default, and provides a description:

Item	Object Name	Description
1	`BlanketPurchaseOrder`	A company level purchase order, which enables agreements with vendors to provide services across multiple projects, released on a per-project/per-period basis with work authorizations against a previously determined maximum.
2	`BlanketPurchaseOrderDetail`	Line Items for Blanket Purchase Orders
3	`Contract`	Base Commit for EPC Activities (SOV = Payment Application)
4	`ContractDetail`	Line Items for Contracts
5	`PurchaseOrder`	To track money committed to be spent (General Spends type Base Commit)
6	`PurchaseOrderDetail`	Line Items for Purchase Orders
7	`WorkRelease`	Process that is connected to Blanket Purchase Order Business Process that is deployed at company level. This process can be used to write against the blanket purchase order

Item	Object Name	Description
8	`WorkReleaseDetail`	Line Items for Work Releases
9	`ChangeOrder`	A formal commit change to the contract.
10	`ChangeOrderDetail`	Line Items for Change Orders
11	`POAmendment`	Approval process for purchase order changes.
12	`POAmendmentDetail`	Line Items for PO Amendments
13	`Invoice`	A general process for requesting and approving payments against commitments (invoice at the CBS or breakdown level, do not calculate retainage or stored materials)
14	`InvoiceDetail`	Line Items for Invoices
15	`PaymentApplication`	A process to track your payment information using a standard payment application method (for example, tracking retainage, stored materials, past payments, etc.)
16	`PaymentApplicationDetail`	Line Items for Payment Applications
17	`Estimate`	Used to create multiple project estimates and identify the preferred scenario.
18	`EstimateDetail`	Line Items for Estimates
19	`BudgetApproval`	Used to approve project budget
20	`BudgetApprovalDetail`	Line Items for Budget Approval
21	`BudgetChange`	For requesting additional (or reduced) budget beyond the existing budget.
22	`BudgetChangeDetail`	Line Items for Budget Changes

Item	Object Name	Description
23	BudgetTransfer	For transferring budget from one CBS code to another. Most typically used to release budget contingency to other cost items.
24	BudgetTransferDetail	Line Items for Budget Transfers
25	PotentialChangeOrder	Contractor initiated potential change order.
26	PotentialChangeOrderDetail	Line Items for Potential Change Orders
27	JournalEntry	A process for adjusting spends line items. Most commonly used to reassign costs to alternate cost centers or GL codes; Generic spend to transfer across cost codes
28	JournalEntryDetail	Line Items for Journal Entries
29	Payment	BP to hold Checks Processed Information from Financial System.
30	PaymentDetail	Line Items for Payments
31	RiskAndIssue	A log for documenting, tracking, and estimating impacts of open issues and risks; Log of items that may impact schedule/scope/cost
32	RiskAndIssueDetail	Line Items for Risks & Issues
33	FundAppropriation	Fund accounts as assigned to projects
34	FundAppropriationDetail	Line Items for Fund Appropriations
35	ProjectInformation	Project attribute information
36	VendorEvaluation	Document vendor performance for consideration for future work (Simple)
37	Vendor	Company vendor directory

Item	Object Name	Description
38	`Vendor Detail`	Line Items for Vendors
39	`Timesheet`	Used to capture Employee Timesheets (project / non-project hrs)
40	`TimesheetDetail`	Line Items for Timesheets
41	`RequestforSubstitution`	A change of identical material or equipment
42	`RequestforSubstitutionDetail`	Line Items for Request for Substitution
43	`BudgetChangeOrder`	A change to a budget that is typically created for a contractor that is based on changes to a contract between the contractor and owner.
44	`BudgetChangeOrderDetail`	Line Items for Budget Change Orders
45	`BudgetItem`	A budget that is typically created for a contractor that is based on a contract they have with an owner for a project.
46	`BudgetItemDetail`	Line Items for Budget Items
47	`PaymentApplicationtoOwner`	A payment application that is raised by a contractor to the owner in order for the contractor to receive payment.
48	`PaymentApplicationtoOwnerDetail`	Line Items for Payment Applications to Owner
49	`PaymentFromOwner`	A record of the actual payments a contractor will have received from the owner based on the payment application they presented to the owner.
50	`PaymentFromOwnerDetail`	Line Items for Payments From Owner

User-Defined Report (UDR)

Unifier displays a project-level/company-level UDR that is enabled for integration in the log page of the Business Objects node (**Company Workspace** > **Admin** mode > **Gateway** > **Business Objects**).

You can export data, generated out of a project-level/company-level UDR that is enabled for integration, to an Oracle/external application Provider through Gateway.

To export, you can select the listed UDR and click Deploy to send the data in the UDR to Gateway and use the data for integration with an Oracle/external application Provider.

Gateway Node in Unifier

To access the **Gateway** node go to Unifier **CBS** type **Shell** > **Company Workspace** > **Admin** mode > **Gateway** > **Business Objects**

The **Gateway** node provides the following information on the **Gateway Integration** landing page:

- ▶ **API URL**
    - ▶ This element captures the Gateway API URL that Unifier goes to in order to establish connection with Gateway.
    - ▶ Data Definition: SYS Description Text 250
- ▶ **User Name**
    - ▶ This element contains the user's name who logs into Gateway URL.
    - ▶ Data Definition: SYS Long Name
- ▶ **Unifier Deployment**
    - ▶ Allows you to enter the name of the Unifier Deployment, which needs to be accessed to exchange data with external applications
    - ▶ Data Definition: SYS Short Description Text 250
- ▶ **Integration Parameters** block
    - ▶ **Source Base Currency**
    - ▶ **Activity Sheet Synchronization**
        - ▪ **Import Synchronization** (The import synchronization that is selected for Activity and Assignment data for customers with EVM license and import synchronization that is selected for Activity data for customers without EVM license.)
        - ▪ **Export Synchronization**
    - ▶ **Rate Sheet Synchronization**

To see the **Integration Settings**, click **Open** from the toolbar to open the **Integration Settings** window. In the **Integration Settings** window, you can edit fields and run test. The Integration Settings window contains the following blocks and fields:

Gateway block

- ▶ **API URL**
- ▶ **User Name**
- ▶ **Password**

- Contains the password required to log into the Gateway URL.
- Data Definition: Short Description Text
▸ **Test Connection**
  - Enables you to run a test to verify that the Gateway URL and other credentials are valid. See the "**Testing Connection**" topic below.
▸ **Unifier Deployment**
  - Allows you to enter the name of the Unifier Deployment, which needs to be accessed to exchange data with external applications
  - Data Definition: SYS Short Description Text 250

Integration Parameters block

Select Source Base Currency for Rate Conversion
▸ **Currency**
▸ **Select Synchronizations to exchange Activity data**
▸ **Import Synchronization** (editable drop-down (size 250 chars))
▸ Contains the name of the Gateway Synchronization, which will be used to Import Activity data from Unifier to P6
▸ Using the Gateway URL and the Unifier Deployment details captured within the **Integration** tab of "Company Properties," this field lists all the "Import" synchronizations from the URL, which are applicable to the mentioned Unifier Deployment.
▸ The synchronizations shown in the drop-down will be the ones that match the Unifier Deployment. It lists the OOTB synchronizations provided for Oracle Primavera Cloud.

> **Note**: For Unifier, this is an "Import" synchronization (to import data into Unifier). From P6 perspective, this is an "Export."

For customers with or without EVM licenses, the import synchronization that is selected in **Select Synchronizations to exchange Activity data** will be the import synchronization that is selected for EVM data, provided customer selected that prior to upgrade to 20.7; otherwise, the synchronization selected will be from **Select Synchronizations to exchange Activity data**.

For all customers, the activity import synchronization that is selected in **Select Synchronization to exchange Activity and Assignment data** prior to upgrade to 20.7 is shown as selected under import synchronization **Select Synchronization to exchange Activity data**. If there is no synchronization selected in **Select Synchronization to exchange Activity and Assignment data**, then the synchronization selected in **Select Synchronization to exchange Activity data** must be selected. If none of them are selected prior to upgrade to 20.7, then the import synchronization will be empty.

Starting from 20.7, customers with or without EVM licenses can get data from P6, and the existing export synchronization and Import Synchronization selected from Role and Resources synchronization will not have any impact.

▸ **Export Synchronization** (editable drop-down (size 250 chars))

Contains the name of the Gateway Synchronization which will be used to Export Activity data from P6 to Unifier

Using the Gateway URL and the Unifier Deployment details captured within the 'Integration' tab of Company Properties, this field lists all the "Export" synchronizations from the URL which are applicable to the mentioned Unifier Deployment.

The export synchronization shows additional OOTB synchronizations "**Send Activity data from Unifier to Primavera Cloud**" defined for Oracle Primavera Cloud. You will be able to push the updated activity data to Primavera Cloud, using the export synchronization.

The Export Synchronization option "Update Activity data from Unifier to Primavera Cloud" enable you to send updated activity data from Unifier to the Oracle Primavera Cloud. When you are using Oracle Primavera Cloud data for scheduling project, you can bring the activities, schedules, and the associated WBS to the Unifier Activity Sheet. From the Activity Sheet, Unifier pulls the activity attributes in to the business processes. In the business processes, you can update the schedules and reverse auto-populate (RAP) data back to the Activity Sheet. In the **Unifier Activity Sheet** log of the projects that are synchronized with Oracle Primavera Cloud, the **Send Data** option enables you to send the updated schedules back to the Oracle Primavera Cloud. The business flow updates the activity data in Oracle Primavera Cloud according to the activity data in Unifier.

> **Note**: For Unifier, this is an "Export" synchronization (to export data from Unifier), from P6 perspective, this is an "Import."

> ▸ **Import Synchronization** (editable drop-down (size 250 chars))
>
> Contains the name of the Resource and Role Rates from P6 for EVM Copy.

When you make changes in the **Integration Settings** window, you must click **OK** to save your changes. Click **Cancel** to close the **Integration Settings** window.

Testing Connection

To run a test to verify that the Gateway URL and other credentials are valid use the **Test Connection** option, in the **Gateway** block. If the system is unable to establish connection, you will receive an error message. If the system is able to establish connection, you will receive a confirmation message.

Business Objects Node in Unifier

You can expand the **Gateway** node to see the **Business Objects** node (**Company Workspace > Admin** mode > **Gateway** > **Business Objects**). When you click the **Business Objects** node the Business Objects log window appears on the right-hand side.

The Business Objects log window in Unifier provides the following information:

▸ List of Unifier objects that have been deployed from uDesigner. The Unifier objects are:
  ▸ Projects/Shells (Attribute form)
  ▸ Business Processes

> **Note**: The following types of BPs are not supported for integration: Project/Shell Creation BP - Resource BP - RFB BP - Text BP.

- ▶ Roles (Attribute form)
- ▶ CBS Codes (Unifier CBS Shell-type only)
- ▶ Detailed information about each Unifier object that has been deployed:
  - ▶ Name
  - ▶ Category
  - ▶ Type
  - ▶ Last Updated
  - ▶ Last Deployed to Gateway
- ▶ A mean to deploy a Unifier Business object that is ready to Gateway
  - ▶ Deploy to Gateway

In the Business Objects log window, the columns provide detailed information about each Unifier object that has been deployed.

Column name	Description
Name	The name of the Unifier object.
Category	The category of the Unifier object: Business Processes, Shell Manager, and so forth
Type	The type of the Unifier object: Activity Sheet Attributes (from P6 and not defined in uDesigner), Resource Attributes, Roles Attributes, Cost, Simple, Shell Type, Document, Line Item, and so forth.
Last Updated	The date when the Unifier object was last updated, which is the Unifier object "Deploy" date from uDesigner.
Last Deployed to Gateway	The date when the Unifier object was last deployed to Gateway.

In the Business Objects log window, the *menu* enables you to:

- ▶ Deploy a Unifier object to Gateway
  - ▶ Edit
- ▶ Find a Unifier object by applying filters
  - ▶ View
- ▶ Review the history of a Unifier object
  - ▶ View
- ▶ Access Unifier Help, documentation library, and productivity kit

> ▸ Help

In the Business Objects log window, the *toolbar* enables you to:

▸ Deploy a Unifier object to Gateway
  - ▸ **Deploy to Gateway**
▸ Review the history of a Unifier object
  - ▸ **History**
▸ Find a Unifier object by applying filters
  - ▸ **Find**

Deploy to Gateway

When deployed to Gateway, the system appends the attributes of the objects in **Unifier** to the corresponding object in **Unifier Provider**. You can select multiple items and deploy the selected items to Gateway. For the selected objects, the user can create the following and synchronize the data exchange:

▸ Data Mapping templates
▸ Business Process flows

If the "Integration" form of the following is set in uDesigner, you can use this option to deploy:

▸ Activity Sheet Attributes (as captured in Unifier > Unifier Provider > Gateway)

  The deploy action only sends the values that you had manually entered in the Activity Attribute form to Gateway.

  The "Activity Sheet" object in Gateway contains all the pre-defined Activity Attributes fields by default.

  If you have added bitemID field in the Activity Sheet, then the P6 CBS code (P6) can then be mapped to the `bitemID` (Unifier) in the field mappings on Gateway.

▸ Projects/Shells (Attribute form)
▸ Business Processes

  Data Elements of type SYS Rich Text must not be sent to Gateway, when deployed.

▸ Roles (Attribute form)
▸ CBS Codes (Unifier CBS Shell-type only)
▸ Project-level/Shell-level User-Defined Reports (UDRs)
▸ Company-level UDRs

How to exchange data through UDR with an Oracle application Provider

You can export the data generated out of a UDR through Gateway and out to an external system. UDRs that are enabled for integration (i.e., the "**Enable for Integration**" option is selected) appear in the Business Objects node log, under Gateway in Company Workspace. You can deploy these UDRs and integrate them with Oracle integrators.

> **Note**: For a UDR to be eligible for deploying to Gateway, you must select the "Enable for Integration" option.

All the UDRs, which have been enable for integration (i.e., the "Enable for Integration" option is selected), are listed in in the **Business Objects** node, and you can choose to deploy those UDRs to Gateway to configure them for Data Exchange.

The Business Objects node log displays UDR types and categories.

All Project-level/Shell-level UDRs have Project-level/Shell-level as their type and User Defined Report as their category.

All company-level UDRs have company-level as their type and User Defined Report as their category. You can search for and find a UDR Business Object by type or category.

If you deselect the "Enable for Integration" option of a UDR after it has been deployed to, and configured in (for a Business Flow), Gateway, the system generates an error when synchronizing.

If you delete a UDR that you have recently deployed to, and configured in (for a Business Flow), Gateway, the system generates an error when synchronizing.

When a Line Item Type BP is deployed to Gateway, from Unifier, the system creates two objects for that BP.

You can create different field mapping templates, according to the template requirements, and use the templates in different Business Flows to transfer the data.

If you share documents between Unifier and any Oracle application, and the Oracle application does not support document integration, the system completes the Business Flow but without transferring the documents.

History

The system logs all the deployed Unifier objects in History. The **History** option allows you to view the status of a deploy action, informing you whether the deployment was successful, or not, in addition to the following information:

▶ Requestor

The name of the user who has deployed the record.

▶ Source

If you select Unifier objects of same type and deploy, then the system provides all selected objects (including names of all objects which were chosen by you for deploy) in alphabetical order.

If you select Unifier objects of multiple types and deploy, then the system provides separate history entries for each of the objects that are getting deployed to Gateway.

▶ Start Date

The date when the deployment action started (Unifier started to prepare the xml file for Gateway).

▶ End Date

The date when the deployment action ended.

▶ Status

The status of deployment action (Finished, In Progress, Finished with Errors).

In the History window toolbar, you can:

▶ Open

To open an item in the History log.

- Similar to the Open option in other "History" windows in Unifier, this action opens the "History Details" window.

- Similar to other places in Unifier, you can take this action on one selected row only.

▶ Find

To allow you to search the History records. You can search on all columns (Requestor, Attribute Form, Submit Date, Start Date, End Date, Status).

▶ Close Window

To close the History window.

History Details

▶ If you select a row in the History window and click Open, the History Details window opens. This window includes information about:

▶ Business Processes

The name of the attribute form that was deployed.

▶ Gateway URL

The Gateway API URL through which link to the 3rd party applications is established, as defined by the user within Unifier Company Properties > Integration tab.

▶ Unifier Deployment Name

The name of the Unifier Deployment as defined within the Unifier Company Properties > Integration tab.

▶ Deploy action status details

The details of the status of the deploy action, successful or not.

Find

The Find option allows you to search for records in all of the Business Objects window columns.

Configuring Permissions for Business Objects

To configure the permissions for Business Objects go to: **Company Workspace** > **Admin** mode > **Access Control**. The Access Control node includes the **Gateway** node.

To set permission for **Gateway** node:

▶ **Configure**

If you check this permission, the user can update the "Integration Settings" at "Gateway Integration" landing page.

▶ **Get / Set Activity Sheet Data**

If you check this permission, the user can do the following from the Shell log File menu (Unifier CBS type Shell):

▸ **Get Activity Sheet Data** (from the Shell toolbar):

- All Shells

- Selected Shells

- Filtered Shells

- History

▸ **Send Activity Sheet Data** (from the Shell toolbar):

- All Shells

- Selected Shells

- Filtered Shells

- History

Permission for "Get / Set Activity Sheet Data" from Shell log are configured in Unifier Admin Mode while permissions to take these action from within a Shell (User mode) are given at Unifier User mode level.

To set permission for Business Objects node:

Deploy

If you check this permission, you will enable the Deploy option, in the right-had pane of the Business Objects page.

You can grant permissions, for Business Objects, by way of the User Mode Access in Access Control node: **Company Workspace** > **Admin** mode > **Access Control** > **User Mode Access** > **Shells / Projects (Standard)** > **Schedule Manager** > **Activity Sheet**.

> **Note**: You can move the Activity Sheet module under other nodes.

The following permissions are available for **Activity Sheet**:

▸ **Get Data**

If you check this permission, the user can go in the **Activity Sheet** (**Shell** > **User** mode > **Schedule Manager** > **Activity Sheet**) and perform "Get Activity Sheet Data" or view "History."

If you select the "Get Data" permission, the "View" permission will be selected automatically. In addition to the "Get Data" permission, the user needs the "View" permission in order to be able to have the "Get Activity Sheet Data" permission. You can grant "View" permission without granting the "Get Data" permission.

▸ **Send Data**

If you check this permission, the user can go in the **Activity Sheet** (**Shell** > **User** mode > **Schedule Manager** > **Activity Sheet**) and perform "Send Data" or view "History."

If you select the "Send Data" permission, the "View" permission will be selected automatically. In addition to the "Send Data" permission, the user needs the "View" permission in order to be able to have the "Send Activity Sheet Data" permission. You can grant "View" permission without granting the "Send Data" permission.

▸ **View**

If you check this permission, the user can view **Activity Sheet** data (**Shell** > **User** mode > **Schedule Manager** > **Activity Sheet**) and perform "Open."

The permissions above are also available:

▸ When granting permissions through User Administration (**Company Workspace** > **Admin** mode > **User Administration**).

▸ Within a Shell Template or Shell Instance Access Controls.

▸ When granting permissions within a Shell Template or Shell Instance Access Control through User Administration.

▸ Where all nodes are listed in Unifier Navigator (User mode), when appropriate.

Unifier Provider, Unifier, and Gateway

The following Unifier objects are available in Unifier Provider:

▸ **Project**

Includes attributes that support the creation of projects in Unifier by way of Gateway. The Project object in Unifier Provider includes the following information:

  ▸ Status
  ▸ Location
  ▸ Template Number

▸ **Business Processes** (BPs)

Enables you to create/update different types of BPs such as Cost, Line Item, Document, and so forth, in Unifier. To correspond to the Gateway infrastructure, separate objects are available to capture the information in the BP Upper Form and Detail tab. To support the creation of BPs in Unifier, the Business Processes object in Unifier Provider includes the following information:

  ▸ Name
  ▸ Status
  ▸ Detail tab Name

▸ **Roles**

Enables you to create/update Roles in Unifier (Resource Manager > Roles).

▸ **Resources**

Enables you to create/update Roles in Unifier (Resource Manager > Roles). You can use the Resources object to identify whether a data from Unifier Provider can create a Role, or not.

▸ **CBS Codes** (Unifier CBS Shell-type only)

  ▸ Enables you to use the CBS object in Unifier Provider to import/export the CBS code data from Unifier.
  ▸ Enables you to use the CBS object in Unifier Provider to import the CBS code data into Unifier.

The following provides more details.

Project/Shell

To create/update Project/Shell in Unifier you can use the following attributes:

▶ Data Dictionary
▶ Business Flow
▶ Synchronization
▶ End-to-end solution

The following sections provide more details.

Project/Shell Data Dictionary

The following table describes the Data Dictionary for Unifier Provider (Project/Shell):

Attribute Name	Description
Status	To capture the status of Unifier project. Since Unifier projects must have one of following statuses, the user must define the data value mapping XML to map status of source project and to a project status value in Unifier. ▶ Active ▶ On-Hold ▶ View-Only ▶ Inactive
Location	The location of the destination Unifier Project. Example All Regions > Sites > Properties
Template	The "Number" of the template which must be used to create the new project in Unifier. ▶ Unifier Shell Template Numbers are enforced to be unique across all shell template types. ▶ Unifier determines the "Type" of the shell that must be created, using the template number.

Project/Shell Business Flow

When defining a Business Flow in Unifier Provider (Project/Shell), the destination application parameters for Unifier Provider, Project object, enable you to define the location (Location) and template (Template) as parameters. The attributes are specific to Unifier and eliminate the need for the source application to send the values for Unifier fields.

If the source application sends value for either of the parameters mentioned below via data mapping and you define the parameter value in the business flow, then the value sent by way of mapping takes precedence.

The following parameters are required for successful project creation in Unifier.

> **Note**: Oracle recommends that you set these parameters as "Required" in the Business Flow definition.

Object	Value	Description
Project Location	This is a Text field. You must enter one location, only. Example All Regions > Sites > Properties If you enter multiple locations, Unifier Provider will not be able to resolve the location in Unifier and project creation will fail.	Use this parameter to identify the location (Location): Where the Unifier project must be created in Unifier. You can also add the location as "Shell Attribute" (uuu_location) when defining the "Project" object filters. If you define the location parameter as a shell attribute (uuu_location = <xyz>), and use the available drop-down field (Location) for the Project object, then project creation will fail. If you add a filter row by selecting the fields as Shell Attribute Form and provide a value of the Shell Location, for Project object, then project creation will fail.
Project Template Number	This is a Text field. You must enter one number, only. If you enter multiple numbers, Unifier Provider will not be able to resolve the template in Unifier and project creation will fail.	Use this parameter to identify the templates which must be used to create the new Project in Unifier.

Project/Shell Synchronization

Synchronization in Unifier Provider (Project/Shell) occurs when you set the parameters (Project Location and Project Template Number) as "Required" or "Optional" in the Business Flow definition.

Project/Shell End-to-End Solution

The following explains the end-to-end solution for Unifier Provider (Project/Shell). The configuration settings are for:

- ▶ Unifier
- ▶ Unifier Provider

To configure the creation of projects in Unifier via Gateway

> **Note**: This is an optional step. You can skip deploying the objects from Unifier and add relevant fields in Gateway Data Mapping Templates directly, manually.

In Unifier, go to **Company Workspace** > **Admin** mode > **Gateway** > **Business Objects**.

Deploy the Shell Attribute Forms of the shells that you want to create in Unifier, via Gateway Integration.

All fields from the deployed Shell Attribute Forms appear as attributes of Project object in Unifier Provider Data Dictionary.

To configure the creation of projects in Unifier Provider via Gateway

You must:

- ▶ Create Data Mapping Templates
- ▶ Define Business Flow
- ▶ Define Synchronizations
- ▶ Synchronize

The following provides the details for each step:

Create Data Mapping Templates

Create Data Mapping Templates to map attributes of the Shell that needs to integrate with the Oracle application. All attributes of the Unifier Data Dictionary Project object are available to be added to the Data Mapping Template.

> **Note**: Ensure that you create one Data Mapping Template per Shell type.

If you do not want to deploy from Unifier and want to create the Data Mapping Templates in Gateway directly, then add each Shell Attribute Form Data Element that needs to receive data from the Oracle application Project object, manually.

If you want to deploy from Unifier, after adding the Shell Attribute Form Data Element, then:

▶ If the manually added field is same as one of the fields that were deployed from Unifier, then there will be no adverse impact on the existing fields.

▶ If the manually added field does not exist as a Data Element in Unifier, then there will be no adverse impact on the existing fields.

The fields remain as they are when the Oracle application sends values for the fields that were added to Unifier Provider and those values are not sent to Unifier.

Define Business Flow

Define Business Flow using the appropriate Data Mapping Template.

Create one Business Flow per Shell type in Unifier.

Add the appropriate source (Source) application parameters to filter the projects that you want to create in Unifier.

Add the values of relevant destination (Destination) application parameters (Location and Template).

Configure the Business Flow to be used for creating (Create) and updating (Update) the project in Unifier.

Define Synchronizations

Define Synchronizations by using the appropriate Business Flow.

Define the appropriate parameter values for data exchange.

Define the schedule frequency so that the synchronization does not have to be run manually for the project creation or update.

Synchronization

When a synchronization is run, Unifier Provider sends data to Unifier to:

▶ Create or update a Shell instance (as per Business Flow configuration).

▶ Populate the Data Element with the name of the application that is integrating with Unifier, if the destination Shell Attribute Form contains the "uuu_integrated_with" Data Element.

> **Note**: The application name value is sent by Gateway. The name is not hard-coded by Unifier.

Gateway maintains a cross-reference table between objects of the two applications to monitor whether to create or update the records of an object. The cross-reference table has IDs of projects in Unifier and P6. If the cross-reference table has and entry for a Unifier project against a P6 project, then Gateway will update the Unifier project; otherwise, Gateway will create a Unifier project.

> **Note**: If a project exists in Unifier and does not have an entry in the Gateway cross-reference table, then when Gateway proceeds to create a project in Unifier, to prevent creating aduplicat project in Unifier, Unifier converts the create request to update request and proceeds to update the existing project, instead of creating a new project.

Business Processes

To create/update Business Process records in Unifier you can use the following attributes:

- ▶ Data Dictionary
- ▶ Business Flow
- ▶ Synchronization
- ▶ End-to-end solution

The following sections provide more details.

Business Processes Data Dictionary

Data Dictionary (Unifier Provider Business Processes)

Notes:

- ▪ The remaining attributes are deployed from Unifier, as Data Elements, and will be added to relevant business processes, per business need.
- ▪ If available, the Object IDs in Gateway are noted in the corresponding field.
- ▪ The Parent Element ID is the tag in the Line Item which connects the Line Item with the parent record in which the Line Item has to exist in.
- ▪ Create separate templates for importing data into different BPs.

Item	Object Name	Description	Object Attributes
1	Company Costs	Unifier business processes that hold company level costs. When deployed from Unifier, the Upper forms of the Business Processes of the following category provide data for this object: Type = Cost AND Sub-type = Commit at Company Level AND Classification = <Null> OR Generic	▶ Record Number (record_no) ▶ Title (title) ▶ Creator (uuu_creator_id) in Unifier Provider and CreateUserId in Gateway Object field (S.No 2) ▶ Creation Date (uuu_creation_date) in Unifier Provider and CreateDate in Gateway Object field (S.No 1) ▶ Status (status) ▶ Amount (amount)

Item	Object Name	Description	Object Attributes
2	Company Costs Detail	Detail tabs of Company Cost business processes. When deployed from Unifier, the Detail tabs of all business processes that are in Company Costs category provide data for this object.	▶ Parent Record Number ▶ Line No./LiNum in Unifier Provider and LineNo in Gateway Object field (S.No 3) ▶ Tab Name (uuu_tab_id) ▶ Short Description (short_desc) ▶ Item Quantity (uuu_quantity) ▶ Item Unit Cost (uuu_unit_price) in Unifier Provider and PricePerUnit in Gateway Object field (S.No 4) ▶ Amount (amount)

Item	Object Name	Description	Object Attributes
3	Project Commits	Unifier Project level business processes related to money committed to be spent. When deployed from Unifier, the Upper forms of the business processes of the following category provide data for this object: Type = Cost AND Sub-type = Line Items with CBS Code OR Line Items with Multiple Codes AND Classification = Base Commit OR Change Commit	▶ Record Number (record_no) ▶ Title (title) ▶ Creator (uuu_creator_id) in Unifier Provider and CreateUserId in Gateway Object field (S.No 2) ▶ Creation Date (uuu_creation_date) in Unifier Provider and CreateDate in Gateway Object field (S.No 1) ▶ Due date (due_date) ▶ Effective Date (uuu_effective_date) ▶ Transaction Currency (currencyid) ▶ Rate in Project Currency (currencyrate) ▶ Status (status) ▶ Description (description) ▶ Amount (amount) ▶ Publish Path (uuu_dm_publish_path) ▶ Reference BPO (ref_bpo) ▶ Contract/PO (refid)

Item	Object Name	Description	Object Attributes
4	Project Commits Detail	Detail tabs of the Project commits type business processes. When deployed from Unifier, the Detail tabs of all business processes that are in Project Commits category provide data for this object.	▸ Parent Record Number ▸ Line No./LiNum in Unifier Provider and LineNo in Gateway Object field (S.No 3) ▸ Tab Name (uuu_tab_id) ▸ Cost Code (bitemID) ▸ Short_Description (short_desc) ▸ Description (description) ▸ Work Package (wpid) ▸ Item Quantity (uuu_quantity) ▸ Item Unit Cost (uuu_unit_price) in Unifier Provider and PricePerUnit in Gateway Object field (S.No 4) ▸ Amount (amount) ▸ Reference BPO Lineitem (ref_bpo_lineitem) ▸ Reference (uuu_sovlinum) ▸ Parent Detail Id (ParentDetailId)

Item	Object Name	Description	Object Attributes
5	Project Invoices	Unifier invoice related Project level business processes. When deployed from Unifier, the Upper forms of the business processes of the following category provide data for this object: Type = Cost AND Sub-type = Line Items with CBS Code OR Line Items with Multiple Codes AND Classification = General Spends OR Payment Applications	▶ Record Number (record_no) ▶ Title (title) ▶ Creator (uuu_creator_id) in Unifier Provider and CreateUserId in Gateway Object field (S.No 2) ▶ Creation Date (uuu_creation_date) in Unifier Provider and CreateDate in Gateway Object field (S.No 1) ▶ Due date (due_date) ▶ Effective Date (uuu_effective_date) ▶ Contract/PO (refid) ▶ Transaction Currency (currencyid) ▶ Amount (amount) ▶ Status (status) ▶ Publish Path (uuu_dm_publish_path)

Item	Object Name	Description	Object Attributes
6	Project Invoices Detail	Detail tabs of the Project invoices type business processes. When deployed from Unifier, the Detail tabs of all business processes that are in Project Invoices category provide data for this object.	▶ Parent Record Number ▶ Line No./LiNum in Unifier Provider and LineNo in Gateway Object field (S.No 3) ▶ Tab Name (uuu_tab_id) ▶ Cost Code (bitemID) ▶ Short_Description (short_desc) ▶ Description (description) ▶ Work Package (wpid) ▶ Item Quantity (uuu_quantity) ▶ Item Unit Cost (uuu_unit_price) in Unifier Provider and PricePerUnit in Gateway Object field (S.No 4) ▶ Amount (amount) ▶ Effective Date (uuu_effective_date) ▶ Scheduled Value (scheduled_value) ▶ Parent Detail Id (ParentDetailId)

Item	Object Name	Description	Object Attributes
7	Other Project Costs	Unifier Project level business processes that captures costs other than commits or invoices. When deployed from Unifier, the Upper forms of the business processes of the following category provide data for this object: Type = Cost AND Sub-type = Line Items with CBS Code OR Line Items with Fund Code OR AND Classification = Generic OR Transfer OR	▶ Record Number (record_no) ▶ Title (title) ▶ Creator (uuu_creator_id) in Unifier Provider and CreateUserId in Gateway Object field (S.No 2) ▶ Creation Date (uuu_creation_date) in Unifier Provider and CreateDate in Gateway Object field (S.No 1) ▶ Status (status) ▶ Amount (amount) ▶ Publish Path (uuu_dm_publish_path)

Item	Object Name	Description	Object Attributes
8	Other Project Costs Detail	Detail tabs of the Other Project costs type business processes. When deployed from Unifier, the Detail tabs of all business processes that are in Other Project Costs category provide data for this object.	▸ Parent Record Number ▸ Line No./LiNum in Unifier Provider and LineNo in Gateway Object field (S.No 3) ▸ Tab Name (uuu_tab_id) ▸ Cost Code (bitemID) ▸ Fund Code (uuu_fund_code) ▸ Short_Description (short_desc) ▸ Description (description) ▸ Item Quantity (uuu_quantity) ▸ Item Unit Cost (uuu_unit_price) in Unifier Provider and PricePerUnit in Gateway Object field (S.No 4) ▸ Amount (amount) ▸ Effective Date (uuu_effective_date)

Item	Object Name	Description	Object Attributes
9	Project Simple	Unifier project level Simple business processes. When deployed from Unifier, the Upper forms of the business processes of the following category provide data for this object: Type = Simple AND Level = Project/Shell	▸ Record Number (record_no) ▸ Title (title) ▸ Creator (uuu_creator_id) in Unifier Provider and CreateUserId in Gateway Object field (S.No 2) ▸ Creation Date (uuu_creation_date) in Unifier Provider and CreateDate in Gateway Object field (S.No 1) ▸ Status (status) ▸ Publish Path (uuu_dm_publish_path)
10	Company Simple	Unifier company level Simple business processes. When deployed from Unifier, the Upper forms of the business processes of the following category provide data for this object: Type = Simple AND Level = Company	▸ Record Number (record_no) ▸ Title (title) ▸ Creator (uuu_creator_id) in Unifier Provider and CreateUserId in Gateway Object field (S.No 2) ▸ Creation Date (uuu_creation_date) in Unifier Provider and CreateDate in Gateway Object field (S.No 1) ▸ Status (status) ▸ Due Date (due_date) ▸ Publish Path (uuu_dm_publish_path)

Item	Object Name	Description	Object Attributes
11	Company Line Item	Unifier company level Line Item type business processes. When deployed from Unifier, the Upper forms of the business processes of the following category provide data for this object: Type = Line Item AND Sub-Type = Any AND Level = Company	▶ Record Number (record_no) ▶ Title (title) ▶ Creator (uuu_creator_id) in Unifier Provider and CreateUserId in Gateway Object field (S.No 2) ▶ Creation Date (uuu_creation_date) in Unifier Provider and CreateDate in Gateway Object field (S.No 1) ▶ Status (status) ▶ Due Date (due_date) ▶ Publish Path (uuu_dm_publish_path)
12	Company Line Item Detail	Detail tabs of the company Line Item type business processes. When deployed from Unifier, the Detail tabs of all business processes that are in Company Line Item category provide data for this object.	▶ Parent Record Number ▶ Line No./LiNum in Unifier Provider and LineNo in Gateway Object field (S.No 3) ▶ Tab Name (uuu_tab_id) ▶ Short Description (short_desc)

Item	Object Name	Description	Object Attributes
13	Project Document	Unifier Project level Document type business processes. When deployed from Unifier, the Upper forms of the business processes of the following category provide data for this object: Type = Document AND Sub-Type = Any AND Level = Project/Shell	▸ Record Number (record_no) ▸ Title (title) ▸ Creator (uuu_creator_id) in Unifier Provider and CreateUserId in Gateway Object field (S.No 2) ▸ Creation Date (uuu_creation_date) in Unifier Provider and CreateDate in Gateway Object field (S.No 1) ▸ Short Description (short_desc) ▸ Status (status) ▸ Publish Path (uuu_dm_publish_path)
14	Project Document Detail	Detail tabs of Project Document type business processes. When deployed from Unifier, the Detail tabs of all business processes that are in Project Invoices category provide data for this object.	▸ Parent Record Number ▸ Line No./LiNum in Unifier Provider and LineNo in Gateway Object field (S.No 3) ▸ Tab Name (uuu_tab_id) ▸ Name (uuu_Name) ▸ Short Description (short_desc) ▸ Line Item Status (uuu_line_item_status) ▸ Issue Date (uuu_issue_date)

Summary Payment Application (SPA) SOV type BPs

The creation and update of the Line Items in the Summary Payment Application (SPA) SOV type BPs requires three fields in Unifier Provider. These fields are designed to identify and separate the SPA SOV type BPs in Unifier Provider from the existing SPA SOV type BPs in Unifier.

Note: Line Item update is not supported for Project Invoice (Payment Applications) Type of BP's through Gateway Integration. As a result, every Update from Gateway to Unifier will result in the creation of a new Line Item.

Depending on which Line Item is referenced, the Line Items coming from Gateway follow a certain structure as described in the examples below:

Base Commit Type BP Line Item

Example

```
<_bp_lineitems>  <!—Summary Line -- >
<ElementId>Summary1</ElementId>
<ParentDetailId></ParentDetailId>
<short_desc>desc 1</short_desc>
</_bp_lineitems>


<_bp_lineitems>  <!—Costed line -- >
<ElementId>costed line 1</ElementId>
<ParentDetailId>Summary1</ParentDetailId>
<short_desc>desc 1</short_desc>
</_bp_lineitems>
```

> **Note**: The `parentdetailid` connects the BP Line Item to its parent Summary Line Item in the SOV.

Change Commit Type BP Line Item

Example

```
<_bp_lineitems> <!—Summary Line -- >
<ElementId>Summary1</ElementId>
<ParentDetailId></ParentDetailId>
<short_desc>desc 1</short_desc>
<uuu_sovlinum>1</uuu_sovlinum>
</_bp_lineitems>

<_bp_lineitems> <!—Costed line -- >
<ElementId>costed line 1</ElementId>
<ParentDetailId>Summary1</ParentDetailId>
<short_desc>desc 1</short_desc>
<uuu_sovlinum>1.1</uuu_sovlinum>
<bItemID>Code 1</bItemID>
</_bp_lineitems>
```

Notes:

- The `parentdetailid` connects the BP Line Item to its parent Summary Line Item in the SOV.
- The Data Element `uuu_sovlinum` is an optional field. If the value is received by Unifier for the same field, then Unifier will try to update an existing row; otherwise, the update will create a new Line Item in the SOV (based on the settings of the SOV).

Invoice Type BP Line Item

Example

```
<_bp_lineitems> <!—Summary Line -- >
<ElementId>Summary1</ElementId>
<ParentDetailId></ParentDetailId>
<short_desc>desc 1</short_desc>
<bItemID></bItemID>
<_refnum>1</_refnum>
</_bp_lineitems>


<_bp_lineitems> <!—Costed line -- >
<ElementId>costed line 1</ElementId>
<ParentDetailId>Summary1</ParentDetailId>
<short_desc>desc 1</short_desc>
<bItemID>Code 1</bItemID>
<_refnum>1.1</_refnum>
</_bp_lineitems>
```

Notes:

- The `parentdetailid` connects the BP Line Item to its parent Summary Line Item in the SOV.
- The `refnum` is for Unifier and is used when creating the structure within the SOV for the incoming Line Items and the Summary lines.

Unifier Provider BP Objects and Gateway Objects

To correspond to the Unifier Provider objects (explained in the preceding Data Dictionary section), Gateway will introduce new objects to support the various business processes.

You can use the mapping information in the following table to see how data is sent from Unifier to an Oracle application and flows from object to object (Unifier Provider > Gateway).

Item	Unifier Provider Object Name	Corresponding Gateway Object Name
1	Company Costs	BlanketPurchaseOrder
2	Company Costs Detail	BlanketPurchaseOrderDetail
3	Project Commits	BudgetChangeOrder BudgetItem Contract PurchaseOrder WorkRelease ChangeOrder POAmendment
4	Project Commits Detail	BudgetChangeOrderDetail BudgetItemDetail ContractDetail PurchaseOrderDetail WorkReleaseDetail ChangeOrderDetail POAmendmentDetail
5	Project Invoices	Invoice PaymentApplication PaymentApplicationtoOwner
6	Project Invoices Detail	InvoiceDetail PaymentApplicationDetail PaymentApplicationtoOwnerDetail
7	Other Project Costs	Estimate BudgetApproval BudgetChange BudgetTransfer PotentialChangeOrder JournalEntry Payment PaymentFromOwner RiskAndIssue FundAppropriation

Item	Unifier Provider Object Name	Corresponding Gateway Object Name
8	Other Project Costs Detail	EstimateDetail BudgetApprovalDetail BudgetChangeDetail BudgetTransferDetail PotentialChangeOrderDetail JournalEntryDetail PaymentDetail PaymentFromOwnerDetail RiskAndIssueDetail FundAppropriationDetail
9	Project Simple	ProjectInformation
10	Company Simple	VendorEvaluation
11	Company Line Item	Vendor Timesheet
12	Company Line Item Detail	VendorDetail TimesheetDetail
13	Project Document	RequestforSubstitution
14	Project Document Detail	RequestforSubstitutionDetail

Business Processes Business Flow

When defining a Business Flow in Unifier Provider (Business Processes), the destination application parameters for Unifier Provider, BP object, enable you to define which BP needs to receive data by way of the Business Flow configuration. The attributes are specific to Unifier and eliminate the need for the source application to send the values for Unifier fields.

> **Notes**:
> - To avoid duplicating records, create separate Business Flows (for two BPs of the same type) when importing data into Unifier.
> - Do not use a single Business Flow in Gateway to import into two Company Costs type BPs. Instead, use different Business Flows for setting up the data flow.

If the source application sends value for either of the parameters mentioned below via data mapping and you define the parameter value in the business flow, then the value sent by way of mapping takes precedence.

The following parameters are required for successful project creation in Unifier.

Object	Value	Description
Business Process Name	Text field If you enter more than one value, then the integration will fail.	Use this parameter to identify the Name of the business process that requires the data from the Oracle application. The value that you enter in this parameter is used by Unifier Provider to identify which BP requires data. Example Creating Data Mapping Template ▸ Unifier Provider object: Project Commits ▸ Gateway object: Contracts ▸ Oracle Application object: xyz

Object	Value	Description
Business Process Detail Tab Name	Text field If you enter more than one value, then the integration will fail.	Use this parameter to identify the Detail tab of the business process that requires the data from the Oracle application. The value that you enter in this parameter is used by Unifier Provider to identify which BP requires data. Example Creating Data Mapping Template ▶ Unifier Provider object: Project Commits Detail ▶ Gateway object: Contracts Detail ▶ Oracle Application object: xyz **Note**: The tab Name is also an attribute for all Line Item objects in Unifier Provider. If the Oracle Application sends value for tab name by way of mapping, then the mapped value will override the parameter value defined in Business Flow.

Object	Value	Description
Line Item Identifier	Text field **Note**: Oracle recommends that you use the Data Element name. If you enter more than one value, then the integration will fail.	This parameter is used by Unifier during an update of an existing Line Item (in Unifier), only. The value that you enter in the Data Element of this parameter is used by Unifier to identify which Line Item requires update. **Note**: Within this parameter text box, enter the name (not label) of the Data Element on the Detail tab that must be used as the identifier for Line Item update. Unifier Provider identifies the value entered in this text boxas the DE name (not label).

Business Processes Synchronization

Synchronization in Unifier Provider (Business Processes) occurs when you set the parameters (Business Process Name, Status, and Detail Tab Name) as "Required" or "Optional" in the Business Flow definition.

Business Processes End-to-End Solution

The following explains the end-to-end solution for Unifier Provider (Business Processes). The configuration settings are for:

▶ Unifier
▶ Unifier Provider

To configure the creation of Business Processes in Unifier via Gateway

> **Note**: This is an optional step. You can skip deploying the objects from Unifier and add relevant fields in Gateway Data Mapping Templates directly, manually.

Go to **Company Workspace** > **Admin** mode > **Gateway** > **Business Objects**.

Deploy the business process record that you want to create in Unifier, via Gateway Integration.

All Data Elements from the deployed business process record appear as attributes of Business Process object (Company Costs, Project Commits, Project Invoices, etc.) in Unifier Provider Data Dictionary.

To configure the creation of Business Processes in Unifier Provider via Gateway

You must:

▶ Create Data Mapping Templates
▶ Define Business Flow
▶ Define Synchronizations
▶ Synchronize

The following provides the details for each step:

Create Data Mapping Templates

Create Data Mapping Templates to map attributes of the BPs Upper Form data that needs to integrate with Gateway > Oracle application.

> **Notes**:
>
> Ensure that you create one Data Mapping Template per BP.
>
> If the BP that needs to integrate has Detail tab, then create additional Data Mapping Template, one template per Detail tab, to ensure that the map the Detail Form elements to Gateway > Oracle application.

Once you deploy the BP from Unifier to Gateway, all the attributes of the Business Process object Unifier Provider (Company Costs, Project Commits, Project Invoices, etc.) will be available for you to add to the Data Mapping Template.

If you do not want to deploy from Unifier and want to create the Data Mapping Templates in Gateway directly, then you must add each BP Data Element that needs to receive data from a Oracle application object in Gateway, manually (use the Add New Field in the Add Template window). After you add each BP Data Element in Gateway, you must deploy the BP from Unifier. Note the following conditions:

▶ If the manually added field is the same as one of the fields that you deployed from Unifier, there will be no impact on the existing field. This is similar as if you deployed the manually added field from Unifier.
▶ If the manually added field does not exist as a Data Element in Unifier, there will be no impact on the existing field. When the Oracle application sends value for this field to Unifier Provider, the value remains as is and it is not sent to Unifier.

Define Business Flow

Define Business Flow using the appropriate Data Mapping Template.

Create one Business Flow per BP Upper Form and one Business Flow per BP Detail tab in Unifier.

Add the appropriate source (Source) application parameters to filter the BP records that you want to extract for the Oracle application and create in Unifier.

Add the values of the following relevant destination (Destination) application parameters in order for the BP Records/Line Items to be created in Unifier:

▶ Project ID
▶ Business Process Name

▶ Business Process Detail Tab Name

Configure the Business Flow to be used for creating (Create) and updating (Update) the BP Records/Line Items in Unifier.

Define Synchronizations

Define Synchronizations by using the appropriate Business Flow.

Define the appropriate parameter values for data exchange.

Define the schedule frequency so that the synchronization does not have to be run manually for the BP Records/Line Items creation or update.

Synchronize

When a synchronization is run, Unifier Provider sends data to Unifier to create or update BP Records/Line Items instance (as per Business Flow configuration).

Example

To create BP records of Base Commits type in Unifier:

1) In Unifier, deploy the Base Commits BP to map to Unifier Provider object (Project Commits).
2) Log in to Gateway instance and create the following two Data Mapping Templates:
   a. Using the Gateway object "Project Commits" to map the Base Commits BP "Upper Form" information to the Oracle application.
   b. Using the Gateway object "Project Commits Detail" to map the Base Commits BP "Detail" tab information to the Oracle application.
3) Using the appropriate Gateway objects, create the following two Business Flows:
   a. Using Gateway object "Purchase Orders" and selecting the corresponding Data Mapping Template that you created (sub-step "a" above).
   b. Using Gateway object "Purchase Orders Detail" and selecting the corresponding Data Mapping Template that you created (sub-step "b" above).
4) Add the appropriate source (Source App Parameters) to filter records from the source application and set the destination application parameters (Destination App Parameters) to:
   a. Business Process Name = Base Commit
   b. Business Process Detail Tab = <detail tab name>
5) Create two synchronizations:
   a. For Base Commit BP in Unifier
   b. For Base Commit Line Item in Unifier
6) Define the schedule frequency so that the synchronization does not have to be run manually for the BP Records/Line Items creation or update.

Roles

You can create a Role in **Unifier** by using both Role and Resource data from a Oracle application. The Role object in **Unifier Provider** can be used to create and update Roles in Unifier. The following sections provide details about:

▶ Roles Data Dictionary

- ▶ Roles Business Flow
- ▶ Roles Business Flow (Destination App Parameters)
- ▶ Roles Synchronization
- ▶ Roles End-to-End Solution

Roles Data Dictionary

The Role object in Unifier Provider has the following default attributes which are the mandatory fields needed to create a Role object in Unifier:

Attribute Name	Description
Role Name	The name of the Role object in Unifier.
Role Status	The Role status is either Active or Inactive. ▶ If the Oracle application Role Status values do not match the Unifier Role Status values, then use Data Mapping values. ▶ If the Oracle application does not send any values for this attribute, then Unifier creates a Role with a default status of "Active."
Role Currency	The currency for the Role. This attribute is mandatory/required for creating a Role object in Unifier. If the Oracle application does not send any values for this attribute, then Unifier creates a Role with a default currency of company base currency.

As a result of the Summary Sheet integration that creates Role in Unifier (by pulling data from P6 Schedule Summary data, the Role ID (uuu_role_id) is a mandatory/required field for creating a Role object in Unifier.

Creating a Role object in Unifier by pulling data from Gateway (Role/Resource object) does not require the Role ID (uuu_role_id) field for creating a Role object in Unifier.

Creating a Role object in Unifier via Gateway integration (by pulling data from Gateway Role/Resource object) require the values of the following fields, mentioned in the table above:

- ▶ Role Name
- ▶ Role Status
- ▶ Role Currency

Roles Business Flow

Role, or Resource, mapping in Unifier (from an Oracle application) is achieved by way of the "Dynamic Object Mapping" field in Gateway.

The "Create Template" window in Gateway enables you to select "Provider 1" as a Oracle application and "Provider 2" as Unifier.

In the section available for mapping objects, you can select "Resource" as the object in the Oracle application and "Role" as the object in Unifier (Provider 2).

You can choose a criteria to bring the "Resource" data from the Oracle application by selecting the "Use Criteria Step" checkbox. You can then proceed to the next step and add the required mappings.

Roles Business Flow (Destination App Parameters)

You can create the Roles object in Unifier from both Resources and Roles objects in Unifier Provider. As a result, when defining a Business Flow, you need to identify the parameters (Destination App Parameters) within Unifier Provider. The following explains the Roles Business Flow:
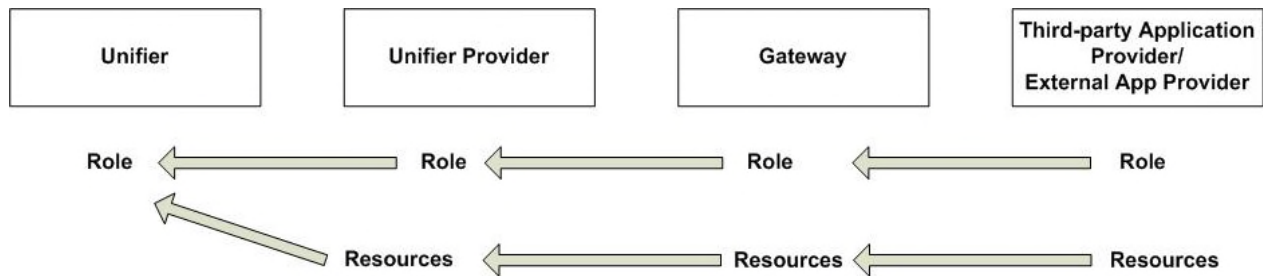
Roles Synchronization

You can create synchronization using the appropriate Business Flow.

Roles End-to-End Solution

Follow these steps to create Roles objects in Unifier, via Gateway integration:

1) From Unifier, deploy the Roles attribute form to Gateway.
   ▸ This is an optional step. You can use this step to add additional Data Elements (required for Role creation or to receive values from the Oracle application) to the Roles attribute form.
   ▸ You can create the Role object in Unifier from Role, or Resource, object in Unifier Provider by using the destination parameter (see the Roles Business Flow (Destination App Parameters) above); however, when a Roles object is deployed from Unifier, it only provides attributes for the Role object in Unifier Provider, only.

2) Create Data Mapping Template.

   Unifier Provider "Role" object > Gateway "Role" object > Oracle Application "xyz" object

3) Create Business Flow.

   Use the Gateway "Role" object and Data Mapping Template.

4) Create Synchronization.

   Use the Business Flow.

5) Create Schedule.

   Enable the scheduled creation/update of roles.

Resources

You can use the Resources object to identify whether a data from Unifier Provider can create a Role/Resource, or not. When you map a Unifier "Resource" object to a Gateway "Resource" object, you can create/update both the Resources and Roles object in Unifier. The following sections provide details about:

▶ Resources Data Dictionary
▶ Resources Business Flow
▶ Resources Synchronization
▶ Resources End-to-End Solution

Resources Data Dictionary

The Resources object in Unifier Provider has the following default attributes which are the mandatory fields needed to create a Resources object in Unifier:

Attribute Name	Description
Resource Name	Unifier Resource Name.
Resource Status	The Resource status is either Active or Inactive.
	If the third-party application Role Status values do not match the Unifier Resource Status values, then use Data Mapping values.
	If the third-party application does not send any values for this attribute, then Unifier creates a Resource with a default status of "Active."
Resource Code	Resource Code.
Resource Capacity	Resource Capacity.
User First Name	First name of the Unifier user who is being added as a resource.
User Last Name	Last name of the Unifier user who is being added as a resource.
User E-mail ID	E-mail ID of the Unifier user who is being added as a resource.
Default Role Name	The role that the resource is allocated to.

Resources Business Flow

You can create the Business Flow by using the appropriate Resource-to-Resource Data Mapping Template.

Resources Synchronization

You can create the Synchronization by using the appropriate Business Flow.

Resources End-to-end Solution

Follow these steps to create Resources objects in Unifier, via Gateway integration:

1) From Unifier, deploy the Resource attribute form to Gateway.

   ▸ This is an optional step. You can use this step to add additional Data Elements to the Resources attribute form that are required for:

   Resource, or Role, creation.

   Receiving value from the third-party application.

   When a Resource object is deployed from Unifier, it only provides attributes for the Resource object in Unifier Provider, only.

2) Create Data Mapping Template.

   Unifier Provider "Resource" object > Gateway "Resource" object > Third-party Application "xyz" object

3) Create Business Flow.

   Use the Gateway "Resource" object and Data Mapping Template.

4) Create Synchronization.

   Use the Business Flow.

5) Create Schedule.

   Enable the scheduled creation/update of resources.

CBS Codes

You can create and update the CBS Codes in Unifier Cost Sheet via Gateway integration with any Oracle application.

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