

Oracle Fusion Cloud Project Management

**Using Project Execution
Management**

24D



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24D

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1 Project Definition

Overview of Project Execution Management

Create and manage your projects, collaborate on project and nonproject tasks, and find best-fit resources to staff projects.

Project Execution Management includes these features:

- Project planning
- Work plan templates for tasks and resource assignments
- Project plan and task execution
- Progress tracking
- Project performance and analysis
- Issue tracking
- Resource schedules and assignments
- Calculation of resource utilization

Import Project Plan Process

The Import Project Plan process imports project plans from third-party applications in the interface table to Project Management. The process creates project plans based on the data loaded into the open interface table.

You must load the import data to the PJT_PROJECT_PLAN_XFACE interface table and run this process.

Note: You can load data to interface tables using predefined templates and the Load Interface File for Import scheduled process, which are both part of the External Data Integration Services for Oracle Cloud. For more information about file-based data import, see the File-Based Data Import (FBDI) for Project Management guide.

From the navigator, select the Scheduled Processes menu and specify the process name, date and time to run the Import Project Plan process.

The process validates the project plan data and creates project plans in Project Management. The errors and warnings for the invalid project plan data are tracked in a report for the Import Project Plan process. Review the errors and fix the issues. Load the data from CSV file into the interface table again and resubmit the process.

Note: We recommend that you use the Import Projects process to create projects.

Importing Project Plan Process Report

After the Import Project Plan process completes, review the output report to view the successful transactions and the errors and warnings. If errors exist, review and resolve the issues before submitting the process again. If warnings exist,

take note of the details, and make corresponding corrections directly in Project Management in the Manage Project Plan page. You can broadly classify the errors into the following types:

- Basic data validation errors such as some required attribute missing, or invalid values.
- Data consistency between records, such as task with the same identifier having different names in different records.
- Data referential issues, such as a specified parent task identifier doesn't exist.
- Data integrity issues with the current application data, such as import of a project fails because a project with the same name already exists in the target database.

Related Topics

- [Overview of External Data Integration Services for Importing Data](#)
- [Maintain a Single Source of Truth for Project Team Members and Labor Resources](#)

How Microsoft Project Works with Project Management

Use Project Management integration with Microsoft Project to complete initial scheduling and what-if analysis in Microsoft Project before exporting the project plan to Project Management.

The integration of Microsoft Project versions 2016, 2019, or 2021 for desktop with Project Management application lets you schedule project plans, manage resource assignments, and track progress. It also supports components such as manual tasks, inactive tasks, free text, and primary baseline. You can export and synchronize milestones between Microsoft Project and Project Financial Management.

To set up Microsoft Project integration, you must install Microsoft Project Integration Client. After the setup is complete, you can import and export project plans.

Note: Cloud-based versions and other desktop versions of Microsoft Project aren't supported.

Install Microsoft Project Integration Client

A project manager or project administrator can download and install the integration clients available for different versions of Microsoft Project to integrate with Project Management or Project Financial Management applications.

Note: You can only have one integration client, either for Project Management or Project Financial Management applications, on your desktop. To switch between different clients, you must uninstall the existing client and install the other client.

To install Microsoft Project Integration client for Project Management:

1. If you have an existing version of Microsoft Project Integration with Project Management, you must uninstall that client version by selecting Uninstall from the Oracle Fusion Projects ribbon in Microsoft Project.
2. From the Navigator, open Project Management.
3. From the Manage Project Plan page or from the My Projects page, open the Actions panel tab and select Install Microsoft Project Integration to download the client. The minimum system configuration for Microsoft Project

and other details appear. Make sure your configuration meets those requirements before proceeding with the install, including the required browser.

4. Save the client, extract the installation files to a local folder, and run setup from that folder.
5. After the Microsoft Project Integration client is installed successfully, open Microsoft Project.
6. From the Oracle Fusion Projects menu, select **Change Environment** and enter the URL for Oracle Fusion Applications.

You can change the environment URL at any time to support later server changes.

Import Task Codes into Microsoft Project

Use the **Import List of Values** menu option on the Oracle Fusion Projects menu to import values defined for task codes. Ensure that the task codes that you import don't match with any of the Microsoft Project column names. The following table lists the three task codes and the associated Microsoft Project fields.

Task Code	Associated Microsoft Project Fields
TASK_EXT_TEXT01	Text1
TASK_EXT_CODE01	OutlineCode1
TASK_EXT_NUM01	Number1

Use the **View Attribute Mapping** menu option to review how Project Management attributes map to Microsoft Project fields.

Import Projects

Import projects (but not work plan templates) from Project Management work area to create project files in Microsoft Project.

CAUTION: It's important that the project calendars in Microsoft Project and Project Management are in sync before you export or import projects.

The following table describes how some important task-level attributes are imported or set. The project-level attributes such as status and project customer aren't imported into Microsoft Project.

Attribute	Description
Task attributes	<p>Key imported attributes are:</p> <ul style="list-style-type: none"> • Task numbers (from the WBS column in Microsoft Project) • Planned dates • Percent complete and physical percent complete • Total planned quantity. If calendar or scheduling settings differ, Microsoft Project recalculates effort or units to retain imported dates. <p>Enterprise task codes are imported but project codes aren't imported.</p>

Attribute	Description
	The task type for all imported tasks is set to Fixed Units in Microsoft Project.
Task constraints and dependencies	Project Management application doesn't support the constraint types As Late As Possible and As Soon As Possible. Other constraints are imported using the mapping described in the section on exporting project plan and scheduling information in this topic. If you assign start and finish dates to a task, then a Must Start On constraint is created for the task when you import the project into Microsoft Project.
Milestones	Tasks designated as milestone tasks are imported as milestones in Microsoft Project.
Schedule Type	<p>When importing projects from the Project Management work area into Microsoft Project, the tasks will be created with the schedule type set in the Project Management work area, irrespective of the default task type set in Microsoft Project. So, a fixed duration project is imported as fixed duration tasks and fixed effort project is imported as fixed work tasks.</p> <p>The application always imports the summary tasks as fixed duration because they can't be imported as fixed work.</p>

The following table describes how some important resource and resource assignment attributes are imported or set.

Attribute	Description
Resources	All labor and expense resources defined as project resources are imported.
Resource assignments	<p>The following attributes are imported for resource assignments:</p> <ul style="list-style-type: none"> Planned dates Planned, and remaining effort. The resources (task managers) that you assign to summary tasks are imported into Microsoft Project with zero allocation. Actual costs for labor resources and actual and planned costs for expense resources. The cost amounts are imported using the project currency. Import processing reports an error if Microsoft Project doesn't support the project currency.

Note: While importing or exporting projects, if you use a screen reader application, ensure that the focus is on the Transfer Report to read the details of your project transfer.

Export Project Plan and Scheduling Information

Export your project plan to the Project Management work area after initial scheduling is complete in Microsoft Project and after you fix all errors identified during prevalidation.

CAUTION: It's important that the project calendars in Microsoft Project and Project Management are in sync before you export or import projects.

The WBS column values from Microsoft Project are exported as task numbers to the Project Management work area. You can enter alpha numeric characters or use the auto-generated values for WBS in Microsoft Project.

Important attributes exported or recreated at the task level include task number (WBS), task name and dates, task codes, dependencies, constraints, and milestone indicators. A Microsoft Project task should have a contiguous assignment, because the Project Management application doesn't support split tasks. Scheduling in the Project Management application will use the original duration to calculate the dates.

The task date constraints are recreated in Project Management based on the mappings as listed in this table.

Microsoft Project Constraint Type	Project Management Constraint Type
As Late As Possible	No constraint created in Project Management
As Soon As Possible	No constraint created in Project Management
Finish No Earlier Than	Finish On or After
Finish No Later Than	Finish By
Must Finish On	Finish On
Must Start On	Start On
Start No Earlier Than	Start On or After
Start No Later Than	Start By

When exporting projects to the Project Management work area, Microsoft Project exports the tasks based on the conditions specified in this table.

Tasks	Condition
Inactive tasks	Doesn't export.
Manual tasks	Exports. If the manual task has invalid dates, such as text entries, Microsoft Project exports the dates and duration as blank.
Manual tasks with predecessor dependencies	Exports tasks without predecessor dependencies.
Summary tasks	Manual summary tasks must be converted to automatic summary tasks before exporting them from Microsoft Project into Project Management. If the dates are missing, Project Management automatically populates them.

Tasks	Condition
Summary tasks with dependencies	Summary tasks support dependencies and can be successors or predecessors to any other tasks. Keep in mind that dependencies on summary tasks are applied to its highest-level child tasks that don't have constraints or dependencies.
Baseline	Exports the primary baseline, which is called Baseline, from Microsoft Project into Project Management work area. If the baseline called Baseline isn't available in Microsoft Project, the application exports the data corresponding to the latest saved baseline.
Schedule type	<p>The tasks defaults to the schedule type selected during project export in the Export New Project window. Even if the project contains a mix of fixed duration, fixed units, and fixed work tasks, while exporting, they change into the schedule type selected. Note that the fixed work type in Microsoft Project corresponds to the fixed effort schedule type in the Project Management work area.</p> <p>The resource assignment dates aren't revised based on the task type in the Project Management work area until you explicitly roll up data or schedule tasks.</p>
Milestones	When exporting milestone tasks, ensure that the tasks are lowest-levels tasks with zero duration, that is, the same start and finish dates.

Export Resource Assignments

Important attributes transferred or recreated at the resource assignment level when you export projects include the resource name, planned dates, and total planned work and remaining work. The task type of all exported tasks is set to Fixed Effort in Project Management work area, which corresponds to the Microsoft Project task type of Fixed Work. However, resource assignment dates aren't revised based on task type in Project Management work area until you explicitly roll up data or schedule tasks.

Resources, such as task managers, that you assign to summary tasks must have zero allocation. Otherwise, the prevalidation check reports an error.

Note: The Peak value of a task resource assignment is exported when exporting the resource assignment from Microsoft Project to Project Management work area.

Export Resource Information

When exporting, only resources with task assignments are exported. The following table describes how resources are exported.

Project Management Resource Type	Microsoft Project Resource Type	Description
Labor	Work	Resources associated with resource assignments are linked to only existing project enterprise labor resources if the email or name exactly matches. Best practice is to include email addresses to differentiate resources with the same name. Export New Project won't create labor resources in Project Enterprise Resources.

Project Management Resource Type	Microsoft Project Resource Type	Description
Expense	Cost	Resources are linked to existing project enterprise resources if the names match. Export New Project won't create expense resources in Project Enterprise Resources.

Related Topics

- [Microsoft Project Prevalidation Messages](#)

Microsoft Project Prevalidation Messages

Use prevalidation messages to identify errors that prevent export of your project plan from Microsoft Project to Project Management. You must fix all errors before exporting a project.

Identify tasks with prevalidation errors using the indicators in the Exception column in the Gantt Chart view of Microsoft Project.

Tip: After export, review the transfer report to identify if errors or warnings occurred for checks other than those performed during prevalidation.

Prevalidation Checks

The following table describes the prevalidation rules for tasks and resource assignments.

Level	Rule
Milestone tasks	No subtasks are allowed under milestone tasks. Milestones must be lowest-level tasks.
Milestone tasks	Milestone tasks must have zero duration.
Tasks	Only existing labor resources in Project Enterprise Resources will be assigned as labor resources. Including the resource's email address is a best practice.
Tasks	Only existing expense resources in Project Enterprise Resources will be assigned as expense resources.

2 Manage Project Requirements

Project Requirements

If you manage projects using the Agile development method, you start by identifying the high-level requirements and separating them further to manage the completion of work on the requirement.

You use the Project Requirements work area to:

- Organize backlog items by requirements
- Manage your list of backlog items
- Create project tasks for backlog items

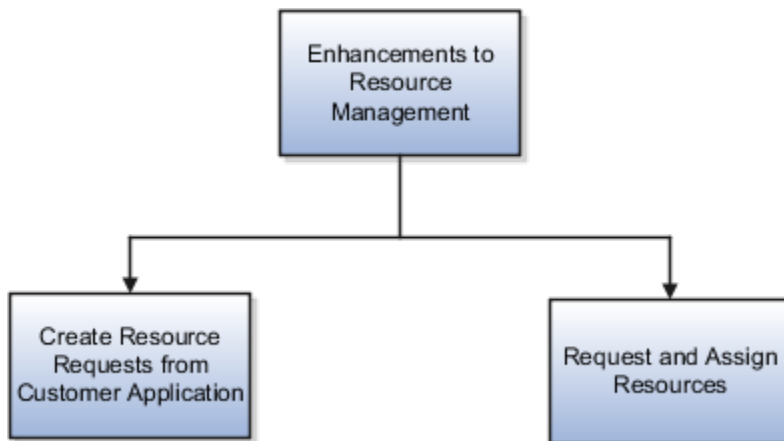
Build a Requirement Hierarchy

You can organize requirements into a hierarchy and split them into lower-level requirements. You can finally break them down into backlog items. Use the requirement hierarchy to manage the work that must be completed to fulfill the requirement.

You can view and create backlog items at any level of the hierarchy and also search for requirements and backlog items.

The following example shows a simple two-level requirement hierarchy. You can break down the top-level requirement, enhancements to resource management into:

- Create resource requests
- Request and assign resources



Manage Backlog Items

You can split requirements into backlog items and associate them to the lowest-level of the hierarchy. Backlog items represent a list of incremental work that must be done to meet a requirement.

Do the following to use backlog items to track product development:

- Assign ownership of backlog items to scrum masters and product owners.

- Rank and prioritize backlog items.
- Capture user stories and acceptance criteria for a backlog item.
- Create tasks and capture task details such as resource, task dates, and effort.
- Associate deliverables with backlog items.

Tip: In addition to manually creating backlog items, you can also download a spreadsheet from the application, enter backlog items in Microsoft Excel, and upload the new backlog items.

Associate Projects and Tasks to Track Work

You can associate your projects with backlog items to track the completion of work on a requirement. Associate projects to backlog items by selecting a project from the list in the **Project Name** column. If the project doesn't exist, you can also create a project using the **Create** link in the **Project Name** column on the Manage Backlog Items page.

After you associate a backlog item to a project, you can use the **Tasks** tab in the **Backlog Item Details** region to create project tasks for each backlog item.

Note: Only project managers of a project can associate the backlog item with a project or task.

FAQs for Project Requirements

How can I change the status of a backlog item with the Requirement Storyboard?

Drag and drop the backlog item from one status column to another.

How can I create requirements at any level from a project plan?

You can only create backlog items, the lowest-level requirements, for the project plan.

How can I update multiple requirements at the same time?

Select multiple requirements and click the Mass Update button. Use predefined requirements from the list to make changes to the backlog item selected.

3 Project Plan Tasks and Schedule

Different Ways of Managing Project Lifecycle

As a project manager, you can use the Project Management work area to manage the complete project lifecycle. First create projects for work planning, then have the project administrator enable the project for financial management. Alternatively, the project administrator can create the project directly in the Project Financial Management work area. Use one of the following methods to create a project for financial management:

- Create projects in the Project Management work area, develop the project plan, optionally adding financial tasks, and enabling attributes, such as chargeable and billable. Later when you're ready for financial planning, a project administrator can enable the project for financial management from the Project Financial Management work area, Tasks panel tab.
- Create projects in the Project Financial Management work area. The project administrator can then directly add a project manager in the Project Financial Management work area. The project manager can now manage the complete project lifecycle in the Project Management work area.

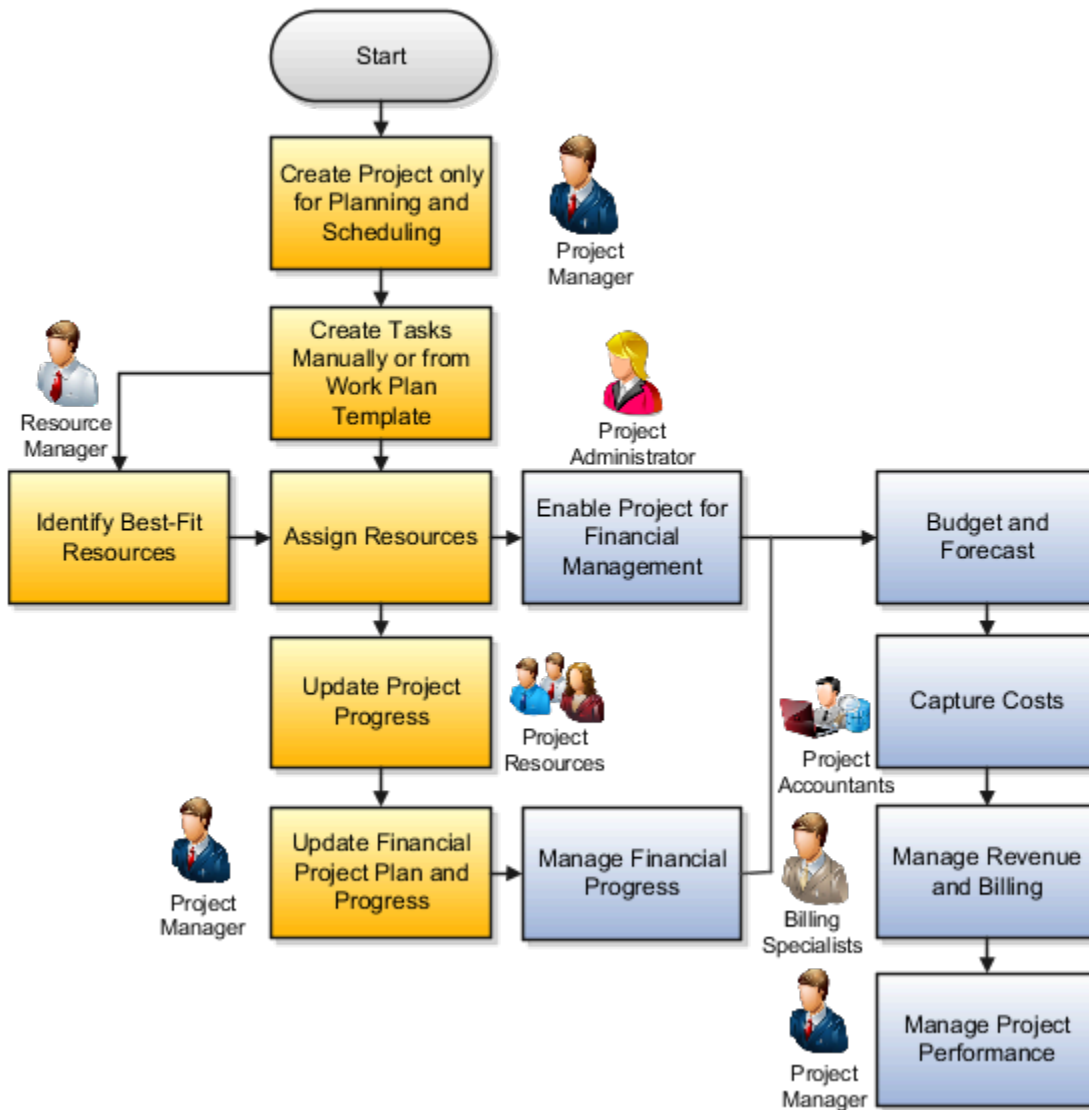
Note: If the project manager in the Project Management work area isn't an HCM resource, then the project administrator must separately add a project manager when the project is enabled for financial management.

Work Planning Before Financial Management

In many circumstances, project managers may need to create a project for planning, scheduling, or proposal purposes, without the need for financial management. The project manager can quickly create a project, add tasks, and plan resources. For example, you have a project related to a sales opportunity and the project manager must assess the schedule and staffing needs. The project can then continue indefinitely without financial management, or the project administrator can enable financial management for the project.

The figure shows the project lifecycle from initial work planning to later managing the financial aspects of your projects.

Create Project for Work Planning



You can create a project for planning and scheduling in one of the following ways:

- Using the UI: from the Manage Project Plan page, My Projects infolet on the Project Management Dashboard, a requirement backlog, or from Oracle Fusion Sourcing.
- Import Project Plan file-based data import feature.
- Project Work Plan Version 2 SOAP web service.
- Projects REST service.

Tip: Create a project without using a project template.

- Microsoft Project (Desktop) integration with Project Management.

When you create a project for planning and scheduling, you can optionally select a work plan template to provide the initial set of financial and nonfinancial tasks, milestones, and resources. Later, you can add more tasks individually or from work plan templates. Once you have created your project from the Project Management work area, you can:

- Schedule project work
- Assign work to team members
- Request and assign resources
- Have team members report progress

Enabling Project for Financial Management

Project administrators can enable the project for financial management using the **Enable Project for Financial Management** action from the Tasks panel tab in the Project Financial Management work area. Specify the organization, project number, and a project template. You can then perform activities such as creating budgets and forecasts, capturing project costs, and monitoring overall project profitability and financial performance. This approach enables you to manage your work and resources, calculate project costs, and generate invoices. When the project is enabled for financial management, the application performs the following actions:

- Makes the financial tasks available for financial planning activities.
- Updates the financial project plan with task start and finish dates.
- Copies the following attributes from the project template:
 - Project Status
 - Project Unit
 - Project Type
 - Project Currency
 - Project Functional Currency
 - Planning Project Flag
 - Business Unit
 - Legal Entity
 - Created From Project
 - Work Type
 - Service Type
 - Budgetary Controlled Flag
- Rolls up the labor resource effort and expense amounts to the lowest-level financial tasks, obtains the summarized resource planning information for each lowest-level financial task, and maps each resource against the primary planning resource breakdown structure.

Project administrators can manually enter the remaining attributes such as team members, project classifications, KPIs, transaction controls, cross-charge options, descriptive flexfields, budgets and forecasts, and assets.

Enable a Work Plan Project for Financial Management

After a project manager creates a project in the Project Management work area, the project administrator can enable the project for financial management to perform financial activities, such as collecting costs, budgeting, forecasting, generating revenue, and billing.

Complete the following steps to enable your project for financial management:

1. Navigate to the Project Financial Management work area.
2. On the My Projects page, click the **Enable Project for Financial Management** link in the **Tasks** panel tab.
3. In the **Enable Project for Financial Management** window, complete the following steps:
 - a. Select the project name from the Project Name list. The application automatically populates the Project Number field based on the project you select.
 - b. Select the project template from the Project Template list.
 - c. Select the project organization from the Organization list.
4. Click **OK**.

Deriving Dates for Financial Tasks

Start and finish dates are mandatory on financial project plan tasks. If a financial task doesn't have a start and finish date in the work plan and you enable a project for financial management, then the application derives the task dates as follows:

- If the parent task has dates, then subtasks use the same dates.
- If the parent tasks don't have dates, then subtasks use the project dates.
- If the project doesn't have a finish date, then the project start date is used as the task finish date.

Work Planning and Financial Management Together

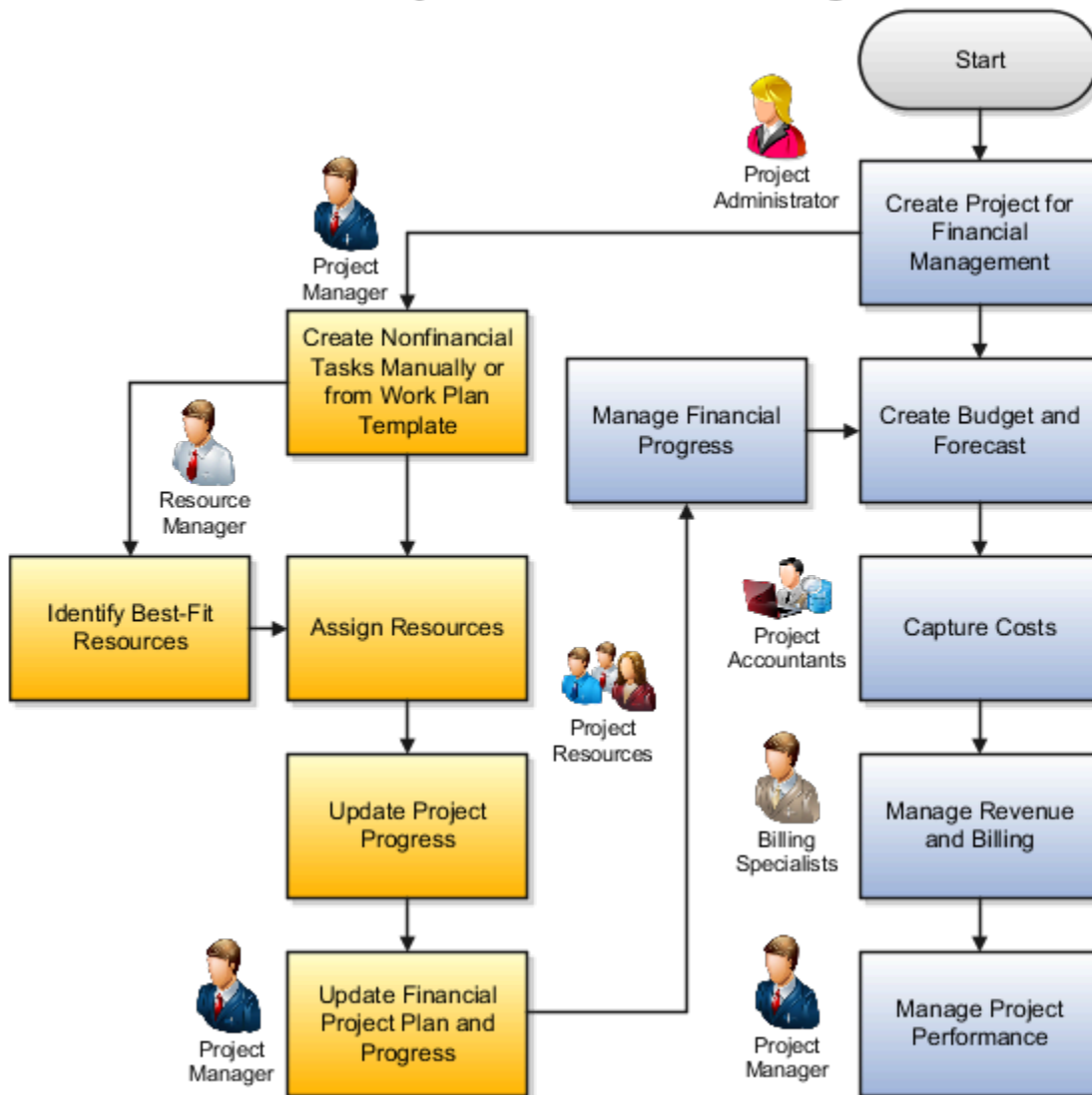
Create a project already enabled for financial management when the project is approved and resources need to report time and expenses against the project immediately. You can do so by creating the project using a project template or another project. Create any new work planning tasks as subtasks of the financial tasks.

The task dates assigned to financial tasks which are created using a work plan template or by copying a project plan are displayed in the Manage Project Plan page by default. Once you select the **Define Common Financial Task Dates Across Work and Financial Planning** check box, the financial project plans and the corresponding work plans you create have common dates and automatically sync the date changes. However, keep in mind that the automatic syncing of date changes doesn't happen for plans that already exist at the time of selecting the check box.

Note: If you didn't select the Define Common Financial Task Dates Across Work and Financial Planning check box, then you must run the Update Financial Project Plan and Progress process to copy the updated project plan and progress information to the Manage Financial Project Plan page.

The figure shows how you can plan work and manage the financial aspects of your projects at the same time.

Create Project for Financial Management



You can alternatively create a financial project plan with financial tasks in one of the following ways:

- Import Projects file-based data import feature
- Project Plan SOAP web service
- Projects REST service
- Microsoft Project integration with Oracle Fusion Project Foundation

The project manager then can add nonfinancial tasks and assign resources to the project and tasks on the Manage Project Plan page in the Project Management work area.

Updating the Financial Project Plan and Progress

As you continue to add tasks, staff the project, schedule tasks, and update progress, you must also update the financial project plan with the latest information. Use the **Update Financial Project Plan and Progress** action on the Manage

Project Plan page of the Project Management work area to transfer the updated project plan and progress information to the Manage Financial Project Plan page. To update progress, you can take any of the following approaches that map to your business flows and project roles:

- Update physical percent complete on the project plan and then choose to automatically capture and publish financial progress as part of the update flow.
- Update physical percent complete on the project plan and then choose capture financial progress as part of the update flow. Then, review, update, and publish financial progress as a separate step from the Progress tab on the Manage Financial Project Plan page.
- Perform all financial progress activities from the Progress tab on the Manage Financial Project Plan page. In this approach, financial progress updates are completely separate.

The application automatically summarizes resources, effort, and task dates to the lowest-level financial task.

Note: If you can only access the Manage Financial Project Plan page for a project in the Project Management work area, then you may need to be added as a project manager on the Manage Project Resources page for the project. To do this, either ask someone who already has access to add you, or ask the application administrator to add you from the Manage Project User Provisioning page (query the resource and select the action to Add Resource as Project Manager, then select the project).

CAUTION: When you use Project Execution Management, the Manage Project Plan page is the master project plan for planning and scheduling. Don't do any planning directly on the Manage Financial Project Plan page. Each time you choose the action to update financial project plan and progress, the process replaces all planning information in the financial project plan, including any planning done directly on the Manage Financial Project Plan page, with the latest plan from the Manage Project Plan page.

Summarizing Planning to Lowest-Level Financial Tasks

Project managers can create detailed project plans that include labor and expense resources that create corresponding resource assignments on the financial project plan on summarization. In addition, you can add any missing resources to non-centrally controlled planning resource breakdown structures (PRBS) automatically without having to define them explicitly before planning. During summarization, the application derives the job and organization for a named person from the person's primary assignment in Human Capital Management. Similarly, the expenditure category associated with an expenditure type is derived from the Manage Expenditure Types setup task.

Summarization takes place when you:

- Execute the Update Financial Project Plan and Progress process.
- Enable a project for financial management.
- Generate budget or forecast from project resources.

Summarization rolls up the labor resource effort and expense amounts, obtains the summarized resource planning information for each lowest-level financial task, and maps each resource against the primary planning resource breakdown structure for the project. Job and Organization are the supported attributes for the named person.

Here's how the summarization works:

- If the PRBS doesn't use the named person or expenditure type but contains job or organization or expenditure category, then:
 - If the PRBS is centrally controlled, follows the precedence logic and maps the resource to the element if exists. Otherwise, map to the generic labor class.

- o If the PRBS is non-centrally controlled, creates the element with job or organization or expenditure category and maps the resource to the corresponding element.
- If the PRBS uses supported attributes such as named person, job, organization, expenditure category or expenditure type, then:
 - o If the exact resource combination exists, maps the resource to the corresponding element.
 - o If the exact resource combination doesn't exist and if the PRBS is centrally controlled, maps the resource to the corresponding element based on precedence logic. If no element exists then, maps the resource to the generic labor class.
 - o If the exact resource combination doesn't exist and if the PRBS is non-centrally controlled then, creates the element with respective elements and maps the resource to that element.
- If the PRBS uses unsupported attributes such as expenditure type, expenditure category with named person, or job, or organization then:
 - o If the named person, job, or organization has single occurrence in the PRBS, maps the resource to that corresponding element. Otherwise, maps to the generic labor class.

Assume that you have the following job details defined in HCM.

Jobs Defined in HCM

Named Person	Job
Phil Williams	Consultant
Alice Parker	Principal Consultant

Let's say the following expenditure types and categories are defined using the Manage Expenditure Types task.

Expenditure Types and Categories

Expenditure Type	Expenditure Category
Rent	Rental expenses
Administration	Overhead expenses

The following table explains some scenarios of resource mapping for labor and expense resources.

Resource Mapping Scenarios

PRBS Definition		Resources Planned on the Work Plan	Result of Summarization Plan
Resource Format	Planning Resources		
Job: Named Person Expenditure Category: Expenditure Type	<ul style="list-style-type: none"> • Consultant: Phil Williams • Principal Consultant: Alice Parker • Rental Expenses: Rent 	Phil Williams Alice Parker Rent	As per the PRBS definition:

PRBS Definition		Resources Planned on the Work Plan	Result of Summarization
Resource Format	Planning Resources		
			<ul style="list-style-type: none"> Alice Parker rolls up to the existing PrincipalConsultant: Alice Parker resource Phil Williams rolls up to Consultant: Phil Williams resource Rent rolls up to Rental Expenses: Rent resource
Job: Named Person Expenditure Category: Expenditure Type	<ul style="list-style-type: none"> Consultant: Phil Williams Overhead Expenses: Administration 	Phil Williams Alice Parker Administration	As per the PRBS definition: <ul style="list-style-type: none"> Phil Williams rolls up to Consultant: Phil Williams resource Administration rolls up to Overhead Expenses: Administration resource Since Alice Parker isn't defined in the PRBS, the application: <ul style="list-style-type: none"> Rolls up Alice Parker to the generic labor resource class, if the PRBS is centrally controlled. Creates Alice Parker: Principal Consultant element if the PRBS is non-centrally controlled.
Expenditure Type: Named Person Expenditure Type: Job Expenditure Category	<ul style="list-style-type: none"> Overtime: Alice Parker Overtime: Principal Consultant Overtime: Phil Williams Straight Time: Phil Williams Overhead Expenses 	Alice Parker Phil Williams Administration	As per the PRBS definition: <ul style="list-style-type: none"> Alice rolls up to Overtime: Alice Parker Phil Williams has more than one occurrence in the PRBS and hence maps to the generic labor class. Administration rolls up to Overhead Expenses because Administration isn't present as an expenditure type but it's expenditure category exists in the PRBS.

Tracking Project Performance

Project managers can use the Project Management Dashboard to monitor the progress on work and financial performance of the project. To see the latest information on the dashboard, submit the **Update Project Performance Data** process from the Scheduled Processes page, the Actions panel tab on the Manage Project Plan page, or the Project Financial Management work area. Project managers can run this process for all the projects they're managing.

The Health, Cost Budget, Milestones, Assignments, Time Cards, and Uninvoiced Costs infolets enable you to quickly review overall health, progress, and financial status of projects and take action to resolve issues.

Tracking Financial Actual Efforts and Costs from the Manage Project Plan Page

Project Managers can track actual financial efforts and costs from the Manage Project Plan page and compare them with planned values. Here's are the columns that you can enable:

- Financial Actual Effort
- Financial Actual Burdened Cost in Project Currency
- Financial Actual Burdened Cost in Project Ledger Currency

Run the Update Project Performance Data process to view the latest information in these columns. Keep in mind that these columns are available only for projects that are enabled for financial management.

Related Topics

- [How You Set Up Planning Resource Breakdown Structures](#)

Project Calendar

Project Calendar

You can assign a calendar to a project when you're creating a project. The associated calendar is used for scheduling purposes.

Note: Project application administrators can set the default project calendar from the Define Project Management Implementation Options page.

By default, the project calendar determines the working and nonworking hours, shifts, and working and nonworking days. You can view the project calendar by clicking the **Manage Project Calendar** link in the **Actions** panel tab.

You can use the project calendar to:

- Create project events and team member events: Events convert working hours into nonworking hours and the project schedule is automatically recalculated.
- View unscheduled events: View deliverables without need-by dates, milestones without finish dates, and project tasks without start or finish dates.
- View tasks, deliverables, and milestones.
- View schedule exceptions: Off period and work period exceptions are displayed as standard calendar events.

Here are a few things you must keep in mind when managing project calendars:

- Project events only affect the project to which it belongs. It doesn't affect other projects which use the same calendar.

- Project managers can only edit the events they created. You can't edit or delete events created by other team members. For example, if a team member creates a PTO, project manager can't edit or delete it.

Related Topics

- [Create Calendars for Projects and Resources](#)

What's the difference between project calendars and resource calendars?

Project calendars determine standard working and nonworking times for resources working on projects. For example, a project calendar can designate the total number of working hours per day and any holidays that occur during the project dates.

A project calendar is used to schedule project tasks, and to estimate project duration.

Resource calendars determine the total available working hours for resources.

Your implementation team defines the default project and resource calendars that are automatically assigned to new projects and resources. However, a project manager can assign another calendar to a project. Similarly, a project application administrator can assign a different calendar to a resource.

How can I change the project calendar after a project is created?

Project managers can change the project calendar from the Edit Project Details page. In the Project Management work area, open the Actions panel tab, and then click the Manage Project Details link to open the Edit Project Details page.

After you change the project calendar and return to the Manage Project Plan page, a banner appears with an option to update the tasks based on the new calendar. Click **Update** to reschedule project tasks based on the new calendar.

What happens if project team members don't have allocation dates?

The project calendar uses the project start and end dates as allocation dates to create events for team members without project allocation dates.

Can I create, edit, or delete events for team members on my project calendar?

Yes. Project managers can create events such as PTO, training, and team building activities. However, you can only edit or delete the events that you had created. You can't edit or delete events created by other team members.

Why can't I view all the event types on a project calendar?

By default, the project calendar displays the events from the standard calendar, and project and team member events. Project managers can enable additional event types such as deliverables, milestones, and project tasks using the Manage Event Display action on the Manage Project Calendar page.

What are unscheduled events?

They're events which don't have key dates that specify when an event takes place in the project schedule. For example, deliverable without need-by date, milestone without finish date, and project task without start or finish dates.

Project Resources

Project Resources

Project application administrators define enterprise resources from the Manage Project Enterprise Resources page and then project managers can add the required resources to a project as project resources. There are two types of project resources: Expense and Labor.

You can add project resources from the **Manage Project Resources** page. You can then assign multiple labor resources to project tasks using the **Labor Resources** column on the Manage Project Plan page.

When you add labor resources, cost rate, bill rate, and project role are populated by default. And, you must specify the planned effort for labor resources and planned amounts for expense resources.

Resource Rates in Financial Projects

In financial projects, plan labor resources in Manage Project Resources using the common source of truth for resource rates. By standardizing rate derivation across work and financial planning, project managers can estimate the project cost and revenue with improved accuracy. For example, rather than manually maintaining the resource rates in Manage Project Resources, use the resource rates as defined in the rate schedules or project overrides.

While performing high-level planning in the Manage Project Resources page by adding or updating the resources and managing the project plan, get the resource rates from the rate schedules or project overrides based on the settings defined in Manage Project Financial Settings. Use the Refresh Rates action on the Manage Project Resources page to get the latest rates in the project. For example, obtain the latest rates for resources who received a promotion or job change.

Here are a few things to consider:

- Bill rates for the project resources are derived only if the project is associated to a single contract and rate definitions are specified at the contract level.
- Any manual updates to resource rates in Manage Project Resources won't be considered when managing financial aspects of the project such as financial plans, budgets, and forecasts. In addition, refreshing rates

will remove the overrides and default to standard rates from rate schedules or overrides based on the project settings.

- In nonfinancial projects, resource rates are always defaulted from the rates defined in Manage Project Enterprise Resources page.

Effort and Labor Amounts

Team members can enter actual and remaining hours when working on tasks. The application displays the sum of the actual and remaining hours as the current hours. And the current effort can be less than or more than the planned effort.

Here's a table that shows Devon and Emily's allocations for a task with the total planned effort of 24 hours.

Labor Resource	Planned Effort (in Hours)	Actual Hours	Remaining Hours	Current Effort (in Hours)
Devon	8	6	4	10
Emily	16	12	8	20

Let's take a closer look at Devon's assignments. The planned effort is 8 hours, the actual effort is 6 hours, and the remaining effort is 4 hours. Because the current effort is the sum of actual and remaining effort, the current effort is 10 hours.

Labor cost amounts and labor bill amounts are automatically calculated based on the effort and the cost rate and bill rate specified in the Manage Project Resources page. So, if the planned and current efforts are different, then the planned and current amounts will also be different.

Let's say that the labor resource allocation for Devon is 50 percent and for Emily its 100 percent. The planned effort is calculated as follows: $\text{Planned Effort} = (\text{Labor Resource Allocation} / \text{Total Allocation on the Task}) * \text{Planned Effort on the Task}$. So, the planned effort for Devon is $50 / 150 * 24 = 8$ hours and for Emily its $100 / 150 * 24 = 16$ hours.

Let's say that the cost rate for Devon is 30\$ per hour and for Emily its 32\$ per hour. The planned labor cost is calculated as follows: $\text{Planned Labor Cost} = \text{Planned Effort in Hours} * \text{Cost Rate in \$}$. So, the planned labor cost for Devon is $8 * 30 = 240\$$ and for Emily its $16 * 32 = 512\$$. And, the total planned labor cost = $240 + 512 = 752\$$.

Let's say that the bill rate is 35\$ per hour. The planned labor bill amount is calculated as follows: $\text{Planned Labor Bill Amount} = \text{Planned Effort} * \text{Bill Rate in \$}$. So, the planned labor bill amount is $(8+16) * 35 = 840\$$.

Similarly, efforts and costs are calculated for each labor assignment accordingly.

Expense Amounts

Project managers can manage expense amounts from the Manage Project Plan page. For each task, you can track planned expense amount, actual expense amount, remaining expense amount, and current expense amount. The application displays the sum of the actual and remaining amounts as the current amount. And the current expense amount can be less than or more than the planned expense amounts.

Here's a table that contains some examples of expense amounts.

Expense Resource	Planned Expense Amount	Actual Expense Amount	Remaining Expense Amount	Current Amount
Airfare	2000	2200	300	2500
Accommodation	10000	9990	410	10400
Meals	500	450	200	650
Total Amount	12500	12640	910	13550

Let's take a closer look at the first example for airfare. The planned expense amount is \$2000, the actual expense amount is \$2200, and the remaining expense amount is \$300. Because the current amount is the sum of actual and remaining amounts, the current expense amount is \$2500.

Related Topics

- [Considerations for Selecting Rate Schedules for Project and Financial Planning](#)

How do I manage planned resources?

Project managers can add resources to a project for planning purposes without involving a resource manager. These resources have Planned as the assignment status.

You can submit a project resource request so that the resource manager can find qualified resources and fulfill the assignment.

If you, as a project manager, have the Assign Project Resource to Project privilege, you can directly fulfill the assignment and change the status from Planned to Confirmed.

What's a planned resource assignment status?

Resource assignments with the Planned status are used by project managers as placeholders during project planning. These resources aren't included in projected utilization calculations. When it's time to begin work, you can request a confirmed or reserved assignment for the resource.

Project Plan and Schedule

Project Statuses

The project status is set to Active when you create a project from the Manage Project Plan page. You can analyze projects using the project statuses.

Impact of Project Statuses

The following table lists the project statuses and what you can do with projects in that status.

Project Status	What you can do?
Draft	<ul style="list-style-type: none"> Project managers can view draft projects in the Project Manager Dashboard and use the projects for requirements planning. Team members can't see the tasks from draft projects on the Team Member Dashboard or the My Work work area.
Active	<ul style="list-style-type: none"> Project managers can view active projects in the Project Manager Dashboard and use the projects for requirements planning, project execution, and reporting. Team members can view task assignments on active projects on the Team Member Dashboard and My Work work area.
Pending Close	<ul style="list-style-type: none"> Project managers can view pending projects in the Project Manager Dashboard and use the projects for project tracking, and reporting. Team members can view task assignments on pending projects on the Team Member Dashboard and My Work work area.
Submitted	<ul style="list-style-type: none"> Project managers can view submitted projects in the Project Manager Dashboard and use the projects for project tracking, and reporting. Team members can view task assignments on submitted projects on the Team Member Dashboard and My Work work area.
Closed	<ul style="list-style-type: none"> Project managers can't view closed projects in the Project Manager Dashboard or use the projects for requirements planning, project execution, and reporting. Team members can't view tasks of closed projects on the Team Member Dashboard or in the My Work work area.

Fixed Duration Projects

In fixed duration projects, project managers can add tasks and specify the duration. The task duration is fixed and task effort varies based on the number of resources assigned to the task and their allocation. Typically, you create fixed duration projects when you have strict milestones and deadlines.

Note: You can create a project that has both fixed duration and fixed effort tasks.

Fixed Duration Project Creation

To create a fixed duration project, select **Fixed Duration** in the Schedule Type list on the Create Project dialog box when creating a project.

To convert a fixed effort project to a fixed duration project, click **Manage Project Details** in the panel tab and update the schedule type of the project on the Edit Project Details page.

Note: Project application administrators can use the Manage Project Management Implementation Options setup task to assign the schedule type for all new projects. By default, the schedule type is Fixed Duration.

Fixed Duration Project Management

Project managers can create tasks and specify the start and finish dates, or specify the project duration. When you modify the number of resources and their allocation, the effort is automatically updated. When managing tasks, keep in mind the following:

- When you assign resources, the default allocation is populated based on the allocation defined on the Manage Project Resources page.
- Effort is calculated based on the project and resource calendars. So, if it's a nonworking day in the project calendar or the resource calendar, effort isn't calculated for that day.
- After you convert a fixed effort project to a fixed duration project, if you want to modify the initially allocated effort, you should either modify the duration or add a labor resource. If you modify the duration, the initially allocated effort becomes zero. If you add a labor resource, the effort is recalculated. You can't modify effort directly; it's always calculated based on the task duration and resource assignments.

Example of Fixed Duration Project Management

Here's a table that shows tasks along with Start, Finish, Duration and Labor Resources. It also contains the calculated Effort when the resource calendar has:

- 5 working days per week, 8 hours per day.
- 6 December, 2019 as a nonworking day for Anthony.
- Saturdays and Sundays are nonworking days for all resources.

Task	Labor Resource and Allocation	Start	Finish	Duration (In Days)	Effort (In Hours)
Builder 1	Smith [100%]	25-Nov-19	25-Nov-19	1	8
Builder 2	Smith [100%], Anthony [100%]	26-Nov-19	27-Nov-19	1.5	24
Builder 3	Anthony [100%]	2-Dec-19	13-Dec-19	10	72

Let's take a closer look at the examples. In case of the task Builder 1, there's one resource with 100% allocation and the duration is 1 day. And, because the working hours are 8 hours per day, here's how the Effort is calculated:

Effort = Resource Allocation * Duration = 1*8 = 8 hours.

In case of the task Builder 2, there are 2 resources assigned with 100% allocation and the duration is 1.5 days. And, because the working hours are 8 hours per day, here's how the Effort is calculated:

Effort = Resource allocation * Duration = 8*1.5 + 8*1.5 = 24 hours.

In case of the task Builder 3, there's one resource with 100% allocation and the duration is 10 days. And, because the working hours are 8 hours per day and Anthony isn't working on December 6, 2019, here's how the Effort is calculated:

Effort = Resource allocation * Duration = 8*(10-1) = 72 hours.

Also, notice that work hasn't been calculated for December 7, 2019 and December 8, 2019 because they're Saturday and Sunday, which are nonworking days in the resource calendar.

Fixed Effort Projects

In fixed effort projects, project managers can add tasks and specify the effort. The task effort is fixed and the task duration varies based on the number of resources assigned to the task and their allocation. Typically, you should create fixed effort projects when you have a tight budget for labor resources or when the availability of the required resources is crucial.

Note: You can create a project that has both fixed duration and fixed effort tasks.

Fixed Effort Project Creation

To create a fixed effort project, select **Fixed Effort** in the Schedule Type list on the Create Project dialog box when creating a project.

To convert a fixed duration project to a fixed effort project, click **Manage Project Details** in the panel tab and update the schedule type of the project on the Edit Project Details page.

Note: Project application administrators can use the Manage Project Management Implementation Options setup task to assign the default schedule type for all new projects in the organization.

When you use fixed effort schedule type, the effort remains constant when you change start and finish dates, or allocation. Let's update the allocation of Smith to 80 percent. The application automatically updates the duration to 17 days, and the finish date to 20 Dec, 2017.

Fixed Effort Project Management

Project managers can create tasks and specify the effort. When you modify the number of resources and their allocation, the duration is automatically updated. When managing tasks, keep in mind the following:

- When you assign resources, the default allocation is populated based on the allocation defined on the Manage Project Resources page.
- Duration is calculated based on the project and resource calendars. So, if it's a nonworking day in the project calendar or the resource calendar, duration is extended.
- When the **Define Common Financial Task Dates Across Work and Financial Planning** check box is selected and you modify task dates from any other source other than Manage Project Plan page, then on subsequent rescheduling using the Update action, dates are preserved and resource allocations are recalculated. If the check box isn't selected, then dates are rescheduled but resource allocations remain as is.

Example of Fixed Effort Project Management

Here's a table that shows tasks along with Start, Effort and Labor Resources. It also contains the calculated Finish and Duration when the resource calendar has:

- 5 working days per week, 8 hours per day
- December 6, 19 as a nonworking day for Anthony
- Saturdays and Sundays are nonworking days for all resources

Task	Effort (In Hours)	Labor Resource and Allocation	Start	Finish	Duration (In Days)
Builder 1	8	Smith [50%]	25-Nov-19	26-Nov-19	2
Builder 2	16	Smith [100%], Anthony [100%]	27-Nov-19	27-Nov-19	1
Builder 3	72	Anthony [100%]	2-Dec-19	13-Dec-19	10

Let's take a closer look at the examples. In case of the task Builder 1, there's one resource with 50% allocation and Effort of 8 hours. And, because the working hours are 8 hours per day, here's how the Duration is calculated:

Duration = Effort/Resource Allocation = $8 / (8 * 0.5) = 2$.

In case of the task Builder 2, there are 2 resources assigned with 100% allocation and Effort is 16 hours. And, because the working hours are 8 hours per day, here's how the Duration is calculated:

Duration = Effort/Resource Allocation = $16 / (8 + 8) = 1$.

In case of the task Builder 3, there's one resource with 100% allocation and the Effort is 72 hours. And, because the working hours are 8 hours per day and Anthony isn't working on December 6, 2019, here's how the Duration is calculated:

Duration = (Effort/Resource Allocation) + Nonworking days = $(72/8) + 1 = 10$.

Also, notice that work hasn't been calculated for December 7, 2019 and December 8, 2019 because they're Saturday and Sunday, which are nonworking days in the resource calendar.

Project Scheduling

As a project manager, you can easily schedule and manage project plans by using the various options on the Manage Project Plan page.



Watch video

You can:

- Use the Gantt chart to drag and drop capabilities to manage task dependencies, reorganize tasks, and fill down the task values to multiple tasks quickly.

- View tasks in a timeline format
- View changes to project schedule instantly
- Identify critical paths
- Display progress line
- Schedule summary tasks
- Search for tasks
- Convert tasks to milestone and vice-versa
- Autosave project plan changes
- Print the project plan
- View actual financial efforts and costs, that is, you can add the Financial Actual Effort, Financial Actual Burdened Cost in Project Currency, and Financial Actual Burdened Cost in Project Ledger Currency columns.

In addition, project managers can see the same task dates in both the financial plan and project plan on creating a financial project from the Project Financial Management work area. These dates can act as the starting point for additional work planning and scheduling.

You can use these columns on the Manage Project Plan page to schedule and manage project plans:

Note: The project currency is USD and so some columns have (USD) in their name.

Column Name	Description
Actual Effort	The actual effort spent on the task.
Actual Expense Amount(USD)	The sum of actual amounts of all expense resources assigned to tasks.
Actual Finish	The date when the work has actually finished.
Actual Labor Bill Amount(USD)	The sum of actual labor bill amounts of all the labor resources assigned to tasks.
Actual Labor Cost(USD)	The sum of actual labor cost of all the labor resources assigned to tasks.
Actual Start	The date when the work has actually commenced.
Baseline Duration	The task's planned duration in the baseline project plan. This is used to compare how the current task duration deviates from the original task duration (baseline) established for that task.
Baseline Effort	The task's planned effort in the baseline project plan. Current task effort is compared with this value to see how it deviates from the original task effort (baseline) established for that task.
Baseline Expense Amount(USD)	The task's planned expense amount in the baseline project plan. This is used to compare how the current expense amount deviates from the original task expense amount (baseline) established for that task.
Baseline Finish	The task's finish date in the baseline project plan.

Column Name	Description
Baseline Labor Bill Amount(USD)	The task's planned labor bill amount in the baseline project plan. This is used to compare how the current task bill amount deviates from the original task bill amount (baseline) established for that task.
Baseline Labor Cost(USD)	The task's planned labor cost in the baseline project plan. This is used to compare how the current labor cost date deviates from the original task labor cost (baseline) established for that task.
Baseline Start	The task's planned start date in the baseline project plan.
Billable	Indicates that transactions charged to that task can be billed to customers.
Chargeable	Indicates that something is eligible to be charged to a task.
Constraint Date	The constraint date specified for the task.
Constraint Type	The type of constraint applied on the task.
Cost Percent Complete	The percentage of cost consumed.
Deadline	The deadline of a project or task.
Deliverables	The deliverables associated with a task.
Description	The description for the task.
Duration	The total duration of the task.
Effort	The number of hours or days that a resource is assigned or has worked on a task.
Expense Amount(USD)	The sum of amounts of all expense resources assigned to tasks.
Expense Resources	The expense resources assigned to the selected task.
Finish	The current finish dates of tasks. If the tasks haven't started, they represent the planned finish dates. For in-progress tasks, they represent the estimated finish dates. For completed tasks, they represent the actual dates.
Labor Bill Amount(USD)	The labor bill amount of the task.
Labor Cost(USD)	The labor cost of the task.
Labor Resources	The labor resources assigned to the selected project task.

Column Name	Description
Percent Complete	The percentage value reflecting the progress a task is making towards completion.
Physical Percent Complete	The amount of physical work completed on a task.
Planned Duration	The planned duration of the task.
Planned Effort	The total planned effort of the task in hours or days.
Planned Expense Amount(USD)	The sum of planned amounts of all expense resources assigned to tasks.
Planned Finish	The date when the task is scheduled to finish.
Planned Labor Bill Amount(USD)	The planned labor bill amount of the task.
Planned Labor Cost(USD)	The planned labor cost of the task.
Planned Start	The date when the task is scheduled to start.
Predecessors	The predecessors of the selected task.
Primary Resource	Indicates whether the resource is the primary labor resource for the task.
Priority	The priority of the task.
Progress Status	The progress status of the task.
Remaining Effort	The effort remaining on the task.
Remaining Expense Amount(USD)	The sum of remaining amounts of all expense resources assigned to tasks.
Remaining Labor Bill Amount(USD)	The remaining labor bill amount of the task.
Remaining Labor Cost(USD)	The remaining labor cost amount of the task.
Requirement	The name of the requirement that's associated with the project task.
Schedule Mode	Indicates whether the task is scheduled manually or automatically by the application.
Schedule Type	The schedule type of the task.
Show Timeline	Indicates whether you can view project and task timelines.

Column Name	Description
Sprint	The name of the sprint.
Start	The current start dates of tasks. If the tasks haven't started, they represent the planned start dates. For in-progress tasks, they represent the actual start dates. For completed tasks, they represent the actual dates.
Successors	The successors of the selected task.
Task Name	The name of the task.
Task Number	The number assigned to the task.
Total Actual Cost(USD)	The actual cost of the task. Shows the sum of actual expense and actual labor costs.
Total Cost(USD)	The total cost of the task. Shows the sum of expense and labor costs.
Total Planned Cost(USD)	The total planned cost of the task. Shows the sum of planned labor and expense costs.
Total Remaining Cost(USD)	The remaining cost of the task. Shows the sum of remaining expense and labor costs.
WBS	Indicates the position of the tasks in the work breakdown structure.

Real-time Scheduling

Real-time scheduling takes place as you edit the project. You can also reschedule projects to a new project start date using the Project Details dialog box. Rescheduling considers only the Not Started tasks, but not the In Progress or Completed tasks. You must manually schedule the In Progress or Completed tasks.

If the schedule mode of a task is Automatic, task dates are automatically updated based on dependencies and constraints on the task and its summary tasks. If there's a conflict between dependencies and constraints, constraints determine the dates.

If the schedule mode of a task is Manual, you must manage the task dates manually or convert the schedule mode to automatic.

When you create a task, if the Define Common Financial Task Dates Across Work and Financial Planning check box is selected, then the start and finish dates default from their parent task. However, if the check box isn't selected, then dates default from the project start date unless the parent task has constraints or dependencies to be honored.

If a task hasn't started and doesn't have dependencies or constraints, here's how the task start date is determined when you change its schedule mode from Manual to Automatic, change the project start date, or update the project plan by clicking the Update action:

- If the task has summary tasks with dependencies or constraints, then the constraints and dependencies of the closest summary task are applied to the task. For example, if the summary task has Start on or after constraint without any dependency, then the summary task constraint date is set as the task start date.

- If the task doesn't have any summary tasks with dependencies or constraints, then the project start date is set as the task start date.

You can schedule tasks using the project calendar or resource calendars regardless of the number of resources on a task. Partial day scheduling happens when a task takes up only a partial duration of the last working day, its successor task will start on the same day and use the remaining part of the day.

Dependencies

A dependency is a relationship between two tasks in which the start or end date of a task depends on the start or end date of another task. The four types of task dependencies are Finish-to-Start, Start-to-Start, Finish-to-Finish, and Start-to-Finish. You can also add a time lag when you add dependencies.

After you create tasks, you can add dependencies and constraints to summary tasks, milestones, and gates.

Note: Team members can also add to-do tasks from the Manage Tasks page and convert them into project tasks. However, they can't assign dependencies or constraints.

Here's how you can add dependencies:

- Using the drag and drop capability on the Gantt chart
- Using the link icon in the toolbar
- Specifying the successor or predecessor values in the respective columns or in the Task Details dialog box

Here's a table that lists the short codes for dependencies.

Dependency Type	Short Code
Finish-to-Start	FS or None
Start-to-Start	SS
Finish-to-Finish	FF
Start-to-Finish	SF

For example, if you want to add the task whose serial number is 5 as a successor with Finish-to-Finish dependency, then enter 5FF in the successor column.

Note: If you don't enter a short code, it's considered as a Finish-to-Start dependency.

You can also add a lag in the predecessor or successor column. For example, if you enter 5FF+10 or 5FF-6, then the successor will finish 10 days after the predecessor or 6 days before the predecessor respectively.

Constraints

A constraint is a restriction on a task to control its start or finish date. Leaf tasks support the following constraints:

- Finish by
- Finish on
- Finish on or after
- Start by
- Start on
- Start on or after

Summary tasks only support the Start on or after and Finish by constraints.

Examples of Tasks with Dependencies

When a task or its summary tasks have dependencies and the schedule mode of the task is automatic, task dates are automatically updated based on dependencies on the task, dependencies on its summary tasks, dependency type, predecessor task dates, and lag.

Note: If a task has multiple predecessor tasks, the application ensures that all the dependencies are met.

The following tables show how dates are determined for tasks with dependencies. In this example, the start of T2 is determined from the start of T1 as it has the Start-to-Start dependency.

Task Name	Task Type	Start	Finish	Duration	Predecessor	Successor
T1	Summary	2/13/23	2/14/23	2	NA	T2
T1.1	Leaf	2/13/23	2/13/23	1	NA	NA
T1.2	Leaf	2/13/23	2/14/23	2	NA	NA
T2	Summary	2/13/23	2/14/23	2	T1SS	NA
T2.1	Leaf	2/13/23	2/14/23	2	NA	NA

In this example, although T2.1 doesn't have any direct dependencies, its summary task T2 has a dependency on T1. So, the dependency is also applied to T2.1 and the dates reflect the same.

Task Name	Task Type	Start	Finish	Duration	Predecessor	Successor
T1	Summary	2/13/23	2/16/23	4	NA	T2
T1.1	Leaf	2/13/23	2/16/23	4	NA	NA

Task Name	Task Type	Start	Finish	Duration	Predecessor	Successor
T2	Summary	2/17/23	2/17/23	1	T1	NA
T2.1	Leaf	2/17/23	2/17/23	1	NA	NA

Note: T1FS is the same as T1, you don't need to add a suffix in this case.

Milestone M1 has the Start-to-Start dependency on T1 and so it starts when T1 starts but since the milestone has zero duration, it starts and ends on the day T1 starts.

Task Name	Task Type	Start	Finish	Duration	Predecessor	Successor
T1	Summary	2/13/23	2/16/23	4	NA	T2
T1.1	Leaf	2/13/23	2/16/23	4	NA	NA
M1	Milestone	2/13/23	2/13/23	0	T1SS	NA

In this Finish-to-Finish example, task T2.1 has a dependency on T1.1. Both finish on the same date.

Task Name	Task Type	Start	Finish	Duration	Predecessor	Successor
T1	Summary	2/13/25	2/18/25	4	NA	NA
T1.1	Leaf	2/13/23	2/18/25	4	NA	T2.1FF
T2	Summary	2/18/25	2/18/25	1	NA	NA
T2.1	Leaf	2/18/25	2/18/25	1	T1.1FF	NA

Examples of Tasks with Constraints

When a task or its summary tasks have constraints and the schedule mode of the task is automatic, task dates are automatically updated based on constraints on the task, constraints on its summary tasks, and constraint type.

The below tables show how task dates are determined for tasks with constraints. In this example, because of the start constraint, the summary task T1 starts on 2/2/23 and the end date 2/6/23 rolls up from it's leaf task T1.1.

Task Name	Task Type	Start	Finish	Duration(In Days)	Constraint Type	Constraint Date
Project1	NA	2/13/23	NA	NA	NA	NA

Task Name	Task Type	Start	Finish	Duration(In Days)	Constraint Type	Constraint Date
T1	Summary	2/2/23	2/5/23	3	Start on or after	2/2/23
T1.1	Leaf	2/2/23	2/5/23	3	NA	NA

In this example, the Start on constraints on the leaf tasks T1.1 and T1.2 roll up on the summary task.

Task Name	Task Type	Start	Finish	Duration(In Days)	Constraint Type	Constraint Date
Project1	NA	2/13/23	NA	NA	NA	NA
T1	Summary	2/14/23	2/17/23	4	NA	NA
T1.1	Leaf	2/14/23	2/15/23	2	Start on	2/14/23
T1.2	Leaf	2/16/23	2/17/23	2	Start on	2/16/23

Examples of Tasks with Dependencies and Constraints

When the schedule mode is automatic, and when there are both constraints and dependencies, the application tries to populate successor task dates such that both the constraints and dependencies are met. However, if there's a conflict, the constraint determines the dates.

In this example, T1.1 has the Start on constraint which rolls up the dates to T1. T2 has the Start to Start dependency on T1 that causes the start date to sync up with T1. When a Finish by constraint is added to the successor task, it shows a warning to ensure there is no constraint-dependency violation.

Task Name	Task Type	Start	Finish	Duration(In Days)	Predecessor	Successor	Constraint Type	Constraint Date
Project1	NA	1/31/23	NA	NA	NA	NA	NA	NA
T1	Summary	2/1/23	2/2/23	2	NA	NA	NA	NA
T1.1	Leaf	2/1/23	2/2/23	2	NA	NA	Start on	2/1/23
T2	Leaf	2/1/23	2/3/23	3	T1SS	NA	Finish by	2/7/23

Automatically Sync Dates Between Financial Project Plans and Work Plans

If the project application administrator has enabled the Automatically Sync Dates Between Financial Project Plans and Work Plans feature, you can manage planned financial task dates (**Planned Start Date** and **Planned Finish Date** for tasks) from either of the following and automatically sync the date changes in both:

- Financial project plan
- Work plan

Automatically syncing the planned financial date changes in both the plans:

- Enables better collaboration between the project manager and the project administrator by providing the same and consistent task schedule. For example, project administrator's updates in financial tasks are automatically available for the project manager's review in the work plan.
- Validates the dates in real time in managing project plans. For example, when the transaction and planned dates are synced, you can only change the task planned dates to the dates valid for the task's expenditure items.

Prerequisite

Ensure that the Project Application Administrator has enabled the **Define Common Financial Task Dates Across Work and Financial Planning** option. Once this option is enabled, the financial project plans and the corresponding work plans you create have common dates and automatically sync the date changes. The application doesn't automatically start syncing dates for the plans that exist at the time of enabling the option. For such plans, you need to once sync the task dates manually.

If you create a new task from the Manage Project Plan page, dates default from their immediate summary task. As you start managing a financial project in the Manage Project Plan page, the application automatically enables the rollup task planned dates setting. For more information, see [How Task Dates Work with Assignment Dates](#)

Set up automatic syncing of financial task dates between financial project plans and work plans

To set up automatic syncing of financial task dates between financial project plans and work plans, do the following:

- Only for the financial project plans and work plans that exist at the time of enabling the Common Financial Task Dates Across Work and Financial Planning option, sync the dates as required:
 - [Copy Financial Task Dates from Financial Project Plan to Work Plan](#)
 - [Update Financial Project Plan and Progress](#)

Copy Planned Dates in Financial Tasks from Financial Project Plan to Work Plan

The Project Application Administrator can perform this action.

After you have enabled the **Define Common Financial Task Dates Across Work and Financial Planning**, for the existing financial project plans and work plans, you need to once sync the dates manually. Thereafter, the dates start syncing between the two plans automatically.

To sync dates from Financial Project Plan to the corresponding work plan:

1. Click **Navigator > Tools > Scheduled Processes**.
2. Click **Schedule New Process**.
3. Search for the Copy Financial Task Dates from Financial Project Plan to Work Plan process and select it.
4. In the **Process Details dialog**, enter the following values:

Field	Value
Select By	Project Number
From	Type the name of the project from which you want to copy the dates
To	Type the name of the project to which you want to copy the dates. In this process, the name of the project will be the same in From and To fields.
Business Unit	Optionally, select a business unit.
Project Organization	Optionally, select a project organization.
Exclude Projects Containing Nonfinancial Data	To include projects containing nonfinancial tasks, constraints, dependencies, deliverables, resource assignments, and nonfinancial progress in the copy dates process, select No . To exclude this information in the copy dates process, select Yes . Default is Yes .

5. Click **Submit**. Once the process complete, you can examine the report in **Process Detail** to see if the copy process is executed as per your requirements.

Copy Planned Financial Task Dates from Work Plan to Financial Project Plan

To sync planned dates from a work plan to the corresponding financial project plan, complete the following steps:

1. Click **Navigator > Projects > Project Management**.
2. Open the relevant project by clicking its name.
3. Open the Actions panel tab and click **Update Financial Project Plan and Progress**.
4. In the **Update Financial Project Plan and Progress dialog**, click **OK**.

Project Plan Baselines

Project managers can create multiple baselines during the project lifecycle, and set one of them as the primary baseline. You can set a primary baseline and compare it with current project progress.

And, view the primary baseline data on the Gantt chart in the **Manage Project Plan** page.

You must have the Manage Project Work Plan Baselines privilege or the Project Manager role to manage baselines.

Here's how you can view primary baseline data:

- Right-click on the Gantt chart and click Show Baseline to view the baseline start and end dates.
- Add baseline-related columns such as Baseline Duration, Baseline Effort, Baseline Start, Baseline Finish, Baseline Labor Cost, Baseline Expense Amount, and Baseline Labor Bill Amount.

Here's what you can do using primary baselines:

- Track incremental project progress and performance.
- Compare the current schedule with the primary baseline schedule on the Gantt chart.
- Identify slippages in the project plan for estimating similar projects in the future.
- Use Oracle Transactional Business Intelligence for reporting on the baseline values:
 - Use Oracle Transactional Business Intelligence reports to track the variances between actual values and baseline values. Use the Baseline Variance Analysis sample report to understand how you can create your own custom reports using baseline data.
 - Use the Project Management - Planning Real Time subject area to create analyses.

Create a Baseline

Here are the steps to create a baseline:

1. Open the Manage Project Plan page.
2. Click **Actions > Set Baseline**.
3. Provide a name and description in the **Set Baseline** window.
4. If you want to set it as a primary baseline, select the **Set as Primary** check box.
5. Click **Save and Close**.

Manage Baselines

You can manage baselines from the Manage Baselines dialog box. Here are the steps to navigate to the dialog box:

1. Open the Manage Project Plan page.
2. Click **Actions > Manage Baselines**.

From the Manage Baselines dialog box, you can:

- Set a baseline as the primary baseline by clicking the icon in the **Actions** column and selecting **Set Primary**.
- Delete a baseline by clicking the icon in the **Actions** column and selecting **Delete**.
- Edit baseline names and descriptions.

Related Topics

- [How Financial Project Plan Baseline is Set](#)

Work Items

Work items are used to manage association of a project task with:

- Negotiations from Oracle Fusion Sourcing
- Items and product change orders from Oracle Fusion Innovation Management
- Concepts, proposals, and requirement specifications from Oracle Fusion Product Development
- Issues and deliverables from Oracle Fusion Project Management

Work items are used to drive task progress if there's at least one work item with task completion event. A task is marked as complete when the status of all the work items match their corresponding task completion event. Keep in mind that you can't manually update task progress to 100% if task completion events are set.

Considerations for Creating and Managing Work Items

Here's the list of ways in which project managers can create and update work items:

- The **Manage Work Items** page or the **Manage Work Items** dialog box on the **Manage Project Plan** page
- Using the **Manage Work Items** option in the right-click menu of a task in the **Manage Project Plan** page.
- Corresponding Negotiation or Product Management pages

Note: You can't associate deliverables or issues from the Manage Work Items page. Also, you can't associate concepts and requirement specifications as Work Items in the Manage Work Items dialog box on the Manage Project Plan page.

Considerations for Removing Work Items

Project managers can't remove a work item after its status has changed to the status specified as the task completion event and the associated task is complete.

Note: When you delete a task, Project Management removes its work items.

Example of Creating a Project to Manage Negotiation

Suppose that you want to create a project to manage negotiation through the various stages of a negotiation lifecycle.

Note: This example applies only if you use Oracle Fusion Sourcing.

The following table summarizes key decisions for this example scenario.

Decisions to Consider	In This Example
Which team members will work on this project?	Amy Marlin is the project manager. Anton James is the project team member.
What access do team members need?	Project team members must be project enterprise resources. To access negotiations from the Manage Work Items page or the Work Items window, the user must be either a owner, collaboration team member, or an active agent for the negotiation.
What tasks must be completed and how much time will each task take?	Create a project plan with the tasks to track various negotiations.

How you Complete a Negotiation Integrated with Projects

To complete a negotiation integrated with projects, follow these steps:

1. In Project Management, create a project, summary tasks, and subtasks to associate with the work items.
2. In Oracle Fusion Sourcing, create a negotiation.
3. In Project Management, perform these tasks:
 - o Associate the work item to the appropriate tasks in the project.
 - o Specify task completion events to ensure that tasks are marked as complete based on work item events.
 - o Verify that tasks are marked complete when task completion events are met.

Prerequisites

- Have access to Oracle Fusion Sourcing.
- In the Project Management work area, assign project enterprise resources as collaboration team members to a negotiation.

Create a Project

1. In the Project Management work area, click **Create Project** to create a project named Laptop Procurement.
2. On the Manage Project Plan page, click **Create** and select **Create Multiple Tasks** from the submenu.
3. Enter **8** in the **Number of Tasks** field and click **OK**. Complete the fields as shown in this table and then click **Save**.

Task Name	Resource
Laptop Procurement	Leave blank
1.1 Research Market Conditions	Anton James
1.2 Develop Strategy	Anton James
1.3 Conduct Negotiation	Leave blank
1.3.1 Publish RFQ	Anton James
1.3.2 Hold Supplier Conference	Anton James
1.3.3 Close RFQ for Bidding	Anton James
1.4 Evaluate Quotes	Anton James
1.5 Award RFQ	Anton James

Task Name	Resource

Create a Negotiation

1. In Fusion Sourcing, in the Negotiation work area, on the **Tasks** panel tab, click the **Create Negotiation** link.
2. In the Create Negotiation window, complete the fields, and click **Create**.

Field	Value
Negotiation Type	RFQ

Procurement BU and **Negotiation Currency** fields have default values. You can change them if required. Also, the Negotiation Style must have projects task enabled.

3. On the Edit Negotiation tab, in the Overview train stop, complete the required fields.

Field	Value
Title	Laptop Procurement
Close Date	Future date

4. On the Edit Negotiation tab, in the Lines train stop, you must add at least one line. Complete the required fields and click **Save and Close**.

Field	Value
Description	Goods for inventory

Other mandatory fields in the Lines section have default values. You can change them as required.

Create Work Items to Track Task Completion Events

1. In the Project Management work area, on the Manage Project Plan page, for the Publish RFQ task, right-click and select **Manage Work Items**.
2. Complete the following fields and click **Save and Close**.

Type	Name	Task Completion Event
Negotiation	Laptop Procurement	Negotiation Published

Similarly, you can create work items for all the other tasks mentioned above and specify task completion events for each work item.

Progress the Negotiation and Drive Task Completion

Now verify that the project tracks the negotiation life cycle effectively.

1. In Fusion Sourcing, in the Negotiation work area, from the **Tasks** panel tab, click **Manage Negotiations**.
2. On the Manage Negotiations tab, search for the Laptop Procurement negotiation.
3. In the Search Results region, click the Laptop Procurement link to view the negotiation details.
4. On the Edit Negotiation tab, Click **Publish**.
5. Click **Save**.

On publishing the negotiation, the Publish RFQ task is marked as complete as the task completion event is met.

Example of Creating a Project to Manage Product Development

Suppose that you want to create a project to manage product development through the various stages of the product development lifecycle. The scope of the project is limited to the feasibility stage.

Note: This example applies only if you use Oracle Fusion Innovation Management or Oracle Fusion Product Development.

The following table summarizes key decisions for this example scenario.

Decisions to Consider	In This Example
Which team members will work on this project?	Amy Marlin is the project manager. Anton James is the project team member.
What access do team members need?	Project team members must be project enterprise resources.
Which types of work items of the product lifecycle will this project have?	Concept, Proposal, and Requirements Specification for Oracle Fusion Innovation Management. Item and Product Change Order for Oracle Fusion Product Development.
What tasks must be completed and how much time will each task take?	Create a project plan with the tasks to track the submission and approval of the concept, proposal, and requirements specification.

How you Complete the Feasibility Stage of a Solar Powered Car

The scope of this example is restricted to Innovation Management.

To complete the feasibility stage of the solar powered car, follow these steps:

1. In Innovation Management, create concept, proposal, and requirements specification.

2. In Project Management, create a project with a summary task named Feasibility, and create subtasks that will be associated with the work items.
3. In Project Management, perform these tasks:
 - o Associate each work item to the appropriate tasks in the Solar Powered Car project.
 - o Specify task completion events to ensure that tasks are marked as complete based on work item events.
 - o Verify that tasks are marked complete when task completion events are met.

Prerequisites

- Have access to Innovation Management or Product Development.
- In the Project Management work area, assign team members of the product development team as project enterprise resources.

Create a Project

1. In the Project Management work area, click **Create Project** on the **Actions** panel tab to create a project named Solar Powered Car.
2. On the Manage Project Plan page, click **Create** and select **Create Multiple Tasks** from the submenu.
3. Enter **10** in the **Number of Tasks** field and click **OK**. Complete the fields as shown in this table and then click **Save**.

Task Name	Resource
Solar Powered Car	Leave blank
1.1 Feasibility	Leave blank
1.1.1 Concept	Leave blank
1.1.1.1 Submit Concept	Anton James
1.1.1.2 Approve Concept	Amy Marlin
1.1.2 Proposal	Leave blank
1.1.2.1 Submit Proposal	Anton James
1.1.2.2 Approve Proposal	Amy Marlin
1.1.3 Requirements Specification	Leave blank

Task Name	Resource
1.1.3.1 Submit Requirements Specification	Anton James
1.1.3.2 Approve Requirements Specification	Amy Marlin

Create Concept, Proposal, and Requirement Specification

1. In Innovation Management, in the Concepts work area, from the **Tasks** panel tab, click the **Create Concept** link.
2. In the Create Concept window, complete the fields, and click **Save and Close**.

Field	Value
Name	Solar Powered Car
Description	Concept for the feasibility stage of the solar powered car.

Once you create a concept, a proposal with the same name is automatically created.

3. In the Concepts work area, from the **Tasks** panel tab, click the **Create Requirements Specification** link.
4. In the Create Requirements Specification window, complete the fields, and click **Save and Close**.

Field	Value
Requirements Specification	Solar Powered Car
Description	Requirements specifications to define requirements for the feasibility stage of the solar powered car.

Create Work Items to Track Task Completion Events

1. In Project Management, on the Manage Project Plan page, click the **Manage Work Items** icon in the Submit Concept task.

Verify that the **Work Items** column is visible. If the column isn't visible, click the **Manage Columns** icon and choose to display the column.

2. In the **Manage Work Items** window, click **Add Row**.

3. Complete the following fields.

Type	Name	Task Completion Event
Concept	Solar Powered Car	Submitted

Similarly, create task completion events for submitting proposal and requirement specification.

4. Click the **Manage Work Items** icon in the Approve Concept task.
5. In the **Manage Work Items** window, click **Add Row** and complete the following fields.

Type	Name	Task Completion Event
Concept	Solar Powered Car	Approved

Similarly, create task completion events for approving proposal and requirement specification.

Progress the Product Development Lifecycle and Drive Task Completion

Now, verify that Project Management tracks the Product Development life cycle effectively.

1. In Innovations Management, in the Concepts work area, from the **Tasks** panel tab, click **Manage Concepts**.
2. On the Manage Concepts tab, search for the Solar Powered Car concept.
3. In the **Search Results** region, click the Solar Powered Car link to view the concept details.
4. Review the concept, and then from the **Actions** menu click **Submit for Approval**. Notice that the status changes from Draft to Submitted.
5. In the Submit for Approval window, click **Select and Add**.
6. In the Select and Add: Reviewers window, search for and select a reviewer, and click **OK**.
7. In the Submit for Approval window, click **Submit**.
8. Click **Done**.

On submitting the concept for approval, the Submit Concept task in Project Management is marked as complete as the task completion event is met.

How You Manage Project Gates

Gates are decision and control points in a project plan. Project managers can create gates in the project timeline where all the stakeholders review the project results to date and decide if the project should be continued or terminated. A project manager can:

- Create a gate
- Add stakeholders (as gate approvers) to the gate
- Start the gate review process
- Change the gate status
- Delete the gate

Lifecycle of a Project Gate

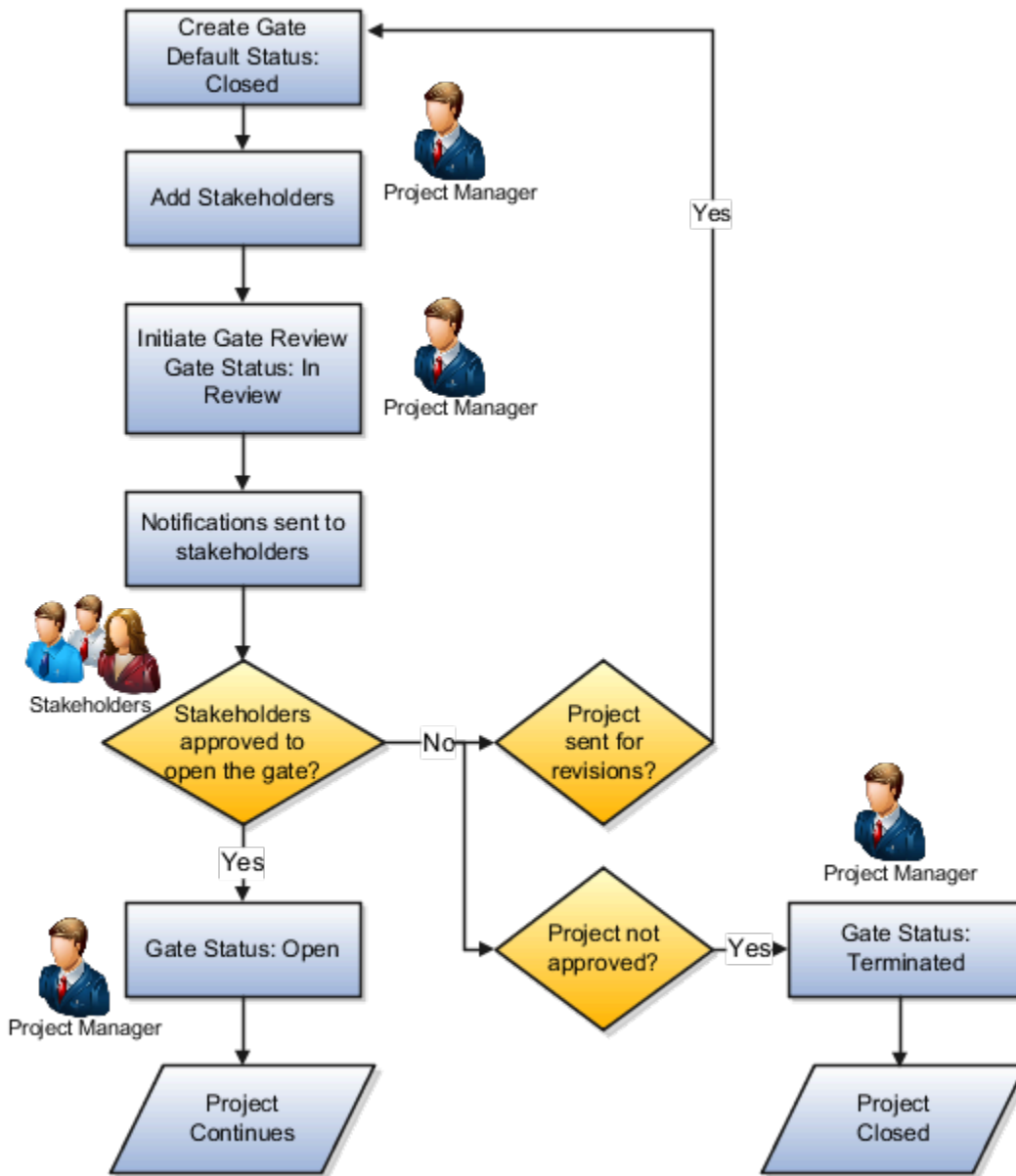
Here are the stages in a project gate lifecycle:

1. Project manager adds a gate to a project plan.
2. Project manager adds appropriate stakeholders using the Manage Task Details page. By default, the gate status is Closed.
3. Project manager changes the gate status to In Review to initiate the review process.
4. The application sends a notification to each stakeholder.
5. Stakeholders review the project results to date and set their approval status to Approved or Rejected. Optionally, stakeholders can also add comments. For example, they can suggest revisions.
6. The application sends a notification to the project manager after each stakeholder sets the approval status.
7. Project manager changes the gate status to Open, Closed, or Terminated based on the status changes and comments from stakeholders.

Note: Project managers can open a gate only if all the stakeholder approve the gate.

If a project manager deletes a stakeholder after the status of a gate has been set to In Review, a withdrawal notification is sent to the stakeholder.

This figure shows the gate review and notification workflow.



Gate Statuses

Here's a table that describes all the gate statuses and the next allowable statuses.

Status	Description	Next Allowable Statuses
Closed	Project tasks prior to this gate aren't complete. Project should not move to next tasks yet.	<ul style="list-style-type: none"> In Review Terminated
In Review	Stakeholders are reviewing the project results to date to decide whether to open the gate.	<ul style="list-style-type: none"> Open

Status	Description	Next Allowable Statuses
		<ul style="list-style-type: none"> Closed Terminated
Open	Gate review is complete. All stakeholders have approved opening the gate, and the project can continue.	<p>In Review</p> <p>Note: This is a rare situation in which a project manager wants rework on the previously completed project tasks and changes the status back to In Review.</p>
Terminated	Gate review is complete. The stakeholders decide to discontinue the project at this gate.	<p>Closed</p> <p>Note: This is a rare situation in which a project manager wants to reconsider the project and changes the status back to Closed.</p>

Project Gate Notifications

Gate approvers are the stakeholders who decide whether a gate should be opened. A project manager adds or removes the approvers for the gate in the Manage Task Details window from the Manage Project Plan page.

When a project manager changes the gate status to In Review, approvers receive gate review notifications.

Note: An approver must be a project enterprise labor resource, active as of the current date.

Notification Details

The approvers receives an email notification and also a worklist notification within the application. The notification displays the:

- Gate details
- Project details
- Associated work items
- Associated deliverables

An approver can:

- Approve or reject the gate using the email notification.
- Enter comments for the gate.
- View deliverables from the email notification, if any.
- Navigate to work items work area, if applicable.

A project manager can add or remove approvers only when the gate status is Closed or In Review. A project manager can view the approval status and related details in the Manage Task Details window. You can open the gate only when all approvers have approved the project.

Gate Approval Requests

The following table describes the impact of changing the gate status and the corresponding approval request status.

Request Status	Action	Impact
Send	On changing gate status to In Review	Sends an email notification to all the approvers.
Cancel	<ul style="list-style-type: none"> On changing gate status from In Review to Closed or Terminated On deleting a gate 	Cancels the email notification of all approvers.
Cancel	<ul style="list-style-type: none"> On approving or rejecting a gate on behalf of an approver On removing an approver 	Cancels the email notification of the selected approver.

Project Gates Opening Automatically Upon Approval

You can set up a project gate to open itself upon approvals from all approvers or close even when a single approver rejects. You can automatically set a project gate to Open status upon receiving the final approval from the listed approvers. This approach eliminates a step, so the project manager does not have to change the gate status manually. Open gates can't be deleted in both manual and automated modes.

Instead of the manual step required to open or close a gate, the system automatically changes the status based on the approver's response. This automation saves the time and manual effort of tracking the opening or closing of gates. You cannot delete a gate once it is approved and open as the gate is complete and retains final approval history.

Project Gates Opening Automatically Upon Approval

Action	Status Change	Use Case
Auto Open	In review to Open	Gate opens when all approvers approve. For example, Laura, Lynda, and Sam are approvers assigned to a gate. When all three approvers approve, the system itself changes the status from In review to Open.
Auto Close	In review to Close	Gate closes even if a single approver rejects. Any rejection requires the approval process to start afresh, which means that the gate moves back to the Close status. For example, Laura, Lynda, and Sam are approvers assigned to a gate. Sam rejects, therefore the system itself changes the status from In review to Close. Approval from the other approvers also gets withdrawn at this stage.

Considerations for enabling automatic status change:

- The system auto opens the gate only when all approvers approve.
- System auto closes when any of the approvers rejects. Status change happens on the first rejection. The approval notifications get withdrawn for anyone else with pending approval.
- Approvals can come through:
 - The notification approval by the approvers including delegation and reassignment in the workflow.
 - The manual update by the project manager.
- On auto-close, the following information gets retained for audit history:
 - Gate Approver Status
 - Comments
 - Updated By
 - Updated Date

In automated mode, on Auto Close, the audit history gets cleared when the gate status is updated from Close to In review. In manual mode, the audit history gets cleared when the gate status changes to Close explicitly from any other state such as In review or Terminated.

- When a gate is open, the delete option is disabled in the context menu, toolbar, and the Gantt chart.

Work Plan Templates

A work plan template is standard set of project tasks and resource assignments. They enable project managers to standardize project creation across teams and act as an efficient starting point for creating task structures.

You can use work plan templates to add tasks and resources during project creation and to existing projects.

Advantages of using work plan templates:

- Quickly build task structures by using standard task structures.
- Save time in assigning resources by using generic resources and later replacing these resources with actual named-persons.
- Save standard task structures and share them with other project managers.

Note: You can't use work plan templates when using Microsoft Project Integration.

Work Plan Template Creation

To create a work plan template, you must be the Project Manager or have the required privileges. To create a work plan template from a project, open the project and select **Save as Work Plan Template** from the **Actions** drop-down list on the Manage Project Plan page.

When you create a work plan template, it contains the following values from the project:

- Financial and nonfinancial tasks along with their attributes including:
 - Task Number, Task Code, Description, Priority, Billable, Chargeable, Schedule Mode, Schedule Type, Work Type
 - Planned Effort, Planned Allocation, Planned Duration
 - Labor Resources and Expense Resources
 - Planned Labor Cost, Planned Labor Bill Amount, Planned Expense Amount, Total Planned Cost
 - Dependencies
 - Gates
 - Gate approvers as team members
 - Milestones
 - Approvers from the Gate Approvers table
- Note:** Approvers are saved as team members. Approvals and comments aren't copied.
- All resources except project-specific resources
 - Expense resources on tasks
 - Deliverable types associated with tasks
 - Project resources as planned resources
 - Resources along with roles if same resource with multiple roles exists
 - Resource assignments for each task

The application sets the tasks progress to zero and sets the following values to blank:

- Start and Finish
- Progress
- Constraint type and date
- Sprint and requirement
- Actual expense amounts
- Actual hours
- Actual amounts for expense resources

Note: The application doesn't copy project information such as project codes, project dates, project status, and project hierarchy elements to the work plan template.

How You Add Tasks During Project Creation

Project managers can select a work plan template in the Create Project window when creating a project to add tasks from a work plan template.

When you add tasks from a work plan template, all the values in the work plan template are copied to the project. Refer to the Work Plan Template Creation section to learn about values contained in work plan templates.

Considerations for Editing Work Plan Templates

Project managers can edit work plan templates from the Edit Work Plan Template page. To navigate to the page, open **Manage Project Plan** page > click **Manage Work Plan Template** from the Actions panel tab > click the work plan template.

When you edit a work plan template, the existing projects based on the work plan template aren't updated. These changes are included only in the projects that are created after making these changes.

Considerations for Adding Tasks from a Work Plan Template

When you create tasks from a work plan template, here are a few things to keep in mind:

- The tasks inherit the schedule type of the project.
- Summary tasks in the work plan template are added as peers to the selected task in the project plan. If the selected task is at a project level, summary tasks in the work plan template are created as subtasks.

How You Share Work Plan Templates

Project managers can share work plan templates with other project managers in two ways:

- Enable the **Public** check box when you use the **Save as Work Plan Template** action in your project plan.
- Enable the **Public** check box for a work plan template in the **Manage Work Plan Templates** window.

Add Attachments to Projects

You can add attachments to projects from the My Projects page. Attachments can be a file, text, or URL. Only project managers and project administrators can add or delete attachments. Team members can view attachments.

To add an attachment:

1. Navigate to **Projects > Project Management**.
2. In the My Projects page, select a project and click the **Attachment** icon.
3. In the Attachment dialog box, click **Add**.
4. From the **Type** drop-down list, select an attachment type (File, Text, or URL). If you select File, click **Browse** to select the file from your system. If you select Text or URL, enter the file name or URL.
5. Enter the title and description of the attachment.
6. Click **Save and Close** to save the attachment. The attachment icon changes to paperclip, indicating that the project contains an attachment.

To delete an attachment:

1. Navigate to **Projects > Project Management**.
2. In the My Projects page, select a project and click the **Attachment** icon.
3. In the Attachment dialog box, select the attachment you want to delete and click **Delete**.
4. Click **Save and Close**. The paperclip icon is removed, indicating that the attachment is deleted.

Project Plan and Schedule FAQs

What's the difference between fixed duration and fixed effort projects?

In fixed duration projects, task duration is fixed and task effort varies based on the number of resources assigned to the task and their allocation. It's a good idea to create fixed duration projects when you have strict milestones and deadlines.

In fixed effort projects, task effort is fixed and the task duration varies based on the number of resources assigned to the task and their allocation. Typically, you should create fixed effort projects when you have a tight budget for labor resources or when the availability of the required resources is crucial.

How are task numbers assigned?

Task numbers are unique and non-sequential identifiers within a project that can be populated from various sources.

When you create tasks from the Manage Project Plan page, the application automatically assigns task numbers. If required, you can enable the Task Number column in the Manage Project Plan page and edit the task numbers.

When you create a task from the Manage Financial Project Plan page, you must enter task numbers. Keep in mind that it's important to create and use a standard task numbering approach for financial tasks that represent charge codes.

Tip: If your organization uses a standard task numbering approach, you can update your work plan templates or project templates accordingly. This ensures that you always have standardized task numbers for your new project plans.

How can I print or export the project plan?

To print the project plan, open the Manage Project Plan page and select **Actions** > **Print**. Also, you can print the Gantt chart.

How can I view the list of recently accessed projects?

Project managers can view the list of recently accessed projects by selecting the Recent Projects saved search on the My Projects page. The Recent Projects list displays the last 15 projects accessed from both Project Financial Management and Project Management.

If you set My Projects as the Project Management home page or frequently access your recent projects, it's a good idea to set Recent Projects as the default Saved Search.

Note: You can't use additional filters when using the saved search Recent Projects. Any filters you use will be applied to all the projects that you have access to.

How can I set up a Project Management home page of my preference?

Project managers can set My Projects, Manage Project Plan, or Manage Financial Project Plan as their Project Management home page.

To set the Project Management home page:

1. Open the **Settings and Actions** menu and click **Set Preferences**.
2. Click **Project and Grants Management Preferences**.
3. In the Project Management section, select the preferred page from the Home Page drop-down list.

If you select the Manage Project Plan page or the Manage Financial Project Plan as the default home page, they display the last visited project.

Do the Dates Automatically Sync for a New Task?

If the **Define Common Financial Task Dates Across Work and Financial Planning** check box is selected and you create a new task in a work or financial plan, the application automatically displays the task in the corresponding plan with the same dates.

To select **Define Common Financial Task Dates Across Work and Financial Planning** check box, navigate to the Setup and Maintenance work area, search for Define Project Management Configuration task, and click the **Manage Project Management Implementation Options** task.

Why didn't task dates change when predecessor task dates changed?

Successor task dates don't change when its predecessor's task dates change if the schedule mode of the successor task is set to Manual. If you want the task dates to change automatically, change the schedule mode of the task to Automatic.

If the successor task is in progress, then its dates don't change even if you change the predecessor task dates to a later date.

Which Dates Get Automatically Synchronized Between the Work Plan and Financial Plan?

If you've selected the **Define Common Financial Task Dates Across Work and Financial Planning** check box, only the financial task dates (Planned Start Date and Planned Finish Date) start getting automatically synced between a work plan and the corresponding financial plan.

The following don't sync:

- Actual Start and Actual Finish: Dates when the task has actually started and finished.
- Start and Finish dates: Current dates for the tasks. For not started tasks, they represent planned dates. For in-progress tasks, Start represents the actual start and Finish represents the estimated finish date. For completed tasks, they represent actual dates.
- Baseline Start and Baseline Finish: Planned dates of the task when you created a baseline.

What Happens When the Planned Task Dates of Either of the Plans are updated Using FBDI or the REST API?

When you update the planned task dates through FBDI or the REST API for either the financial or the work plan, the dates automatically reflect in both the plans.

Note: The dates are updated only if you've selected the **Define Common Financial Task Dates Across Work and Financial Planning** check box.

The first time you open the work plan, you get a prompt to Select **Update** to apply constraints. The constraints preserve the start date for automatic tasks without dependencies created from FBDI or the REST API.

For a fixed-effort task, when task dates are updated from any other source other than Manage Project Plan page, on subsequent rescheduling, dates are preserved and resource allocations are recalculated.

Can a task have multiple predecessor and successor tasks?

Yes. However, keep in mind that there can only be one dependency between two tasks. For example, two tasks can't have both start-to-start and finish-to-finish dependencies.

What's critical path?

Critical path is the list of tasks whose delay can delay the project. To view critical tasks on the Gantt chart, click the Highlight Critical Path button.

What's progress line?

Progress line is a Gantt chart feature that provides a visual representation of project progress. It's typically used to identify tasks that are behind schedule.

Can I change the project currency for a project?

Yes, you can change it from the Edit Project Details page. Click the Manage Project Details link in the Actions panel tab to open the Edit Project Details page.

Can I update the schedule mode of the Automatic tasks in the Project Plan?

Yes, you can change the schedule mode of a task from Automatic to Manual. If dependencies on other tasks exist, then the application deletes the dependencies if you choose to proceed with the change.

Why is the default allocation percentage of a resource assigned to a task less than 100 percent?

The default resource allocation percentage of a resource assigned on a task is populated based on the allocation specified for the resource in the Manage Project Resources page.

Note that you can change the default allocation percentage of a resource from the **Manage Project Resources** page.

Why did the task dates change after I assigned a resource to the task?

Task dates are updated for fixed effort tasks based on the resource calendar. So, if a resource isn't working on a certain date, the task duration is extended.

Let's say you have a task that takes four days of effort, starts on Monday, and ends on Thursday. If you assign a resource with 100% allocation who isn't working on Wednesday, the task finish date moves to Friday.

Project Plan Access FAQs

How can team members view a project plan?

If you're assigned to a task, click the project name link under the task name on the Manage Tasks page. This opens the project in the Project Plan page, which is a view-only page.

You can also view project plans from the View Projects page. To open the View Projects page, navigate to the My Work work area, open the Actions panel tab, and click the **View Projects** link. Then, click a project name link to view the project in the Project Plan page.

Note: If you don't have access to a project plan, ask the project manager to provide access.

How can I share a project plan with users who aren't assigned to the project?

Project managers can share a project plan in four ways: print the project plan, provide view-only access to the project plan, export it to Excel, or use the Project Management - Planning Real Time subject area.

To provide view-only access, open the View-Only Project Plan Access section of the Edit Project Details page. Then select whether to give access to all users or just the project team and participants. Keep in mind that resources whose status is Canceled can't access the project.

Related Topics

- [Who can access view-only project plans?](#)

Who can access view-only project plans?

Control view-only project plan access from the My Work work area using view project security configuration.

Application administrators can define the data security policies to configure view-only project access based on business needs. For example, provide view-only project plan access to certain critical projects for non-team members. Project managers can provide access either to all users or only the project team.

To configure the view projects list:

1. In the Setup and Maintenance work area, go to the Manage Project Management Implementation Options task.

2. In the Define Project Management Implementation Options page, select **Manage Access with User Roles** check box in the **View-Only Project Plan Access** section.

The view projects list access is now controlled by security role configuration. Security roles have data security access to the View Project Work Plan Data privilege. The seeded Team Collaborator role already has this data privilege.

To give view-only access to project plans for non-team members:

1. Create a custom role by copying the seeded Team Collaborator role. Select the option to copy from Top Role when copying the role.
2. Associate the custom role with a new data security policy with the View Project Work Plan Data privilege and the required condition.
3. Assign a user the new security job role from the Security Console UI. The user can now log in and access My Work work area and have view-only access to project plans based on the data security setup.

Few points to consider:

- The seeded roles have all the required setup and you need not modify them to get access to view the project plans. If you have setup custom roles, review them and make necessary changes to it.
- When adding new data security policies to custom roles, ensure that the policies are directly associated to the role. Data security policies aren't associated from inherited roles.

Why can't I access a financial project in the Project Management work area?

Project managers can't access financial projects from the Project Management work area until the project start date. However, you might want to access the project plan in the Project Management work area before the project start date for planning purposes.

In such cases, project application administrators can enable access by changing the start date of the project manager from the **Parties** tab of the **Manage Financial Project Settings** page.

Why can't I view project management or resource management pages?

You can view project management or resource management pages only if you're a project enterprise labor resource with an active user account.

In addition, you must have a job or abstract role with the security privilege to access specific pages in Project Execution Management applications.

For more information, refer to the Securing Project Execution Management Applications section of the Overview of Project Portfolio Management Security topic.

Related Topics

- [Overview of Project Management Security](#)

Project Deliverables

Project Deliverables

Project deliverables are used to track the output produced to complete a project or task. A deliverable can result from the need to satisfy an external contractual obligation, or the need to fulfill an internally-planned activity.

Here's a table that describes the attributes that you enter and update when managing deliverables.

Attribute	Description
Deliverable type	A classification of deliverables. Note: Project application administrators can create deliverable types from the Manage Deliverable Types page.
Name	The name for the deliverable. The deliverable type is set as the name by default. It supports up to 150 characters.
Priority	The priority that indicates the anticipated impact on work. Valid values are Low, Medium, and High. The default value is Medium.
Status	The status of the deliverable. Valid statuses are New, In progress, and Completed. The default value is New.
Attachments	The actual output files, notes, or URLs. Note: You can add multiple attachments to a deliverable.
Need-by Date	The date by which the deliverable must be completed. The task finish date is set as the need-by date by default.
Owner	The user who's responsible for the deliverable completion. If a primary resource is assigned to a task, the primary resource is set as the owner by default.
Short Name	The short name for the deliverable that's used for reporting purposes. The deliverable type is set as the short name by default. It supports up to 30 characters. It's recommended that you use unique short names.
Description	The description of the deliverable.

Considerations for Creating and Managing Deliverables

Team members can create deliverables from the Manage Deliverables page.

Project managers can create deliverables and assign them to team members from the Deliverables tab of the Task Details dialog box. After a deliverable is created, it's available in Manage Work Items. For lowest-level tasks, you can also assign task completion events for deliverables in Manage Work Items.

Note: You must be a project enterprise labor resource to create, update, or own deliverables.

If a task completion event is set, deliverables are considered as work items and drive task progress. A deliverable work item is marked as complete when the deliverable's status changes to the status specified as the task completion event. When all the work items associated with a task are completed, the task status changes to complete. Keep in mind that you can't manually update task progress to 100% if a task completion event is set. If your business doesn't require you to track progress through deliverables, you can leave the task completion event blank.

Considerations for Deleting Deliverables

Project managers and team members can delete deliverables only if their status is New and if they aren't associated with tasks or requirements.

Project managers can remove deliverable associations from tasks. However, project managers can't remove a deliverable association after the deliverable status has changed to the status specified as the task completion event and the associated task is complete. Keep in mind that when a task is deleted, all the deliverables associated with it are also deleted.

Deliverable Notifications

Deliverable notifications inform you about deliverables assigned to you, completed deliverables, changes in deliverable ownership, and deliverables assigned to a new task. Notifications also inform deliverable creators, project managers, and deliverable assignees about the completed deliverables of the projects or tasks that they manage daily.

Deliverable notifications are sent using the email of the person who updated the deliverable.

Note: You will receive a single notification even if you have multiple roles on the project. You will not receive a notification for changes that you make.

Set Up Deliverable Notification

On the Project Manager or Team Member Dashboard, in the My Profile region, click **Edit Email Notification Settings**, and navigate to the **Projects I Manage** or **Projects I Work On** tabs to select notifications preferences.

What's the difference between the name and short name of a deliverable?

The name field is used to capture the description of the deliverable. It supports up to 150 characters.

The short name field is used to identify the deliverable for reporting purposes. It supports up to 30 characters. It's recommended that you use unique short names.

Can deliverables for projects and tasks be inherited from associated requirements?

No. A deliverable associated with a requirement is not automatically associated with the tasks created for that requirement. You associate a deliverable with a task independent of associating a requirement with a task.

Why can't I delete a deliverable?

You can only delete deliverables that are in New status and aren't associated with tasks. You can also disassociate deliverables from tasks.

Keep in mind that you can't disassociate a deliverable if its status has changed to the status specified as the task completion event and the associated task is complete.

What happens when I duplicate a deliverable?

All information including associations with tasks and requirements is duplicated. However, attachments are not duplicated. The status of the duplicated deliverable is set to New.

How can I set task completion event for a deliverable?

When you add deliverables to a task, gate, or milestone, the deliverables are displayed in the Deliverables tab of the Task Details dialog box by default.

To set the task completion event:

1. On the Manage Project Plan page, right-click the task, gate, or milestone, and select **Manage Work Items**.
2. In the Manage Work Items dialog box, set the task completion event for the deliverable.

4 Project Staffing Plan

Import Project Enterprise Resources

The Import Project Enterprise Resources process creates resources based on data from third-party applications that you load into the Project Enterprise Resource Interface table (PJT_PRJ_ENT_RES_INTERFACE).

The Import Project Enterprise Resources process:

- Validates and creates project enterprise labor or expense resources in Project Management based on the data that you load into the interface table
- Creates user accounts for labor resources
- Assigns default project roles to labor resources
- Reports process exceptions for invalid resources in an output report

To import resources:

1. Prepare data for loading and importing by using the Project Enterprise Resources Import Template or Project Enterprise Expense Resources Import Template macro-enabled Excel workbooks.
2. Click **Generate CSV File** in the templates to create worksheets to load to the interface table. Optionally bypass the Excel templates and manually create CSV files.
3. From the Scheduled Processes page, run the Load Interface File for Import process followed by the Import Project Enterprise Resources process.

For more information about file-based data import, see the File Based Data Import for Oracle Project Portfolio Management Cloud guide.

Import Project Enterprise Resources Execution Report

The Import Project Enterprise Resources Execution Report summarizes the number of successful transactions and errors encountered when you imported the resources. If the report has error messages, then:

1. Review the error message details for each resource and fix the issues.
2. Load the data that you fixed in the CSV file into the interface table again.
3. Resubmit the Import Project Enterprise Resources process.

Related Topics

- [Overview of External Data Integration Services for Importing Data](#)

Adjust Cost and Bill Rates for a Project Enterprise Resource

Project application administrators can adjust resource cost and bill rates for project enterprise labor resources.

Adjusting Rates for One Resource

To adjust cost and bill rates for one resource:

1. In the Setup and Maintenance work area, go to the Manage Project Enterprise Resources task.
2. Select the resource and on the Manage Project Enterprise Resources page.
3. Click **Edit** to open the Edit Project Enterprise Resource window.

Adjusting Rates for Multiple Resources

To adjust cost and bill rates for multiple resources:

1. Select the resources and click **Adjust Resources** on the Manage Project Enterprise Resources page.
2. In the Adjust Resources window, select one or both rate types in the **Resource Attribute** drop-down list.
3. Enter new rates in the **Cost Rate** and **Bill Rate** fields and click **Save and Close**.

The new rates apply to all resources listed in the Adjust Resources window.

Note: You can't change currency in the Adjust Resources window.

Adjusting Cost Rates for All Resources in a Business Unit

If you use Project Financial Management applications, you can adjust cost rates for all resources in a business unit as follows:

1. Select the resources on the Manage Project Enterprise Resources page.
2. In the **Actions** menu, select **Update Resource Cost Rates**.
3. Select the business unit, resource class rate schedule, and effective rate date.
4. Click **Update Resource Cost Rates** to run a process to update the cost rates for all project enterprise resources within a business unit, using the selected rate schedule.

Note: The Update Resource Rates for Project Enterprise Resources process updates cost rates only for employees and contingent workers.

FAQs for Project Staffing Plan

Can a project manager directly assign a resource to a project?

Yes. Project managers with the Assign Project Resource to Project privilege can:

- Create confirmed assignments for planned resources
- Update schedules for confirmed resource assignments

Can I replace an expense resource on a project?

Yes. You can replace an expense resource with another expense resource on the Manage Project Resources page. This action also replaces the original resource with the new resource on all task assignments in the project.

Note: Replacing an expense resource on a project doesn't change the expense amount.

Can I request a resource directly from a project?

Yes. You can create a project resource request directly from the Manage Project Resources page for planned resources. For example, you can add an engineer resource as a planned resource during project planning.

Then when it's time to begin work you can create a request to assign an engineer to your project.

You can perform the **Create Resource Request** action for a resource if the following conditions are true:

- Resource type is Labor
- Assignment status is Planned
- Assignment has a From Date and To Date

You can create multiple project resource requests from the Manage Project Resources page. When you select multiple planned resources and click **Create Resource Request**, the application creates a request for each selected resource.

How can I diagnose issues with project resources?

Run the Project Resource Validation diagnostic test from the **Settings and Actions > Troubleshooting > Run Diagnostic Tests** menu to determine whether a specific project or all projects have valid project resources and resource allocations, project roles exist, placeholder resources are associated with project resource requests, and expense resources are valid. The test generates a report showing the results of five eligibility parameters.

- Project Enterprise Resource Test: Validates that project resources are valid project enterprise resources.
- Project Role Setup Test: Validates that project roles exist.
- Labor Resource Allocation Test: Validates that project resources have a valid allocation percentage. The resource assignment from and to date are within the project date range. All of the project resource allocation percentages are greater than zero and result in assigning the resource for less than or equal to 24 hours a day. All project resources are assigned valid project roles.
- Project Resource Requests for Placeholder Resources Test: Validates that placeholder resources that are associated with a resource request are in a Requested status. None of the placeholder resources that are in a Planned status are associated with resource requests.
- Expense Resource Test: Validates that project expense resources have no value for percentage allocation, effort, bill rate, cost rate, project role, e-mail, from date, and to date.

How can I find start and finish dates for a project or task to use on a project resource request?

View project start and finish dates in the My Projects region of the Project Manager Dashboard. View task start and finish dates on the Manage Project Plan page.

How can I create a resource that is restricted to just one project?

Add a new resource to the Manage Project Resources page and select the Project-Specific Resource check box in the Create Project Enterprise Resource window.

For example, if you want to add a private contractor to your project, but the contractor isn't available for other projects, then create the resource as a project-specific resource.

What happens if a resource is allocated multiple times to a project with different rates?

The highest rate is used to calculate the cost and bill amounts of the resource.

What's the difference between a project enterprise labor resource and a project-specific resource?

You can assign a project enterprise labor resource to multiple projects. If you manage the availability and staffing of a project enterprise labor resource in Oracle Fusion Project Resource Management, then the resource is eligible to fulfill project resource requests.

You can select the **Manage Resource Availability and Staffing** option for a project enterprise labor resource, and subsequently deselect the option. However, you can't change a managed project enterprise labor resource to a project-specific resource.

You can assign a project-specific resource to only one project, and subsequently change the project reference to a different project. You can't select the **Manage Resource Availability and Staffing** option for a project-specific resource. However, if you remove the project reference to change the resource to a project enterprise labor resource, then you can select the **Manage Resource Availability and Staffing** option.

Why can't I see the cost and bill rates for a resource?

For a resource rate to appear on the project, the rate must be defined for the resource on the Manage Project Enterprise Resources setup page and the resource rate currency must match the project currency.

For resources in a Confirmed or Reserved status, or who have pending assignment adjustments, you can edit rates directly on the assignment. Rate changes on the project or assignment don't affect the rates on the resource definition.

Related Topics

- [Cost and Bill Rates for a Project Enterprise Labor Resource](#)

5 Execute Project Plan

Task Management

Collaborate with team members in the Team Member Dashboard and My Work work area on tasks that you created, on which you're a resource, and tasks that you follow. Review and edit action items, to-do tasks, milestone tasks, and project tasks.

Depending on the task type, you can view and edit the following task attributes:

- Task list
- Task details and progress
- Followers
- Task dependencies and deliverables

Task List

The task list on the Manage Tasks page displays tasks that you're assigned to work on and tasks that you follow. Filter tasks by project, priority, date, task type, tags, and exceptions.

Create tasks from the task list. New tasks are to-do tasks by default. You can edit the task on the Manage Tasks page, and add the task to an existing project if you're a team member on the project.

Task Details and Progress

Review task details and enter progress for the task. The following table describes each attribute.

Task Type	Task Attribute	Description
Project, To-do Task	Start Date	The proposed start date for the task.
Project, To-do Task, Action Item	Finish Date	The proposed finish date for the task.
Project	Project	Name of the project associated with the task.
All	Creator	Name of the team member who created the task.
Project, To-do Task, Milestone	Priority	The priority assigned to the task.
All	Resource	Team members who are responsible for the overall management of the task.

Task Type	Task Attribute	Description
		<p>Note: If a task has multiple resources, then only the primary resource can edit the task and enter progress. Only the project manager can edit the resource list.</p>
Project	Total Planned Hours	The total number of hours planned for you to complete the task.
Project	Proposed Effort	<p>The revised total number of hours needed to complete the task, as suggested by a resource.</p> <p>Note: If the proposed effort exceed the value defined for Planned Hours Increased in the Progress Exceptions section of the Define Project Management Implementation Options page, the project manager must review the proposal.</p>
Project	Actual Hours Worked	The total number of hours that you worked on the task.
Project	Remaining Hours	The estimated total number of hours required for a person to complete the task.
Project	Percent Complete	<p>The percentage of total planned hours that you worked on the task.</p> <p>The following formula calculates percentage of work complete on a task:</p> <p>Percent Complete = Actual Hours Worked / Total Planned Hours</p> <p>Note: If a task has work items, they drive task progress. When all the work items are complete, the percent complete value automatically changes to 100%.</p>
Project	Allocation	The percentage of total time that you're planned to work on the task.

Followers

Followers are persons who aren't working on the task, but have an interest in reviewing the task progress. Only the resources and other followers can add followers to a task. If a resource assigns the task to another team member, the application automatically changes the original resource to a follower.

Task Dependencies and Deliverables

Project tasks can have peer tasks, task dependencies, and deliverables.

- Peer tasks exist in the same project task hierarchy as your task.
- Dependencies are relationships between tasks. When tasks are linked on the project plan, the predecessor task must be finished before you begin work on any successor tasks.
- View the existing deliverables or add deliverables to the task. A deliverable can result from the need to satisfy an external contractual obligation, or the need to fulfill an internal planned activity.

Related Topics

- [Project Deliverables](#)
- [Can deliverables for projects and tasks be inherited from associated requirements?](#)
- [What's the difference between my tasks and tasks that I follow?](#)
- [Progress Entry for Tasks](#)

FAQs for Execute Project Plan

What's the difference between my tasks and tasks that I follow?

You can edit task details and enter progress for your tasks on the Manage Tasks page. If a task has multiple resources, only the primary resource can edit the task.

When you follow a task, you can view the task details and see the task activity stream. You receive e-mail notifications of changes that team members make to the task.

If a resource reassigns the task to another team member, then the previous resource automatically becomes a follower.

How can I add followers to a task?

Any resource assigned to the task can add followers. Enter a follower's name on the Manage Tasks page.

If a resource assigns the task to another team member, then the previous resource automatically becomes a follower.

What happens if I create a new task from my task list?

Tasks that you create on the Manage Tasks page are to-do tasks, and aren't associated with a project.

You can edit a to-do task and assign it to a project if you're a project team member. The task will be a top-level task in the project.

Why can't I edit a task?

You're a follower on the task. Only the primary resource can edit a task.

Why can't I view the dependencies and deliverables for a task?

The task is a to-do task. Only a project task can have peer tasks, dependencies, and deliverables.

What tasks are available on the Manage Tasks page?

If you're either a resource or follower on a task, then that task is available in the task list on the Manage Tasks page.

How can I view activities for all of my tasks?

Open the **Manage Tasks** tab on the **My Work** page.

The **My Tasks** subtab contains a list of all your tasks that you can filter by various attributes such as project, task type, and tasks that you are scheduled to work on today or in the future.

6 Track Project Progress

Progress Entry for Tasks



Watch video

Team members can enter progress for tasks and provide the actual effort and the actual start and finish dates for the task.

Project application administrators must enable the **Allow team members to report actual hours or remaining hours above or below planned effort** option from the Define Project Management Implementation Options task in the Setup and Maintenance work area. This option enables team members to enter actual values separately from planned values.

CAUTION: You can't disable the feature after it's enabled.

Project managers can directly enter progress on the Manage Project Plan page. Team members can report progress for tasks in either of the following sources:

- Quick Progress region of the Team Member Dashboard
- Manage Tasks page
- Oracle Digital Assistant Project Management Skill

Project application administrators can decide to enable progress reporting by team members only for certain project statuses. If a project is in a status for which team member progress reporting isn't enabled, then team members won't be able to see their tasks in the Quick Progress region or the Manage Tasks page.

Team Member Dashboard

Use the Quick Progress region on the Team Member Dashboard to mark your tasks and actions items as started or finished.

If you aren't the primary resource on a project task, then the task doesn't appear in your Quick Progress region. Only the primary resource can enter progress for project tasks.

Manage Tasks Page

Enter your progress for a task in the Manage Tasks page of the My Work work area. Use the **Mark as Started** and **Mark as Finished** actions from the actions menu of a task to mark the task as started or finished. When you mark a task as started or finished, or enter a partial percentage completion, the application calculates the actual hours and dates as listed in the following table. To enter the actual dates and effort, click the task name. You can provide the values in the Progress section and compare it with the planned values listed in the Planned section of the page. When calculating progress, the application compares the actual hours and dates with the planned values in the project plan and displays progress to the project manager on the Progress infolet on the Project Management Dashboard.

Task Type	Attribute	Description
Project	Mark as Started	Click to automatically update the percent complete value for the task to 25%.
Action Item, Milestone, Project, To-do Task	Mark as Finished	Click to automatically update the percent complete value for the task to 100%. You can mark milestone tasks as finished only.
Project	Proposed Effort	Click the Enter Progress button, Revise Effort option to enter the number of proposed effort hours. Note: Enter the proposed effort only if you need more or less time than shown in the Total Effort field. If the proposed effort exceeds the value defined for the Planned Hours Increased implementation option, the project manager must review the proposal.
Project	Actual Hours Worked	Enter the total number of hours you worked on the task.
Project	Percent Complete	Enter the percentage of the total planned hours you worked on the task.

The following section demonstrates the impact of updating actual and remaining values separately from planned values.

Updating Actual Values

The following table lists a few scenarios when you update the actual effort, start and finish dates separately from the planned effort and dates. Let's assume that a task is scheduled to start on January 5, and the current date is January 4. The following table lists the scenario when at first the task is yet to start, and then it starts one-day later than it was previously supposed to. The resource then updates actual effort as he finishes work on the task. Eventually when the resource finishes the task the actual effort exceeds the planned effort by 8 hours. The resource works for 8 hours every day.

Planned Effort in Hours	Actual Effort in Hours	Progress Updated On	Planned Start Date	Current Start Date	Actual Start Date	Planned Finish Date	Current Finish Date	Actual Finish Date	Remaining Effort	Percent Complete
40	NA	4-Jan	5-Jan	5-Jan	NA	9-Jan	9-Jan	NA	40	0
40	8	6-Jan	5-Jan	6-Jan	6-Jan	9-Jan	10-Jan	NA	32	20
40	24	8-Jan	5-Jan	6-Jan	6-Jan	9-Jan	10-Jan	NA	16	60

Planned Effort in Hours	Actual Effort in Hours	Progress Updated On	Planned Start Date	Current Start Date	Actual Start Date	Planned Finish Date	Current Finish Date	Actual Finish Date	Remaining Effort	Percent Complete
40	48	11-Jan	5-Jan	6-Jan	6-Jan	9-Jan	11-Jan	11-Jan	0	100

Best Practices for Proposed Task Changes

Project managers need to review certain changes to tasks that team members proposed when they entered progress.

To see the effects of a proposed task change, a project manager can preview the impact the change would have on the project plan before deciding whether or not to accept the change.

After previewing the impact to the project plan, a project manager can accept, save, decline, or cancel the proposed task change.

Tip: Project managers can also accept or decline task changes from the **Manage Task Exceptions** page after previewing the impact.

Accept

Accept the proposed change if you agree with the impact. When you accept the change, the proposed dates for the task replace the current dates. The application recalculates the progress and duration for the task and project. You must also save any changes to apply the updates to the project plan.

Alternatively, you can change the proposed dates to different dates than the team member proposed.

Decline

Decline the proposed change if you want to retain the original planned dates and reject the proposed changes. When you decline the change, the proposed dates are replaced with the original dates, and changes to the task are disregarded. The application recalculates the progress and duration for the project plan using the original values.

Cancel

Cancel the proposed change to return to the project plan without accepting any changes. When you cancel the change, the values for the proposed and planned dates don't change.

Save

Save the proposed change to replace the planned dates with the proposed dates, and save the change to the project plan.

Related Topics

- [Task Exceptions and How to Manage Them](#)

Project Milestones

Milestones are single point-in-time events in a project plan with zero duration and effort. Billable milestones can be associated with a contract line for billing and revenue recognition purposes.

Here are some points about milestones:

- They can represent a contractual obligation with a client.
- They can be used in project plans for scheduling purposes.
- They can have associated deliverables.
- They can be used in project plans for invoicing and revenue recognition.
- They can't incur costs directly.
- They have statuses which track the completion progress.
- They can require a review and approval before completion.

Project managers use milestones to track events such as completion of project stages, major project deliverables, key decision points, and approvals. Milestones are used to monitor progress and determine if a project is on schedule.

User Responsibilities

The following table lists the user responsibilities for milestones:

User	Responsibilities
Project Manager	<ul style="list-style-type: none"> • Creates the milestone in the project plan. • Assigns dependencies to the milestone. • Marks a milestone as completed. • Views milestones in various statuses.
Team member	Marks a milestone as completed.

Statuses

The following are the various statuses for milestones.

- Not Started
- In Progress
- Complete: nonbillable milestones that are finished
- Submitted for Completion Approval
This status is for billable milestones when a user updates the percent complete to 100 or selects a contextual action to mark the milestone complete. The milestone follows the Milestone Completion Approval workflow (MilestoneApprovalHumanTask) for approval. The workflow is followed whether or not the billable milestone is associated with a contract line. The default approver is the primary project manager. If the primary project manager submits the milestone for completion approval, the milestone is automatically changed to the

Complete status. If you don't require manual approvals for billable milestones, configure an auto-approval rule in the workflow.

Actions on Milestones

The following table lists the various actions, users who can perform the actions, and the location where you perform the actions.

Action	User Role	Location
Create Milestone	Project Manager	Manage Project Plan page
Create Financial Milestone	Project Manager	Manage Project Plan page
Assign finish date to a milestone	Project Manager Note: The task creator can assign a finish date to a milestone task. However, a team member can't edit the start date or finish date for milestones. If the task creator enters a finish date for a milestone task, the start date is automatically updated with the same date.	Manage Project Plan page
Mark a billable or nonbillable milestone as complete	Project Manager	<ul style="list-style-type: none"> Enter 100 percent complete in the Manage Project Plan page In Manage Project Plan use the contextual action to mark Complete Enter the date in the Actual Finish column in Manage Project Plan Project Milestones page
Mark a nonbillable milestone as complete	Team Member (Team members can't update billable milestones.)	<ul style="list-style-type: none"> Manage Tasks page of My Work work area Quick Progress and New Activity regions of the Team Member Dashboard
Filter milestones by statuses	Project Manager	Project Milestones page

Related Topics

- Financial Milestones

FAQs for Track Project Progress

How can I report progress on a project task that's not in the project plan?

Create a new task for your project while you enter progress. Enter your actual hours for the new task.

You can only add one task at a time with this method. The task hierarchy isn't available for selection when you create tasks while entering progress. You also can't report progress if the task is in a project that doesn't have progress reporting enabled for team members.

How can I copy and paste tasks in projects?

You can copy and paste a task in financial or non-financial projects to quickly add new work to the project plan.

You can either copy a lowest level task or a non-expanded summary task to paste. If you copy only the expanded summary task and then paste it, its child tasks don't get pasted.

The following task information gets copied and pasted to the new task:

- Task name and description
- Efforts and duration
- Dependencies and constraints
- Labor and Expense resource assignments
- Deliverables
- Gate approvers for gates
- Priority
- Schedule Mode and Schedule Type
- Deadline
- Additional Task Information

Few points to consider while copying and pasting tasks:

- You can copy and paste lowest level tasks any time.
- Select only a single task to copy. You can't select and copy multiple tasks at the same time.
- If you select to copy a summary task in expanded version, then only that task is copied and the subtasks tasks aren't copied. Alternatively, collapse the summary task to copy and paste that task and all of its subtasks.
- If constraints and dependencies are present on either the copied or the summary task under which they will be pasted, then they will be applied.
- If there are constraint violations, then you get to choose what to do.

- If there are no constraints or dependencies, then the pasted tasks will inherit the project start date as the default start date.

Why can't I create a task for a project?

Team members can create new tasks in a project only if they are assigned to a project or the project is in a status for which progress reporting by team members is enabled.

You can't assign the tasks you create to other team members.

Why can't I view progress for all tasks on a project?

Project managers can access progress review from the task exceptions for a project. Only the lowest-level tasks that have exceptions on the project are displayed.

Why can't I view my task in the Quick Progress region?

You won't be able to view your tasks in the Quick Progress region if you are not the primary resource on the task or if the project is in a project status for which team member progress reporting isn't enabled.

If you aren't the primary resource, then you can view and open the task from the Manage Tasks page.

Why can't I see my tasks on the Manage Tasks page?

You can't see the tasks from a project on the Manage Tasks page if the current status of the project isn't enabled for progress reporting.

Why do some tasks have exceptions for progress entries?

A team member entered a proposed start date, proposed finish date, or an increase to the planned hours for the task that exceeds the progress thresholds defined in the project management implementation options.

Related Topics

- [Task Exceptions and How to Manage Them](#)

How can I mark a task as finished?

Select Mark as Finished in the Quick Progress region of the Team Member Dashboard or in the Manage Tasks tab of the My Work work area.

When you mark a task as finished, progress for the task is automatically updated to 100% in the project plan.

Alternatively, select the task in the Manage Tasks tab of the My Work work area, and enter a value of 100 in the Percent Complete field.

Another method is to select the task in the project plan, and enter a value of 100 in the Percent Complete column.

7 Project Changes

Change Orders

Change orders are used to record, communicate, and track the impact of proposed project or nonproject changes.

If you implemented Project Financial Management, you can assess the change order impact on the baseline project budget and then automatically adjust the budget when the change is approved. For example, record a change for a specific task and resource and view the overall impact on the project budget. Upon stakeholder approval, implement these adjustments to the project budget automatically.

Here's your navigation to the Manage Change Orders page:

1. Start from your work area:
 - Project managers open the Manage Project Plan page.
 - Team members open the My Work work area.
 - Project administrators select a project in the Project Financial Management work area.
2. Open the Task panel tab and click Manage Change Orders.
3. Use the Show list to filter change orders:
 - Requiring attention
 - Ready for next stage: All participants of a change order stage completed their tasks. (Excludes closed, canceled, completed statuses.)
 - Pending implementation: Change orders with detailed budget impacts are in the approved status
 - Completed
 - Canceled
 - All

Project managers can generate a change order from an issue using Oracle AI. They can also associate a task with a change order to efficiently track tasks and analyze change orders. Keep in mind that you can't delete a task that's associated with a change order.

User Responsibilities

Project managers, project administrators, and team members can have the following user responsibilities.

User	Responsibilities
Creator	Creates the change order and names the owner.
Owner	<ul style="list-style-type: none"> • Monitors the progress, resolution, implementation, and closure of a change order. • Adds and assigns roles to participants at any stage until the change order is either approved, closed, or canceled. This includes adding a participant for stages that have either been completed in the past or not yet visited. • Moves the change order to next or previous logical stage.

User	Responsibilities
	<ul style="list-style-type: none"> Removes participants on assigned tasks, if required.
Project Manager, Project Administrator	Can change the owner of the change order.
Participant	Performs the assigned tasks. For example, the Reviewer reviews the change order and adds review comments and uploads attachments. An Implementor submits the change order for implementation.
Approver	Updates the progress and provides approval comments.

Stages and Statuses

Owners can control the progress of a change order throughout its lifecycle and change its stages. You can skip all stages except the Approval stage if an approver is added. The status of a change order automatically changes based on its stage.

Here's a table that contains the status, key owner and participant responsibilities, and next available action for each stage of a change order.

Note:

- You can move to a stage only if participants are defined for that stage.
- If you skip a stage, all defined participants for that stage will be removed.

Change Order Stage	Change Order Status	Description	Available Actions
Create	Draft	<ul style="list-style-type: none"> Stage and status after the creator initiates the change order. Owner enters change order details and assigns participants to assess, review, approve, and implement the change order. 	For change owner: <ul style="list-style-type: none"> Edit change order Cancel change order Close change order Delete change order Submit for impact assessment Submit for review Submit for approval Submit for implementation
Impact Analysis	In Progress	<ul style="list-style-type: none"> Stage and status after the owner submits the change order for impact assessment. Owner who adds an impact is added as an Assessor by default. Assessors are added as Implementors by default. However, owner can remove them from this role. 	For assessors: <ul style="list-style-type: none"> Mark complete For change owner: <ul style="list-style-type: none"> Edit change order Cancel change order Close change order Submit for review Submit for approval

Change Order Stage	Change Order Status	Description	Available Actions
		<ul style="list-style-type: none"> Assessor adds, edits, or deletes impacts added by self while owner can update impacts of other participants too. 	<ul style="list-style-type: none"> Submit for implementation
Review	In Progress	<ul style="list-style-type: none"> Stage and status after the owner submits the change order for review. Reviewer adds review comments and uploads attachments. 	For reviewers: <ul style="list-style-type: none"> Mark complete For change owner: <ul style="list-style-type: none"> Edit change order Cancel change order Submit for impact assessment Submit for approval Submit for implementation
Approval	In Progress	<ul style="list-style-type: none"> Stage and status after the owner submits the change order for approval. Approver updates the progress and provides approval comments. All Approvers must approve the order before the owner can submit the order for implementation or close the order. The owner can't skip an Approver. However, the owner can delete Approvers who don't respond. 	For approvers: <ul style="list-style-type: none"> Approve Reject For change owner: <ul style="list-style-type: none"> Edit change order Cancel change order Close change order Submit for impact assessment
Approval	Approved	Stage and status after all Approvers approve the change order.	For change owner: <ul style="list-style-type: none"> Submit for impact assessment Submit for review Submit for implementation Close change order Cancel change order
Approval	Rejected	<ul style="list-style-type: none"> Stage and status after an Approver rejects the change order. Approver specifies rejection reason and comments. 	For change owner: <ul style="list-style-type: none"> Submit for impact assessment Submit for review Cancel change order
Implementation	Approved	<ul style="list-style-type: none"> Stage and status after the owner submits the change order for implementation. 	For implementor: <ul style="list-style-type: none"> Mark complete

Change Order Stage	Change Order Status	Description	Available Actions
		<ul style="list-style-type: none"> Implementor updates the comments and attachments. Implementor can automatically generate a new baseline budget version incorporating the change impact when detailed budget impacts are documented in the change order. 	<ul style="list-style-type: none"> Implement and mark complete (if the change order has a detailed budget impact) <p>For change owner:</p> <ul style="list-style-type: none"> Submit for impact assessment Submit for review Submit for approval Close change order Cancel change order <p>After automatic implementation of a change order with detailed budget impacts Close Change Order is the only action available.</p>
Close	Completed	Stage and status after the owner closes the change order.	For change owner: Close change order
Cancel	Canceled	<ul style="list-style-type: none"> Stage and status after the owner cancels the change order. Owner specifies cancellation reason and comments. 	For change owner: Cancel change order

Related Topics

- [Generate a Change Order from a Project Issue](#)

Generate a Change Order from a Project Issue

You can generate a change order from a project issue using Oracle AI.

Project team members create issues as needed, which are then reviewed by the project manager. If a change order is needed, the project manager can generate it directly from the information in the issue and make changes.

1. In the Project Management work area, open an issue.
2. Click **Initiate Change Order**.
3. Review the generated change order and update the details.
4. Change the details or information in the issue and click **Regenerate** until you're happy with the generated change order.
5. Save.

Results:

The change order includes the budget and forecast impact and also detailed impacts if there's a baseline budget version.

Related Topics

- [Change Order Automation for Project Budget Adjustments](#)

Change Order Automation for Project Budget Adjustments

You can perform a detailed assessment of the change order impact on the project budget and then automatically adjust the budget when the change is approved. For example, record a change for a specific task and resource and view the overall impact on the project budget during assessment. Upon stakeholder approval, implement these adjustments to the project budget automatically.

Note: Users must have the Manage Project Changes privilege to create a change order, perform impact assessment, review, and approve a change order.

Add Budget Impact Details to a Change Order

To add budget impact details to the change order:

1. In the My Work work area, click **Manage Change Orders** in the panel drawer.
2. Click **Create** in the Manage Change Orders page.
3. Complete the fields as appropriate in the Create Change Order page. In the Impact Assessment section, click the **Add Impact** icon.
4. In the Add Impact dialog box, perform these actions:
 - a. Select **Budget and Forecast** from the Impact area drop-down list.
 - b. Select the task and resource for which impacts are to be assessed and enter the **Quantity, Currency, Raw Cost, or Revenue** as appropriate. For example, if a scope increase requires an additional 100 hours for a Consultant resource, enter 100 as the quantity. Conversely, for a scope decrease, enter -100.

Note: For rate-based resources such as Consultant, the amounts are automatically calculated based on the rate settings of the current baseline budget version. Optionally, override the amounts by entering both the quantity and cost or revenue amounts.

- c. Click **Save**.

Manage Change Order Budget Impact

Click **Modify in Budget View** in the Add Impact dialog box to navigate to the Manage Change Order Budget Impact page and view and access detailed change impact information within the context of the current baseline budget. You can review project budget figures and factor in changes and their effect on the project margin. Select the Edit Period Amounts action to adjust the change quantity or amounts of the change impacts for specific periods, if required.

Note: Users must have the Manage Project Budget Working Version privilege to manage the change order's budget impact on the Manage Change Order Budget Impact page.

Include Change Order Impact on a Project Budget

Once the change order is approved and moved to the implementation stage, the Implementor can select the **Implement and Mark Complete** action to include the budget impacts. This action creates a new baseline if the current baseline budget version isn't workflow enabled. If the baseline budget version is workflow enabled, a new version is created and submitted for approval. The change order Implementor is notified once the budget version with the change amounts is approved. Additionally, you can also choose to send the notification to the Change Owner by defining a custom rule in the BPM task configuration.

Note: In addition to the Manage Project Changes privilege, users must also have the Create Project Budget Baseline Version privilege to automatically implement a change order with budget impacts.

Considerations for Budget Impact Assessment

Here are a few points to keep in mind while performing budget impact assessment:

- To perform a detailed budget impact assessment and automatic implementation, the change order must be associated with a project that has a baseline budget version created using an approved financial plan type.
- Automatic implementation is supported exclusively for budgets.
- Only one change order can be implemented at a time.
- Once a baseline budget version is created from the change impacts, the change order can only be closed and not moved to any other stage.
- If there are any overrides in the current baseline budget, then they're carried forward while performing impact assessment.
- If there's a budget version with edits, baseline this version before implementing any change order to retain the edits, as the change order budget impacts are implemented only on the latest baseline budget version and manual edits aren't carried forward.
- Change impact amounts for all impact areas can be updated only in the impact assessment stage.
- When there's an active change order for the project budget adjustments, you can continue to create budget baselines provided the following planning options are unchanged from the previous baseline version:
 - Planning Level
 - Calendar Type
 - Planning Resource Breakdown Structure
 - Multiple Transaction Currencies
 - Assign Resource in Single Currency for a Task
 - Planning Currencies

Related Topics

- [Change Orders](#)

Manage Email Notifications

You can receive notifications for new, open, and closed or completed tasks, deliverables, issues, action items, and change orders depending on the settings you select.

The notifications displays the key data, for example, project name, priority, dates, creator, for the object added, reassigned, or completed.

The aspects of email notifications described here are:

- Enabling notification settings
- Receiving notifications

Enabling Notification Settings

Use the email notification settings to determine the notifications you receive. Set notifications separately for projects you work on and projects you manage.

1. Navigate to the **Project Manager Dashboard** or **Team Member Dashboard**.
2. In the My Profile region, click **Edit E-mail Notification Settings**. The Edit E-mail Notification Settings window opens.
3. In the Work I Manage tab, expand each category and set the email delivery frequency to **Daily** or **None** for the objects you manage.

Note: The Daily option is the default setting for all the projects.

4. In the Work I Own tab, set the email delivery frequency to **Daily** or **None** for the objects you work on.

Receiving Notifications

The application automatically sends email notifications when you perform the related action. The following table lists the recipients of the notifications based on action.

Action	Receiver of the Notification
Create, reassign, or complete tasks	Owner Project manager Creator, on reassignment Previous owner, if ownership is changed
Create, reassign, or complete issues	Owner Project manager Creator, on reassignment Previous owner, if ownership is changed

Action	Receiver of the Notification
Create or close action items	Project manager
Create, reassign, or complete deliverables	Owner Project manager Creator, on reassignment Previous owner, if ownership is changed
Create or reassign change orders	Owner Creator, on reassignment Previous owner, if ownership is changed
Close or cancel change orders	Creator Participants
Approve, reject, or complete change orders	Owner
Assign or remove participant	Participant

Note: Project managers also receive a daily summary of the projects they manage. Use the Generate Project Updates E-Mail process to create the daily digest.

8 Project Performance

Sprint Burndown

Project managers can use the sprint burndown graph to predict if the scrum team will complete all planned backlog items in a sprint in Agile projects.

The sprint burndown graph evenly distributes the hours assigned to tasks in the project plan across the sprint duration to calculate the ideal remaining hours. The scrum team consumes a certain number of hours to complete a certain number of backlog items. The graph shows how efficiently a project team consumes the available hours in a sprint.

You can measure how hours are ideally consumed during the sprint and compare it to how the project team is actually consuming hours. If the actual hours remaining deviates from the ideal hours remaining, it means that you must assess how many backlog items can realistically be achieved in a sprint. Consider why progress was less or more than anticipated during the sprint retrospective.

Related Topics

- [Examples of Sprint Burndown](#)

How Sprint Burndown Is Calculated

Use sprint burndown to monitor the hours the scrum team requires to complete work in a sprint and adjust the planned sprint hours for future sprints, to ensure that the ideal hours remaining is close to the actual hours remaining.

Settings That Affect Sprint Burndown

The sprint burndown graph captures planned hours from the project plan and actual hours from the progress reported by team members. The following information must be available:

- Project plan with tasks associated with backlog items.
- Sprint when the backlog items will be worked on.
- Planned hours for project tasks.
- Actual hours reported by team members on tasks.

How Sprint Burndown Is Calculated

The graph shows sprint burndown by calculating the ideal and actual hours remaining.

The following figure shows the formula used to calculate actual hours remaining.

$$\text{actual hours remaining} = \text{planned hours} - \text{actual reported hours}$$

The following figure shows the formula used to calculate ideal hours remaining.

$$\text{ideal hours remaining} = \text{planned hours} - \text{ideal hours consumed}$$

To ensure that the sprint burndown data is accurate:

1. Product owners and scrum masters must ensure that product backlogs, sprints, and story points are available to the scrum team members on the Manage Backlog Items page of the Project Requirements work area.
2. Project managers must create a project plan in the Project Management work area.
3. Team members must regularly report progress on the My Work work area.

Data on the sprint burndown graph must be current during product development. You can ensure sprint burndown graph data is current in the following ways:

- Schedule the Capture Progress Data process to run daily after team members enter daily progress.
- As required, use the action to capture progress data and refresh the region to see the latest data.

Related Topics

- [Examples of Sprint Burndown](#)

Examples of Sprint Burndown

Analyze the sprint burndown to improve the planning of future sprints in Agile product development. The sprint burndown graph captures planned hours from the project plan and actual hours from the progress reported by team members.

The following information must be available before you can analyze sprint burndown for your Agile scrum team:

- Project plan with tasks created from backlog items.
- Sprint when the backlog items will be worked on.
- Planned hours for project tasks.
- Actual hours reported by team members on tasks.
- Updated sprint burndown graph with latest data.

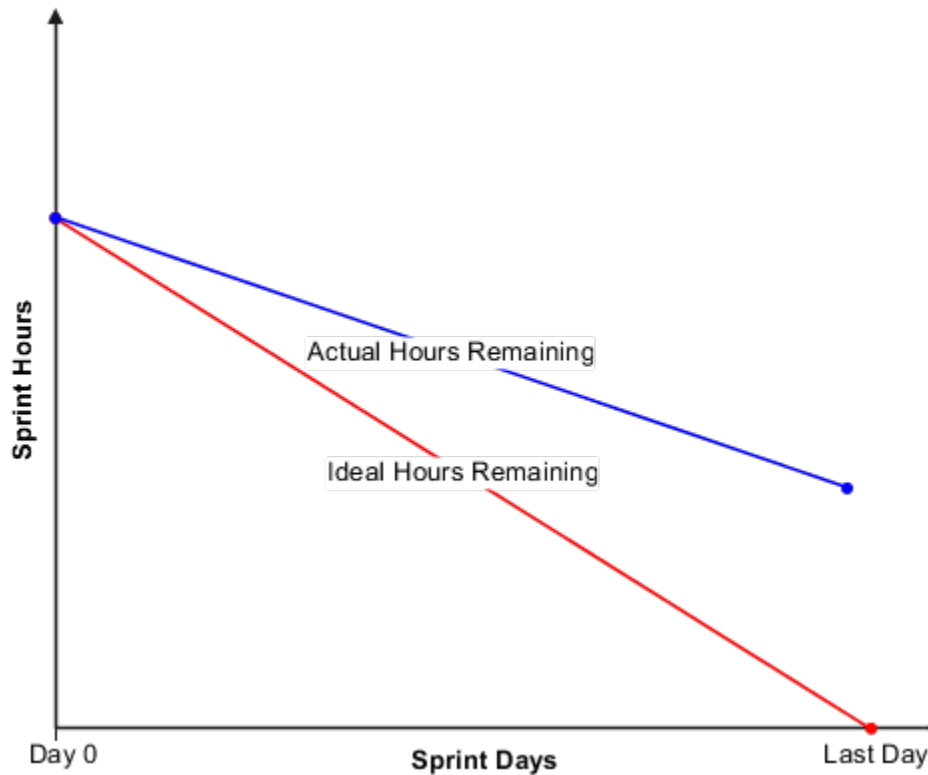
The following example scenarios are based on the story points assigned to backlog items at the start of the sprint.

Actual Hours are Greater Than Ideal Hours

The team consumes more hours on tasks in the sprint than originally planned.

This figure shows that the actual hours remaining line is above the ideal hours remaining line, and the distance between the two lines is increasing. This can indicate that you over estimated the backlog items the team can achieve in a sprint, and some of the backlog items planned for the sprint won't be completed. Based on this, scrum masters and product owners must move any incomplete backlog items

in the current sprint to the next sprint and reprioritize the backlog items at the start of the next sprint.



Some possible reasons why the hours consumed is greater than the ideal hours:

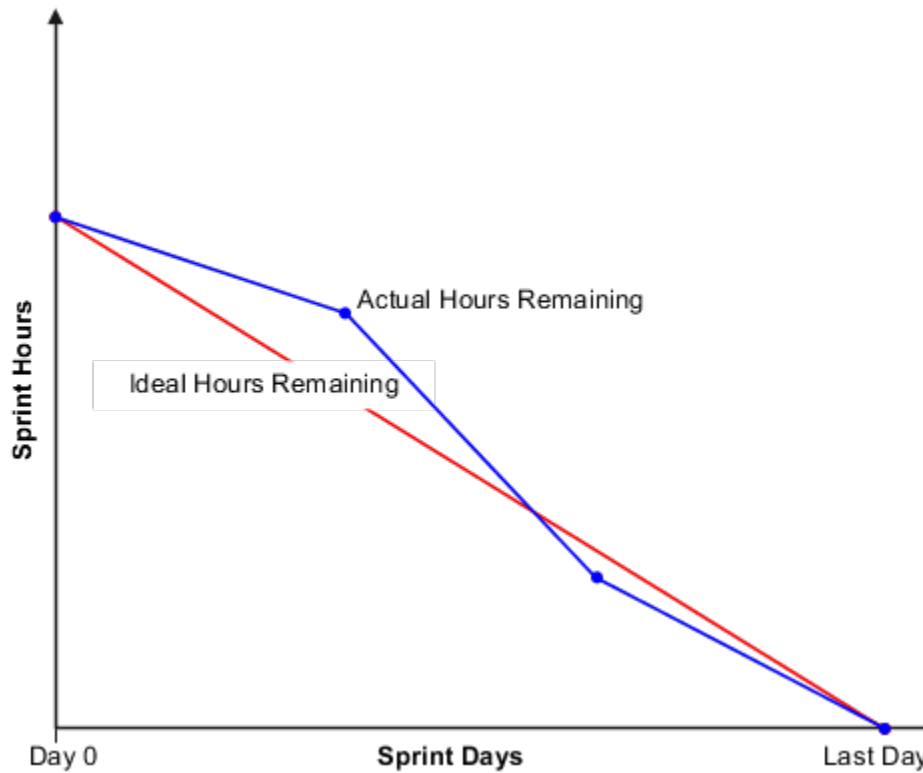
- Over estimation of planned backlog items for the sprint based on complexity.
- Unknown issues that took time to resolve.
- Dependencies on deliverables of other teams.

Actual Hours are Ideal

The team consumes the expected number of hours on tasks in the sprint.

This figure shows that the actual hours remaining line overlaps the ideal hours remaining line. This indicates that your planned hours are accurate, so the team can complete the

planned backlog items in a sprint, and consume the planned hours by the end of the sprint.



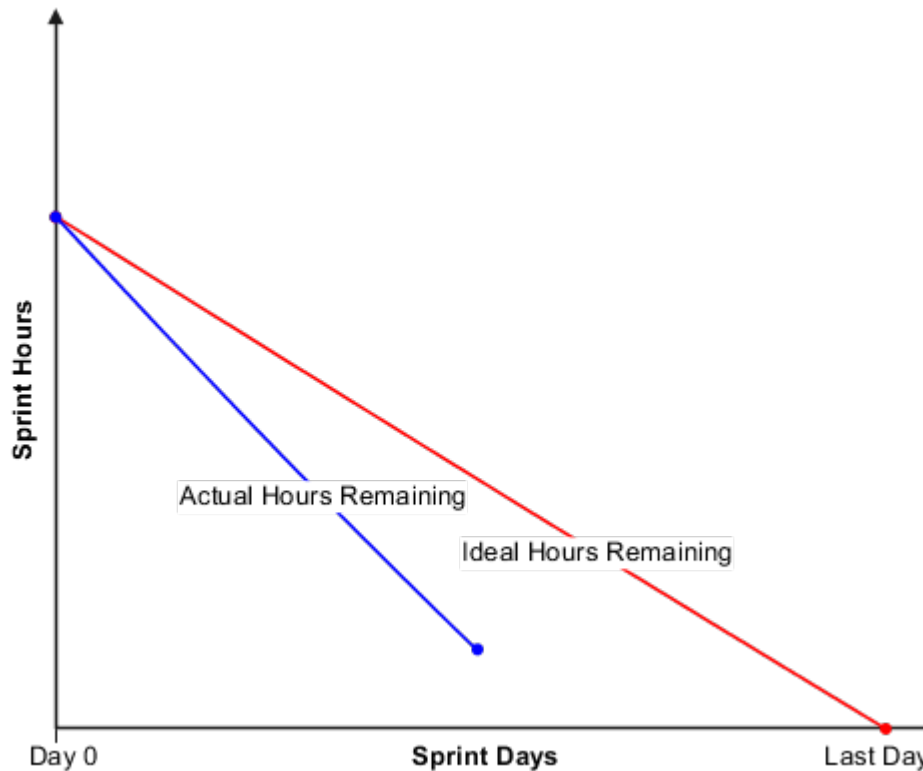
Less variation between ideal and actual remaining hours indicates that the scrum team can accurately assess backlog item complexity and arrive at the number of hours required to complete work in a sprint.

Actual Hours are Less Than Ideal Hours

The team consumes less hours on tasks in the sprint than originally planned.

This figure shows that the actual hours remaining line is below the ideal hours remaining line, and the distance between the two lines is increasing. This helps you predict that the team will complete the planned backlog items for the sprint

early and they can work with the product owner to identify the next most important backlog item from the product



backlog.

A possible reason why hours consumed are less than ideal is that you underestimated backlog item complexity and planned more time than required to complete work in the sprint.

How Sprint Velocity Is Calculated

The sprint velocity helps you predict how many story points your team can achieve on an average in sprints in Agile projects. Scrum teams are expected to assign story points to backlog items in the current sprint.

The line representing the average story points achieved on the Sprint Velocity graph shows the sprint velocity trend of a project team over sprints in a product release cycle.

Settings That Affect Sprint Velocity

Product owners and scrum masters must ensure that product backlogs, sprints, and story points are available to the scrum team members on the Manage Backlog Items page of the Project Requirements work area. The following information must be available:

- Sprint when the backlog items will be worked on.
- Story point estimate for all backlog items in the current sprint.
- Current status of backlog items.

How Sprint Velocity Is Calculated

The Sprint Velocity graph calculates sprint velocity using the total story points achieved in a completed sprint, divided by the total number of completed sprints.

This figure shows the equation to calculate the sprint velocity.

$$\text{sprint velocity} = \frac{\text{total story points achieved in completed sprints}}{\text{total number of completed sprints}}$$

Example of Sprint Velocity Calculation

The following is an example of how sprint velocity is calculated based on story points achieved during sprints.

Sprint	Story Points Achieved	Sprint Status
Sprint 1	6	Completed
Sprint 2	25	Completed
Sprint 3	16	Completed
Sprint 4	40	Ready

This figure shows how the sprint velocity is calculated using the example.

$$\text{sprint velocity} = 47 / 3 = 15.66$$

This means the product team can complete 15 story points on an average in a sprint, so their sprint velocity is 15.

Related Topics

- [Why can't I see certain sprints on the Sprint Velocity graph?](#)
- [What's sprint velocity?](#)

How Project Resource Allocation Is Calculated

You can monitor resource capacity and work allocated to resources on your projects for the next 13 weeks. Compare the work allocation of your resources with their allocation on other projects to understand why certain resources are overallocated or underallocated.

Drill down to modify the allocation percentage for your resources and plan the distribution of work on your projects. Gain visibility into the weekly work allocation of resources compared to their capacity. View resource manager name, project role, allocation hours, allocation percentage, and capacity hours of your project resources.

Settings That Affect Resource Allocation

Values for project assignments and allocation percentage for resources come from the Manage Project Resources page.

You can also set the acceptable threshold percentage range for the workweek thresholds that determine which values are indicated as overallocated, underallocated, or normally allocated. Optionally, select the colors the application uses to indicate allocation.

How Resource Allocation Is Calculated

The application calculates the resource allocation hours based on the capacity hours and allocation percentage.

Calculating Resource Allocation

Calculate resource allocation using the following formula.

project allocation hours = allocation percentage * capacity hours

The following table shows an example of how project allocation for a week is calculated.

Capacity Hours	Allocation Percentage	Project Allocation Hours
40	80	32
40	50	20

Related Topics

- [How can I view a team member's allocation to my projects?](#)
- [Why are resources with 40 hours of allocated work shown as overallocated?](#)

Task Assignment Hours

Review task assignments and compare task assignment hours to allocated and capacity hours for project resources. Identify the tasks that contribute to over or underallocation of resources assigned to projects.

Drill down to identify the tasks on your projects causing resources to be over or underallocated. After identifying the tasks, adjust the resource assignment hours to ensure resources are assigned tasks according to their capacity. View tasks assigned to your resources on other projects and track the other projects resources are assigned.

Settings That Affect Task Assignments Hours

The Project Resources region in the Project Manager Dashboard displays task assignments to resources from the Manage Project Plan page in the Project Management work area.

Use the Manage Workweek Threshold action in the **Project Resources** region in the Project Manager Dashboard to set the acceptable threshold range for resources that are overallocated, underallocated, or allocated according to their capacity. Optionally, select the colors you want to use for indicating allocation of resources.

How Task Assignment Hours Are Calculated

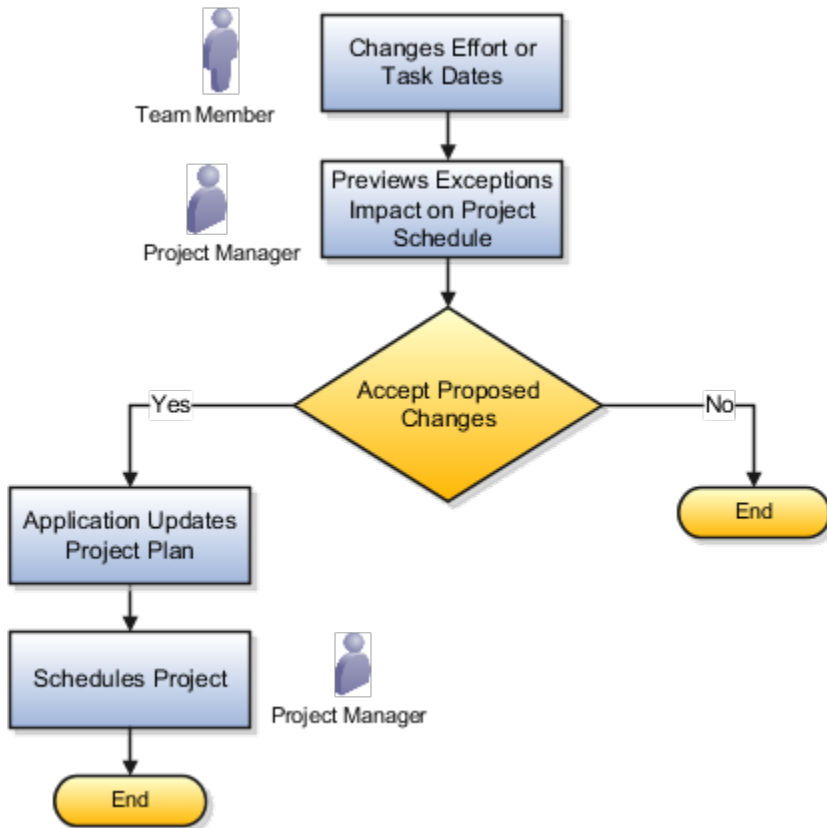
The application rolls up the task assigned hours in the project plan for a resource and displays the weekly tasks assignment hours for a resource. Task assignment hours are the sum of all task hours of a resource in each project. The following example shows the task assignment hours for quality assurance resource George White on the projects Maxwell Software Upgrade and Rudy Corp. Implementation.

Project	Task Assignment	Task Assignment Hours
Maxwell Software Upgrade	Create Test Plan for Upgraded Features	7
	Test Flows	20
	Certify Features	1
Rudy Corp. Implementation	Create Plan to Test Implementation	12
	Prepare Test Scripts	24
	Conduct Implementation Testing	72

The task assignment hours for George White for the Maxwell Software Upgrade project is 28 hours, and for Rudy Corp. Implementation is 108 hours. The Project Resources region in the Project Manager Dashboard calculates George White's weekly task assignment hours based on his capacity, 35 hours a week, and the dates of the project tasks and displays whether he is overallocated or underallocated.

Task Exceptions and How to Manage Them

Task exceptions occur when the team member changes the task dates or effort outside the threshold values set during implementation or when the tasks are overdue. The following figure illustrates the life cycle for an exception.



As a project manager, you can view and manage the task exceptions and overdue tasks in your project from the Manage Task Exceptions page. You can:

- View the tasks modified by team members that caused exceptions
- View overdue tasks that caused exceptions
- Accept or decline the proposed changes for individual tasks

Note: The Accept and Decline action icons are enabled only for tasks containing start date delayed, finish date delayed or effort increased exceptions. For the Start date overdue and finish date overdue exceptions, the icons are disabled.

- Preview the impact of accepting exceptions for a single task on the project schedule.
- Preview the total impact of accepting the exceptions for all tasks at once on the project schedule.
- Quickly accept or decline all the exceptions using Accept All or Decline All respectively.
- Filter by exception types or resources.

After accepting the changes, the new task dates or effort appears in the project plan and project manager must schedule the project to view the latest schedule.

Project Management Analysis

How Project Progress is Calculated

Project managers use the Progress infolet from the Project Management Dashboard to compare the target and actual percentage of work completed on the projects they own.



Projects with maximum variance between actual and target percent complete appear topmost. Projects with same variance between actual and target percent complete are sorted in the reverse order of number of exceptions. If no effort is planned for a project, then the infolet displays zero percent complete. As soon as the team members start entering progress for tasks, the actual percent is calculated. From the Progress infolet, you can drill down to the Manage Project Plan and Manage Task Exceptions pages to view the details.

Settings That Affect Project Progress

Values in the Progress infolet are derived from the Manage Project Plan page. The project progress depends on the following values of a project:

- Current date
- Planned start date
- Planned finish date
- Planned effort in hours
- Current effort in hours
- Actual hours

Formulas to Calculate Project Progress

Here are the formulas to calculate the target and actual percent complete of a project:

- target percent complete = $(\text{expected hours} / \text{planned effort in hours}) * 100$
 - expected hours = $(\text{expected duration} * \text{planned effort in hours}) / \text{planned duration}$
 - expected duration = $\text{current date} - \text{planned start date} + 1$
 - planned duration = $\text{planned finish date} - \text{planned start date} + 1$
- actual percent complete = $(\text{actual hours} / \text{current effort in hours}) * 100$

Note: The actual percent complete is the rolled up percent complete of the project.

This table shows the values used to calculate target and actual percent complete for Project 1. Assume the current date is 2-Jun-2017, the calendar is 5 days a week with no holidays, and a workday contains 8 hours.

Name	Planned Effort in Days	Planned Start Date	Planned Finish Date	Planned Effort in Hours	Actual Hours	Remaining Hours	Current Effort in Hours	Expected Hours
Project 1	57	22-May-2017	30-Jun-2017	456	120	336	456	160
Task 1	10	22-May-2017	02-Jun-2017	80	40	40	80	$(10 * 80) / 10 = 80$
Task 2	7	01-Jun-2017	09-Jun-2017	56	16	40	56	$(2 * 56) / 7 = 16$
Task 3	20	05-Jun-2017	30-Jun-2017	160	0	160	160	0
Task 4	20	24-May-2017	20-Jun-2017	160	64	96	160	$(8 * 160) / 20 = 64$

This table shows the values used to calculate target and actual percent complete for Project 2. Assume the current date is 2-Jun-2017, the calendar is 5 days a week with no holidays, and a workday contains 8 hours.

Name	Planned Effort in Days	Planned Start Date	Planned Finish Date	Planned Effort in Hours	Actual Hours	Remaining Hours	Current Effort in Hours	Expected Hours
Project 2	16	29-May-2017	14-Jun-2017	128	48	72	128	48
Task 1	5	29-May-2017	02-Jun-2017	40	40	0	40	$(5 * 40) / 5 = 40$
Task 2	3	02-Jun-2017	06-Jun-2017	24	8	16	24	$(1 * 24) / 3 = 8$
Task 3	8	05-Jun-2017	14-Jun-2017	64	0	64	64	0

The project progress is determined as follows:

- If target percent complete is greater than actual percent complete then your project is behind schedule.
- If target percent complete is less than actual percent complete then your project is ahead of schedule.
- If target percent complete is equal to actual percent complete then your project is on schedule.

This table shows the calculation of target percent complete and actual percent complete for Project 1 and Project 2 and their progress results. For Project 1, the planned and current effort are same. For Project 2, the current effort is less than the planned effort.

Project	Expected Hours	Actual Hours	Target Percent Complete	Actual Percent Complete	Progress
Project 1	160	120	$(160 / 456) * 100 = 35$	$(120 / 456) * 100 = 26$	9 percent behind schedule
Project 2	48	48	$(48 / 128) * 100 = 37.5$	$(48 / 128) * 100 = 37.5$	On schedule

FAQs for Project Management Analysis

What's the difference between target percent complete and actual percent complete?

Percentage of work that your project team is expected to complete as-of a certain date is the target percent complete.

Percentage of work that your team actually completes as-of a certain date is the actual percent complete.

Why can't I view the project amounts graph?

You can only view the data in table mode when projects you manage use multiple currencies.

How can I view a team member's allocation to my projects?

Use the Project Resources region on the Project Manager Dashboard to view the resources allocated to your projects. You can also view the other project allocations of your team members.

What happens if resource rates are missing?

The information that appears on the project allocation and assignment bars is inaccurate. The application does not calculate amounts for tasks that are assigned to resources with no labor cost and bill rates.

You must go to the **Manage Project Resources** page and add cost and bill rates for resources in your project.

Where do the project allocation and task assigned amounts come from?

The application calculates project amounts using cost and bill rates that are assigned to project labor resources and expense amounts that are allocated to expense resources. Rolled up task assigned amounts in the Manage Project Plan page appear in the Project Amounts region.

You can filter the graph to compare allocated and assigned amounts for labor cost, labor bill amount, expense amount, and the total cost.

Why are resources with 40 hours of allocated work shown as overallocated?

The acceptable threshold you set is less than 100 percent. The application indicates overallocated and underallocated resources based on the acceptable threshold range you set. Verify the acceptable threshold range outside which resources are overallocated or underallocated.

FAQs for Agile Graphs

Why did the ideal remaining hours change in the middle of the sprint?

You or your team member modified, added, or deleted task planned hours due to scope changes.

What happens if I capture progress data?

Use the Capture Progress Data action to update the data in the sprint burndown graph. The action captures the latest planned hours and actual hours reported by team members, and calculate the remaining hours.

Project managers use this action to capture critical progress data entered after the scheduled process completes. The graph recalculates the ideal and actual hours remaining. You must refresh the region to see the updates.

Related Topics

- [How Sprint Burndown Is Calculated](#)
- [Examples of Sprint Burndown](#)

When's the Capture Progress Data process triggered?

You can schedule the process to run daily. If a team member wants to report progress after the daily capture is taken, you can also run it from the actions menu in the Sprint Burndown region.

What's sprint velocity?

Rate at which story points are achieved in sprints. Use sprint velocity to predict how many story points you can achieve in coming sprints.

For example, you observe that your product development team can complete on average 20 story points in a sprint. That makes the sprint velocity of your team 20. Assuming that the total backlog story points of your product is 200, you can predict that all product backlog items will be completed in 10 sprints.

Related Topics

- [How Sprint Velocity Is Calculated](#)

Why can't I see certain sprints on the Sprint Velocity graph?

Sprints that don't have any story points associated with them don't appear on the sprint velocity graph. Such sprints are excluded from sprint velocity calculations.

What's a story point?

Indicates the relative size of a user story based on its complexity. Use story points to measure the effort required to implement a story in an Agile development process.

You consider story points to be achieved when backlog items for your product are complete. Story points are assigned using a number series that reflect the relative size of one backlog item as compared to another. Relative sizing and increasing numbers are used to indicate complexity of a backlog item. A commonly used number series in the Agile development process is 0, 1/2, 1, 2, 3, 5, 8, 13, 20, 40, 100. You must assign a lower story point number to a relatively simple backlog item when compared to a complex backlog item. For example, you create two product development backlog items and estimate the number of story points needed to complete each item. The following table shows two product development backlog items and the story points assigned to each backlog item. Backlog Item 1 is simpler and requires only 2 story points, but backlog item 2 is complex and requires 13 story points.

Requirement Number	Requirement Name	Story Points
1	Change default sort order of project list table	2

Requirement Number	Requirement Name	Story Points
2	Create Project Expenses region	13

Backlog items with lower story point numbers assigned are expected to be completed faster than backlog items with greater number of story points.

Related Topics

- [How Sprint Velocity Is Calculated](#)

What's total backlog story point?

The total number of story points that must be completed for the completion of product development.

For example, your product has 10 backlog items. You assign story points to each backlog item based on the complexity. The sum of all the story points on your product backlog gives you the total number of story points that your team must achieve to complete the development of the product.

9 Project Issues

Project Issues

Project issues are used to record and track concerns related to your project work. For example, you can create an issue for incomplete customer requirements data. Each issue can have multiple actions items that must be performed to resolve the issue.

For example, an action item could be to meet the customer and capture missing requirements.

Note: You must be a project enterprise labor resource to create, view, update, or own issues or action items.

Issues can be associated with individual nonsummary tasks as work items and can be used to drive progress by setting task completion event.

Here's a table that describes the attributes that you can enter and update when managing issues.

Attribute	Description
Task	The task linked to this issue. When the issue reaches completion the status of the task changes to Completed. You can create more than one issue for the same task. Only when all issues complete is the task completed.
Type	The classification of the issue. You can use predefined issue types or create custom issue types.
Priority	The priority that indicates the anticipated impact of the issue. Valid values are Low, Medium, and High. The default value is Medium.
Status	The status of the deliverable. Valid statuses are New, In progress, and Closed.
Action Items	The actions items that must be completed to resolve the issue.
Attachment	The file, text, or URL that's associated with a project issue, such as references required for closure. You can create, update, or delete an attachment.

How Project Managers Manage Issues

You can manage:

- Issues in all the projects that you manage
- Issues that you create or own
- Issues on which you have action items

You can manage issues from:

- The **Manage Issues** page in the Project Management work area when working in context of a project. To open the page, open the **Manage Project Plan** page of the project, open the **Actions** panel tab, and then click **Manage Issues**.

Note: This page only displays issues for the specific project.

- The **My Issues** region in the Project Manager dashboard.
- The **My Projects** page displays a count of open issues for each project. Click the number to open the Issues page for the project.

Keep in mind that all the action items of an issue must be completed before the issue is closed.

A project manager can generate a change order from an issue with the Initiate Change Order button.

How Team Members Manage Issues

You can manage:

- Issues that you create or own
- Issues on which you have action items

You can manage issues from:

- The **Manage Issues** page in the My Work work area. To open the page, open **My Work** work area, open the **Actions** panel tab, and then click **Manage Issues**.
- The **My Issues** region in the Team Member dashboard.
- The **My Projects** page displays a count of open issues for each project. Click the number to open the Issues page for the project.

Keep in mind that all the action items of an issue must be completed before the issue is closed.

Related Topics

- [Can I reopen an issue?](#)
- [Generate a Change Order from a Project Issue](#)

Project Issue Notifications

Send notifications when creating, updating, closing, or reopening issues and issue action items.

The aspects of project issue notifications described here are:

- Notification options
- Actions requiring notification

Notification Options

Use the e-mail notification settings that are available on the My Profile region on the Team Member and Project Manager dashboards to determine the notifications you receive. Set notifications separately for projects you work on and projects you manage.

Actions Requiring Notification

The following table lists the recipients of the notifications based on action.

Action	Who Receives the Notification
Creating or updating issues	<ul style="list-style-type: none"> Issue owner Project manager, if the issue is associated with a project Issue creator, if the issue is reassigned Previous owner, if ownership for the issue is changed
Closing issues	<ul style="list-style-type: none"> Issue owner Project manager, if the issue is associated with a project Issue creator, if the issue is reassigned
Reopening issues	<ul style="list-style-type: none"> Issue owner Project manager, if the issue is associated with a project Issue creator, if the issue is reassigned
Creating or updating action items	<ul style="list-style-type: none"> Action item owner Project manager, if the issue is associated with a project
Closing action items	<ul style="list-style-type: none"> Action item owner Issue owner Project manager, if the issue is associated with a project

Note: The project manager receives a daily digest of all the issues for the projects he manages depending on the notification settings.

FAQs for Project Issues

What happens when I filter issues using the Other projects filter on the dashboards?

When you select the Other projects filter on Project Manager Dashboard or Team Member Dashboard, the application displays issues which you own or on which you have action items from projects to which you don't have direct access..

Can I reopen an issue?

Yes. When you reopen an issue by changing the status to New or In Progress, existing issue resolution details are deleted. Optionally, you can enter a reopen summary.

What's the difference between tasks, action items, issues, and deliverables?

Tasks are activities that must be performed to complete a project.

Action items are tasks that must be performed to resolve an issue.

Issues are concerns, problems, or outstanding questions that prevent a user from completing a task.

Deliverables are the output that must be produced to complete a task or project.

What happens when I duplicate an issue?

All issue-related information including action items is duplicated, the status of the issue is set to New, and the status of associated action items is set to Not Started.

Why can't I delete an issue?

You can't delete an issue if its status is In Progress or Closed. You can only delete issues whose status is New.

10 Resource Supply

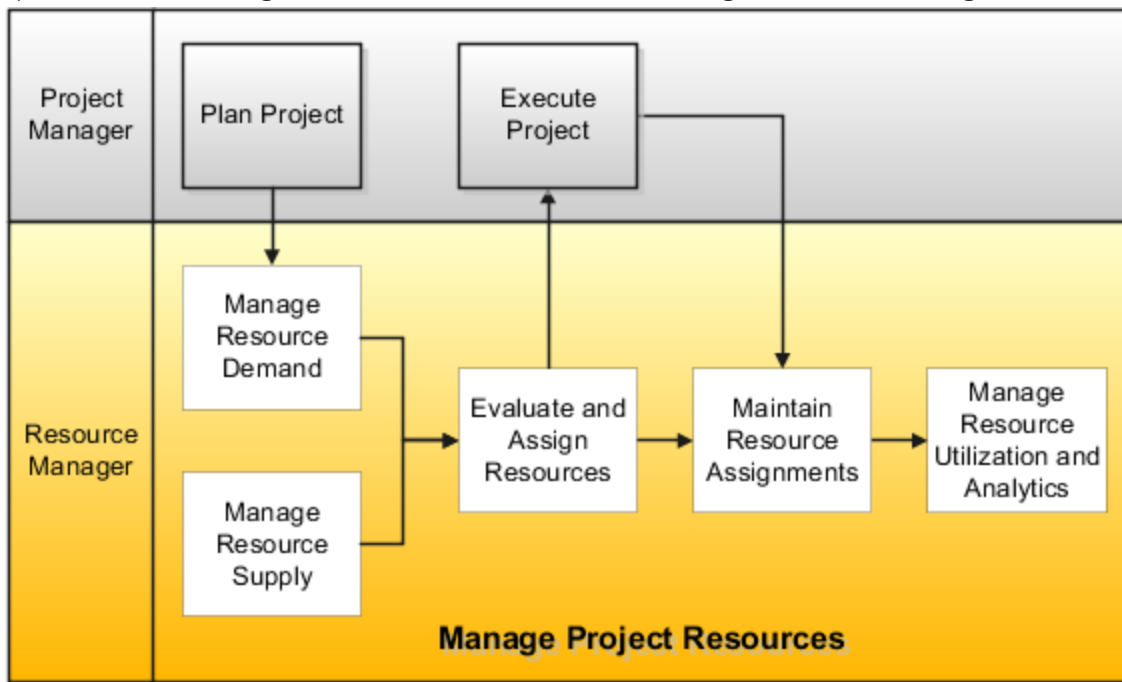
Manage Project Resources Business Process

Resource managers use the Manage Project Resources business process to manage the availability and staffing of project enterprise labor resources in a global environment, fulfill project resource requests, and monitor resource utilization.

The Manage Project Resources business process in Oracle Fusion Project Resource Management is used in conjunction with the Plan Project and Execute Project business processes in Project Management.

The following figure illustrates the flow of business activities for project managers and resource managers in the Manage Project Resources business process.

In this figure, the project manager plans and executes projects. The resource manager manages resource demand and resource supply, evaluates and assigns resources, maintains resource assignments, and manages resource utilization



and analytics

The following table provides a high-level summary of the tasks in each activity in the Manage Project Resources business process.

Activity	Summary of Tasks
Manage Resource Demand	Submit requests for resources to work on project assignments. Specify request details including the requested dates, hours per day, qualifications and proficiency, keywords, and the project role. Enter target cost and bill rates to compare to the rates of resources that you evaluate for a project resource request. Specify a resource for the resource manager to consider for an assignment. Track the dates when a request is submitted, a resource is proposed to fulfill the request, and the resource is approved. Automatically notify the resource manager of open project resource requests. Cancel and withdraw

Activity	Summary of Tasks
	project resource requests. Monitor open project resource requests to ensure that the requests are fulfilled in a timely manner. Create project resource requests from external applications.
Manage Resource Supply	Establish a supply of project enterprise labor resources and manage the availability and staffing of the resources. Maintain key resource information for each resource, including the resource calendar, cost and bill rates, resume, and resource pool membership.
Evaluate and Assign Resources	Receive open project resource requests and find resources to assign to projects. Search for resources from resource pools to fulfill the requests. Evaluate the suitability of resources to fulfill a request based on how each resource meets the requested qualifications and proficiency. Evaluate the available capacity of resources to fulfill a request over the requested date range. Filter the results based on qualifications, available capacity, location, project role, and travel preferences. Compare a selected subset of resources in detail. Review project assignments and nonproject events for resources. Add prospective candidates to a shortlist. Modify search criteria and review results. Propose a resource to fulfill a request and automatically notify the project manager to review the resource for approval. Directly assign a resource to a project without evaluating other resources.
Maintain Resource Assignments	Review assignments for resources and projects. Add descriptive assignment information. Cancel project assignments. Change project assignment dates. Submit project assignment cancellations and date changes for review and approval to the project manager.
Manage Resource Utilization and Analytics	Navigate the resource pool hierarchy to view summarized utilization information by resource pool. Drill down to review detailed utilization information for a resource pool and pool members. Compare projected and target utilization percentages over a selected display range. Analyze the details about resource project assignments and nonproject events. Import resource actual hours and compare actual and target utilization percentages over a selected display range. Track resources who are currently unassigned or have assignments that end soon. Review open project resource requests. Create reports to analyze resource supply, demand, and assignments.

Navigate to the **Project Resources** work area to manage resource supply and demand, evaluate and assign resources, and maintain resource assignments. Navigate to the **Resource Manager Dashboard** to manage resource utilization and analytics.

Project Resource Search Index

The Maintain Project Resource Search Index job set consists of processes that facilitates efficient and rapid searching for qualified resources to fulfill project resource requests.

The process creates indexed resource data for the following resource information:

- Competencies
- Resume text in the latest resume of the resource's profile

Note: The process creates an index of resume text in a File attachment type only. Common resume file types are indexed, such as .doc, .txt, and .pdf.

The application uses the index data for the following:

- When evaluating resources for a project resource request
- To calculate Resource Qualification scores, the application compares the resume text to the keywords entered on the resource request when calculating the Resource Qualification score.
- To display resource details

The application counts indexed text as a keyword if the text starts with the requested keyword. For example, if a requested keyword is `SQL`:

- `SQLPLUS` is a match because it starts with `SQL`
- `PL/SQL` is a match because `PL` and `SQL` are indexed separately
- `MySQL` isn't a match because it doesn't start with `SQL`

Note: If a project resource request contains qualifications or keywords, then resource managers can't search for resources or view resource details if the search index isn't available. The search index isn't available if the Maintain Project Resource Search Index process fails, or when the process is running. The search doesn't return more 99999 resources

However, if a project resource request doesn't contain qualifications or keywords, then the resource manager can search for and evaluate resources to fulfill the request based on resource availability, even if the search index isn't current or available.

How the Project Resource Search Index Is Maintained

Here's how you can maintain the project resource index:

- You can run or schedule the **Maintain Project Resource Search Index** job set on the Scheduled Processes page.
- If you have already scheduled **Maintain Project Enterprise Labor Resources** job, then the Maintain Project Resource Search Index job set starts automatically as part of this job.

Run the Maintain Project Resource Search Index job set often enough to account for the following changes:

- Changes in resumes, qualifications, and proficiency for a managed project enterprise labor resource.
- New or terminated resources.

For example, assume that you require resources to update their qualifications when they complete a project, and the average project duration is two weeks. You can schedule the Maintain Project Resource Search Index job set to run once every two weeks to update the index with the latest resource qualification changes.

Related Topics

- [How Resource Qualification Score Is Calculated](#)

FAQs for Resource Supply

What happens if project resource request dates are outside the resource calendar effective dates?

The application can't calculate a resource's available capacity if the project resource request dates are outside of the resource calendar effective dates. The resource will have no Available Capacity score.

Can I change the default value for the resource calendar that appears when I create a project enterprise labor resource?

Yes. On the Define Project Management Implementation Options page, you select a default resource calendar that the application automatically assigns to new project enterprise labor resources.

If the default resource calendar does not meet the requirements for a specific project enterprise labor resource, then you can assign a different calendar to the resource.

Who can be a member of a resource pool?

Project enterprise labor resources whose availability and staffing are managed in Project Resource Management are eligible for resource pool memberships.

If a resource becomes ineligible for staffing, then the application:

- Sets the end date of the resource's current pool membership as of the day the resource becomes ineligible for staffing.
- Sets the start date as of the following day for the resource's membership in the Inactive Resource Pool Memberships pool.

How can I update my profile photo?

Team members can click Edit My Profile in the My Profile region on the Team Member Dashboard. Then click the current profile photo to open the Upload Photo window and browse for a new photo.

Project application administrators can update any profile photo when they create or edit a labor resource on the Manage Project Enterprise Resources page.

How can I attach a resume to my resource profile?

Team members can click Edit My Profile in the My Profile region on the Team Member Dashboard. Then click the Manage Attachments icon to open the Attachments window to add or update a resume.

Project application administrators can add a resume when they create or edit a labor resource on the Manage Project Enterprise Resources page.

How can I enable a project enterprise resource for availability and staffing?

A project enterprise labor resource is a resource that you can assign to multiple projects. A managed project enterprise labor resource is a project enterprise labor resource whose availability and staffing are managed in Oracle Fusion Project Resource Management. You use managed project enterprise labor resources to fulfill project resource requests and directly assign to one or more projects.

How can I edit the default billable percent reason?

Go to the Manage Standard Lookups task in the Setup and Maintenance work area. Then find the ORA_PJR_BILLABLE_PERCNT_REASON lookup type, and add or edit the lookup codes as required.

11 Resource Demand

Import Project Resource Requests Process

The Import Project Resource Requests process creates project resource requests based on data from third-party applications that you load into the Project Resource Requests Interface tables (PJR_RES_REQ_INTERFACE and PJR_RES_REQ_DETAILS_INTERFACE).

Once in the interface tables, the request details are validated and processed by the Import Project Resource Requests process and any exceptions are reported in the output of that process.

Use the Project Resource Request Interface macro-enabled Excel workbook template to prepare data for loading and importing, and ensure that your data conforms to the structure and format of the target application database tables. The workbook contains the following worksheets:

- **Instructions and CSV Generation:** Table-specific instructions, guidelines, formatted spreadsheets, and recommendations for preparing the data file for upload.
- **PJR_RES_REQ_INTERFACE:** Worksheet columns that represent table fields for requested dates, project, calendar, project role, and rates, details about the resource, requester, and staffing owner, and additional remarks.
- **PJR_RES_REQ_DETAILS_INTERFACE:** Worksheet columns that represent table fields for project resource request qualification and proficiency data.

Note: The qualifications and proficiency can be in addition to, or instead of, the project role default qualifications.

After you prepare the data in the Project Resource Request Interface Excel template, click the **Generate CSV File** button in the template to create worksheets to load to the interface tables. Optionally you can bypass the Excel template and manually create CSV files.

Load data into the interface tables and application database tables using one of these two methods:

- Run the Load Interface File and Import Project Resource Requests job set to transfer the data file from your specified location to the interface table and import resource request data from the interface into the database tables.
- Run the Load Interface File for Import process followed by the Import Project Resource Requests process to separate the load and import steps.

For more information about file-based data import, see the File Based Data Import for Oracle Project Portfolio Management Cloud guide.

Run the load and import processes from the Scheduled Processes Overview page.

Parameters - Load Interface File for Import

Import Process

Select Import Project Resource Requests.

Data File

Select the file that contains project resource request data to load.

Parameters - Import Project Resource Requests Process

Project Resource Requests to Import

Specify whether the import process imports all requests, requests with projects, or requests without projects. The default value is All Requests.

Project

Select the project for which a resource is requested.

Request Staffing Owner

Select the project enterprise labor resource responsible for finding a resource to fulfill the request.

Import Project Resource Requests Execution Report

The Import Project Resource Requests Execution report summarizes the number of processed, accepted, and rejected items encountered when you imported the project resource requests. The report contains details for all requests that generated errors during the import process.

Review the error message details for each project resource request and fix the issues. Load the data that you fixed in the CSV file into the interface table again and resubmit the Import Project Resource Requests process.

Related Topics

- [Overview of External Data Integration Services for Importing Data](#)

FAQs for Resource Demand

Can a project manager specify a resource for a project resource request?

Yes. You can specify a resource for consideration by the resource manager when you create a project resource request on the Manage Project Resources page or Manage Project Resource Requests page.

Can I withdraw a project resource request to submit at a later date?

A project manager can withdraw project resource requests that are in Open status. When you withdraw a request, the application changes the request status to Draft. You can enter comments about the withdrawal in the Special Instructions field on the project resource request.

Project resource requests that you withdraw aren't included in projected utilization calculations.

Are project resource request dates affected if I change the project on a request?

No. When you change the project on an open project resource request, the application doesn't automatically update the request start and finish dates. You can adjust the request dates to match the new project dates.

What happens if I cancel a project resource request?

When a project manager or resource manager cancels a project resource request, the application:

- Prompts for a cancellation reason
- Records the user name with the cancellation date and reason
- Changes the request status to Canceled
- Retains the request for viewing

If you select more than one project resource request to cancel, the cancellation applies to all selected requests. You can't reopen a canceled request.

What happens if I duplicate a project resource request?

The application copies the source project resource request information to a new request, except for the following attributes:

- Request name
- Assigned or named resource
- Resources on the shortlist
- Staffing remarks
- Attachments
- Additional information

The status of the new request is **Draft**.

When are project resource requests that project managers create visible to resource managers?

A project manager must submit a project resource request for the request to be visible in the Project Resources work area. Requests that you create in the Project Management work area that are in Draft status aren't visible in the Project Resources work area.

Can I edit, cancel, or withdraw a resource request that I created for a planned resource?

Yes. Click View Resource Request Details on the Manage Project Resources page to open the request, or select the request from the Manage Project Resource Requests page.

However, an error occurs if you already assigned a few resources, and then try to change the requested quantity to lesser than the assigned quantity. Also, you can't cancel or withdraw a request, if it has resources proposed, nominated, or assigned already.

What happens to a resource on a task if I replace the resource on the project with a different resource?

If the existing resource has only one assignment for the project on the Manage Project Resources page, then the new assigned resource replaces the existing resource on all task assignments for the project.

If the existing resource has multiple assignments on a project, and on one of the assignments the resource is replaced by a different resource, then the new resource doesn't replace the existing resource on any tasks.

What happens if a resource is no longer eligible to fulfill project resource requests?

Resource pool owners receive a notification when resources in their pools are no longer eligible to fulfill project resource requests. The pool owner, who is typically the resource manager, may need to take further action after reviewing the notification.

For example, if a resource is currently on a project assignment, but is no longer eligible for future assignments, then the resource manager may need to adjust the finish date of the resource's current assignment. The resource may agree to complete the assignment as scheduled, or the assignment might end immediately if the resource left the company. The resource manager and project manager typically work together in these circumstances to determine the best course of action for the duration of the assignment.

What happens if I request a resource on a project that doesn't have a staffing owner?

The staffing owner on the project resource request will be automatically updated to the resource pool owner that the requested resource belongs to. You can change the staffing owner at any time.

Why can't I approve an adjustment for a project resource request?

If your resource pools are secured, then you can only approve resource request adjustments for resources who are in the resource pools that you manage.

12 Resource Evaluation

Prerequisites for Searching for Suitable Resources

The application uses the following objects to evaluate the suitability of resources to fulfill project resource requests:

- Project and Resource Calendars
- Managed Project Enterprise Labor Resources
- Resource Qualifications
- Resource Pool Memberships
- Resource Search Index

Project and Resource Calendars

The application uses the project calendar and resource calendar to calculate the available capacity of a resource for a new project assignment.

Administrators can set up calendars that include:

- Project shifts
- Workday patterns
- Schedules
- Schedule exceptions

Alternatively, the application provides a predefined calendar with eight hours per day and five days per week with no holidays.

The application uses project calendars to determine:

- Standard working days
- Total number of working hours per day
- Schedule exceptions

The application uses resource calendars to determine the number of available working hours, after assignments and nonproject events.

Managed Project Enterprise Labor Resources

Only active managed project enterprise labor resources are eligible to fulfill project resource requests. To create a managed project enterprise labor resource, administrators enable the option to manage the resource's availability and staffing in Oracle Fusion Project Resource Management. Administrators can create resources individually on the Manage Project Enterprise Resources page or in a batch by using an import or maintenance process or service.

Resource Qualifications

One measure of a resource's suitability for a project assignment is whether the resource has the qualifications and proficiency levels that are specified on a project resource request. Administrators set up content library (including the content template, content sections, and item catalogs), profiles and profile types, content subscribers, and rating models using the Enhanced Talent Profile in HCM. Then the content items in the content sections for each content template (such as Competency, Education, Honor, Language, Certification, and Membership) is available for use in Resource Management. You can search and evaluate a resource using these content sections and the resource's proficiency and competency in each section.

A project manager, when raising a project resource request, can mark a required qualification as mandatory. Resource manager can then search for resources using the mandatory requirements. However, a resource manager can override the mandatory qualification or still nominate resources that don't have the mandatory qualifications. Also, the total qualification score isn't impacted by whether a qualification is mandatory or not.

Note: For more information on Enhanced Talent Management, see the Using Enhanced Talent Profiles guide in HCM.

Resource Pool Memberships

All managed project enterprise labor resources are members of a resource pool. Resource managers select one or more resource pools to focus a search for resources to fulfill a project resource request. Administrators set up resource pools based on logical groups of resources, such as by location, operation, or functional area.

The predefined resource pools are:

- **All Resources:** Contains all resource pools and resources.
- **Resources with No Pool Membership:** Contains resources that don't belong to a resource pool.
- **Inactive Resource Pool Memberships:** Contains time periods for schedulable resources when a resource isn't available for staffing.

Resource Search Index

The Maintain Project Resource Search Index job set maintains these search index objects:

- Project resource qualifications
- Qualification proficiency
- Resume content
- Search filters

The application uses the index to calculate qualification scores and filter counts during the search for resources, and to display resource details.

Administrators must run the Maintain Project Resource Search Index job set often enough to account for:

- Changes in resource qualifications, proficiency, and resumes
- Changes in a resource's eligibility to fulfill project resource requests
- New or terminated resources

Tip: If a project resource request doesn't contain qualifications or keywords, then resource managers can search for and evaluate resources to fulfill the request based on resource availability, even if the search index isn't current or available.

Related Topics

- [How Resource Available Capacity Score Is Calculated](#)
- [How Resource Qualification Score Is Calculated](#)
- [Project Resource Search Index](#)
- [Calendars](#)

Resource Schedule

Oracle Fusion Project Resource Management provides a schedule to manage the project and nonproject commitments for each managed project enterprise labor resource. Project assignments are added to the schedule when a resource is assigned to a project in a Confirmed or Reserved status.

Nonproject events are added to the schedule when you create training, paid time off, or other team member events in Project Management.

The resource schedule contains:

- Confirmed and reserved resource assignments
- Nonproject events such as training, paid time off, and other team member events

Resource managers use the resource schedule to determine if the resource has scheduling conflicts during the date range of a project resource request. The resource schedule is used to determine the available capacity score when you search and evaluate resources to fulfill project resource requests.

You can view the resource schedule on these pages:

- Search and Evaluate Resources page, Available Capacity view
- Search and Evaluate Resources page, Top Resources view
- Compare Resources page, Resource Schedule section
- Resource Details page, Resource Schedule section

You can adjust the calendar time scale and scroll to 1 month prior to the requested start date and 3 months after the requested finish date. This helps you determine whether a resource is available in the expanded time frame.

Weeks in the resource schedule begin on Sunday and end on Saturday.

Resource Card

Another view of a resource's schedule is on the resource card. The resource card shows a resource's weekly available capacity for 5 weeks beginning with the first week of a project resource request. Weekly available capacity is the total number of hours that the resource is available for the week divided by the number of hours requested for that week.

The weekly available capacity is color-coded on the resource card as follows:

- Green indicates that the resource has a total available capacity for 80% or more for the week.

- Yellow indicates that the resource is available between 50% and 79% of the week.
- Red indicates that the resource is available less than 50% of the week.

You can view the resource card on the Search and Evaluate Resources page, Resource Cards view.

Project Resource Request Statuses

Statuses track the lifecycle of a project resource request and restrict available actions.

The project resource request type determines the available statuses for a request. The project resource request types are:

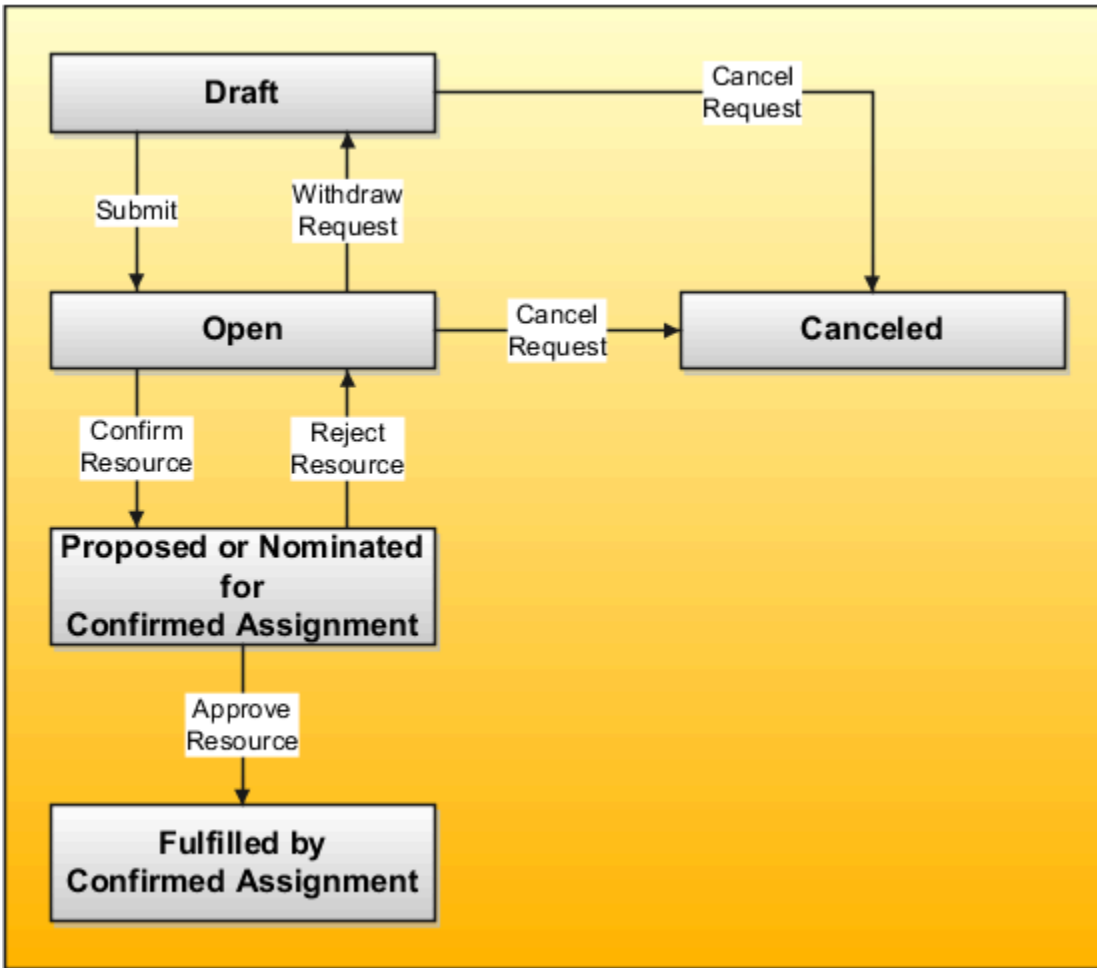
- New Resource
- Assignment Schedule Change
- Assignment Cancellation

New Resource

The following figure shows an example flow of a project resource request status progress for a confirmed assignment of a New Resource request type.

In this figure, a resource request begins in Draft status. If you cancel the request, the status changes to Canceled and there are no further actions. If you submit the request, the status changes to Open. You can either confirm the resource, withdraw the request, or cancel the request. If you withdraw the request, the status changes to Draft. If you cancel the request, the status changes to Canceled. If you propose a resource for a confirmed assignment status, the status changes to Proposed for Confirmed Assignment. You can take one of the following actions when the request is in Proposed for Confirmed Assignment status: Approve resource. The request status will change

to Fulfilled by Confirmed Assignment, and there is no further action. Reject resource. The status returns to Open.



This table describes the statuses for a project resource request with a **New Resource** request type, and lists the permitted actions for each status.

Request Status	Description	Available Actions
Draft	The request status is Draft when a requester: <ul style="list-style-type: none"> Creates a project resource request with an initial status of Draft Withdraws the request 	<ul style="list-style-type: none"> Edit request Submit request Duplicate request Delete request Cancel request
Open	The request status is Open when a requester: <ul style="list-style-type: none"> Submits the request for fulfillment Rejects all proposed resources for the request, and no resources are assigned An Open status indicates that the request is ready for the resource manager to search and evaluate resources to fulfill the request.	<ul style="list-style-type: none"> Edit request Request a specific resource Search and evaluate resources Propose resource for a confirmed or reserved assignment Submit and approve resources for a confirmed or reserved assignment, the

Request Status	Description	Available Actions
		<p>number of resources can't be greater than the remaining quantity. Resource managers must have the Approve Project Resource for Project Assignment privilege to perform this action.</p> <ul style="list-style-type: none"> • Delete request • Cancel request • Withdraw request • Duplicate request
Proposed for Confirmed Assignment, Proposed for Reserved Assignment	The request status is either Proposed for Confirmed Assignment or Proposed for Reserved Assignment when the resource manager submits one or more resources for approval to fulfill a request for one resource.	<ul style="list-style-type: none"> • Approve resource • Reject resource • Duplicate request
Nominated for Assignment:	The request status is Nominated for Assignment when the resource manager submits one or more resources to the project manager for evaluation to fulfill a request for a single resource.	<ul style="list-style-type: none"> • Evaluate resource • Submit for approval to the resource manager
In Process for Multiple Resources	The request status is In Process by Multiple Resources when resources are proposed or approved to fulfill the request, but an outstanding quantity remains of resources that are requested and unfulfilled.	<ul style="list-style-type: none"> • Edit request • Search and evaluate resources • Review resources for request • Propose resource for a confirmed or reserved assignment if there is still remaining quantity to be fulfilled on the request • Submit and approve a resource for a confirmed or reserved assignment if there is still remaining quantity to be fulfilled on the request. Resource managers must have the Approve Project Resource for Project Assignment privilege to perform this action. • Duplicate request
Fulfilled by Multiple Resources	<p>The request status is Fulfilled by Multiple Resources when:</p> <ul style="list-style-type: none"> • The project manager approves all resources for the assignments for this request • The resource manager submits and approves all resources for the assignments for this request 	<p>The actions for a project manager are:</p> <ul style="list-style-type: none"> • Duplicate request • Review resources for request <p>The action for a resource manager is:</p> <ul style="list-style-type: none"> • Review resources for request
Fulfilled by Confirmed Assignment, Fulfilled by Reserved Assignment	The request status is either Fulfilled by Confirmed Assignment or Fulfilled by Reserved Assignment when:	Duplicate request

Request Status	Description	Available Actions
	<ul style="list-style-type: none"> The project manager approves a resource for the assignment The resource manager submits and approves a resource for the assignment The resource manager approves a nominated resource that the project manager has evaluated and finalized. 	
Replace Resource	The resource request status is Replace Resource when the project manager submits a resource request for resource replacement to the resource manager.	The action for a resource manager is: <ul style="list-style-type: none"> Review resources for request
Canceled	The request status is Canceled when the project manager or resource manager cancels the request.	<ul style="list-style-type: none"> Duplicate request Delete request

Assignment Schedule Change or Assignment Cancellation

When you initiate an assignment schedule change or cancellation, the application creates a project resource request to track the change.

The following table describes the statuses for a project resource request with a request type of either **Assignment Schedule Change** or **Assignment Cancellation**, and lists the permitted actions for each status.

Request Status	Description	Available Actions
Pending Adjustment	The request status is Pending Adjustment when: <ul style="list-style-type: none"> The resource manager initiates an assignment schedule change or cancellation in Oracle Fusion Project Resource Management The project manager initiates an assignment date change in Project Management 	<ul style="list-style-type: none"> Approve adjustment Reject adjustment Edit adjustment comments <p>Note: The action to cancel an adjustment is on the assignment.</p>
Approved Adjustment	The request status is Approved Adjustment when: <ul style="list-style-type: none"> The project manager approves a request that's in a Pending Adjustment status The project manager initiates the assignment cancellation in Project Management The resource manager approves an assignment schedule change that a project manager initiated 	None
Canceled Adjustment	The request status is Canceled Adjustment when the project manager or resource manager cancels the assignment adjustment.	None

Request Status	Description	Available Actions
Rejected Adjustment	The request status is Rejected Adjustment when the project manager or resource manager rejects the assignment adjustment.	None

You can't delete, duplicate, or cancel project resource requests with a request type of **Assignment Schedule Change** or **Assignment Cancellation**.

Workflow Notifications in Project Resource Management

Send notifications when you submit project resource requests, propose, approve, or adjust resource assignments, or change resource staffing options.

The aspects of resource management notifications include:

- Actions that trigger notifications
- Notification settings
- Workflow notification example

Actions That Trigger Notifications

The following table lists the actions that trigger notifications, the notification recipient, and the next step for the recipient.

Action Performed By	Action	Recipient	Required Action for Recipient
Project resource requester	Submit project resource request for fulfillment Approve or reject proposed resource for assignment Submit assignment schedule change Cancel assignment	Staffing owner and other recipients specified in the workflow configuration	Information only Approve or reject assignment schedule change (for submitted assignment schedule changes)
Project resource requester	Approve resource for assignment Adjust assignment schedule or cancel assignment	Resource	Information only
Staffing owner	Propose resource to fulfill assignment	Project resource requester and other recipients specified in the workflow configuration	Approve or reject the proposed resource, assignment schedule

Action Performed By	Action	Recipient	Required Action for Recipient
	Submit assignment schedule change Submit assignment cancellation		change, and assignment cancellation
Administrator Maintain Project Enterprise Labor Resource process	Deselect the Manage Resource Availability and Staffing option in the resource definition	Resource pool owner Project managers for projects where the resource is a team member	Information only
Administrator Maintain Project Enterprise Labor Resource process	Enter a To Date in the resource definition to set a date when the resource is no longer available for staffing	Project managers for projects where the resource is a team member	Information only
Staffing owner	Submit and approve project resource assignment	Project resource requester	Information only
Staffing owner	Submit assignment adjustment or cancellation	Project resource requester	Approve or reject the assignment adjustment or cancellation

Notification Settings

Enable notifications by selecting the following options on the Manage Project Resource Management Implementation Options page:

- Notify staffing owner when a project resource request is submitted
- Notify requester when a resource is proposed to fulfill a project resource request

Tip: If you don't enable this workflow implementation option, the requester can still approve or reject the resource on the project resource request.

- Notify resource when a project resource assignment is created or adjusted

Workflow notifications are automatically enabled to notify a resource pool owner and project managers when a resource is no longer eligible to fulfill project resource requests. No implementation setup is required for this type of workflow.

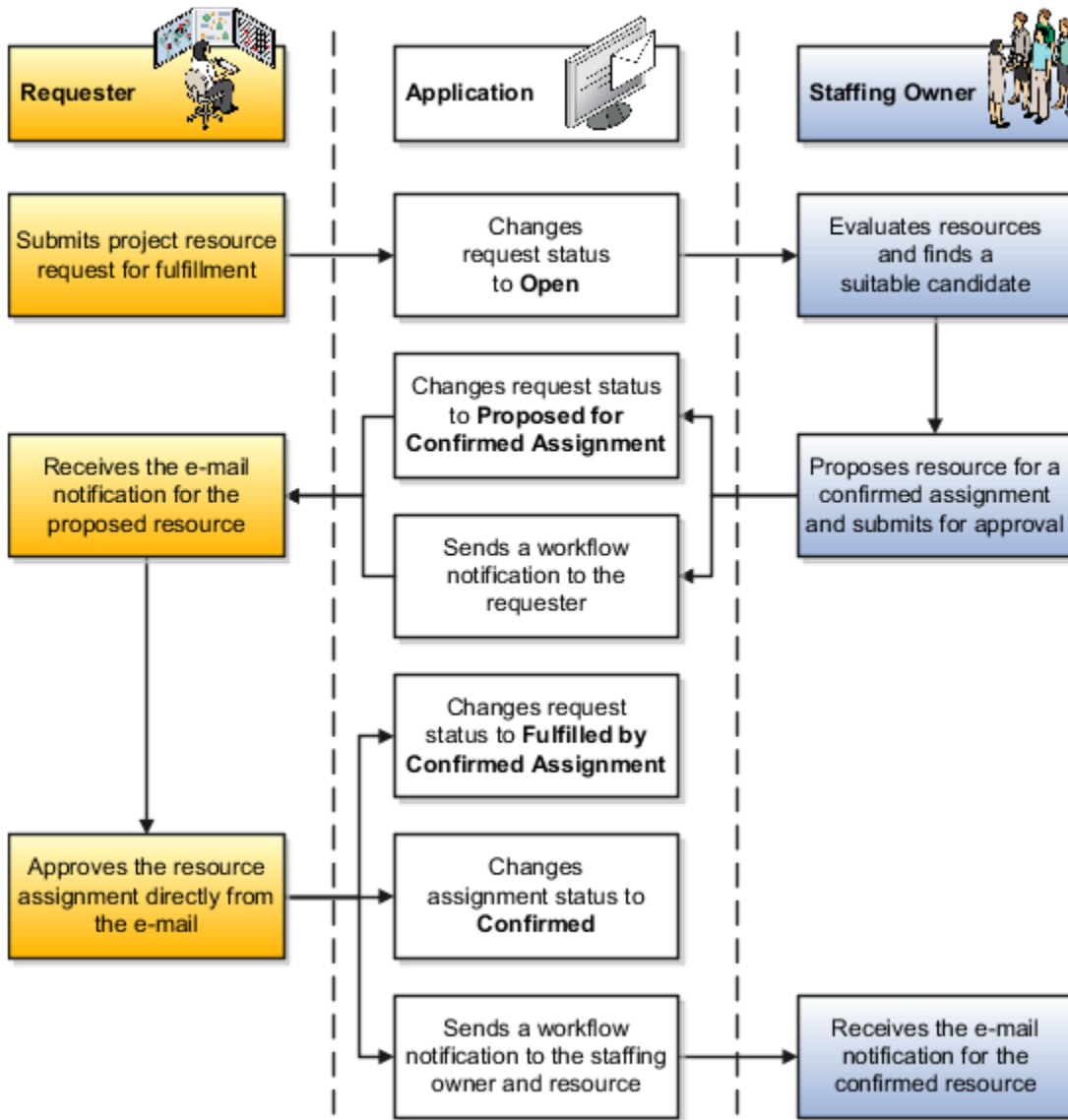
Workflow Notification Example

This example describes a project resource request flow that uses workflow notifications. The example describes the activities of a requester, the application, and a staffing owner, and the associated workflow notifications.

In the following figure: A project manager submits a request for a new project resource. The resource manager searches for qualified, available candidates and finds a resource that's a good match for the project. The resource manager proposes the resource for a confirmed assignment and submits the request for the project manager to approve the proposed resource. The project manager receives an email notification requesting approval of the resource, and approves the resource. This action fulfills the project resource request, confirms the resource on a project assignment,

and launches an email notification to inform the resource and resource manager that the resource is approved.

Example Project Resource Request Flow with Workflow



Considerations for Nominating Resources on a Resource Request

As a resource manager, you can nominate one or more resources for a project resource request and submit them to the project manager for evaluation or directly approve when nominating the resources. The project manager reviews the nominated resources and can communicate to you

The project manager reviews the nominated resources and can communicate to you by updating the resource status on the request. You can also update the status of the resource or withdraw the nominated resources. Once the resource

is finalized, the project manager can approve (depending on the settings) or sends the request back to you for the final assignment as a Confirmed or a Reserved resource.

As a resource manager, consider the following:

- You can continue to nominate more resources on an unfulfilled request after you have nominated a few.
- You can nominate the previously rejected or withdrawn resources again to the same request.
- You can update the assignment status or roles for the nominated resources.
- You can nominate and approve resources if the number of resources nominated is less than or equal to the remaining quantity on the request.
- If you update the requested quantity from multiple to one on an existing request where already one resource was assigned, the status of the request is fulfilled.
- If the project manager rejects all the resources, and there are no more resources in Nominated status or there are no confirmed or reserved resources on this request, the assignment status moves to Open.
- An application administrator can configure the set up so that both project and resource managers can approve the resources on a request.
- An application administrator can create custom status that the project manager and the resource manager can use to create, communicate, and track the status of the nominated resource.

Let's take a look at the workflow for nominating a resource from resource being nominated to a nominated resource being approved or rejected.

Directly Nominate Resources to Request

If you already know the specific resources you want to nominate, then you can select the Nominate Resources action on the Edit Project Resource Request page or Manage Resource Request page, and select the resources.

Evaluate Resources and Nominate

If you don't know the specific resources you want to nominate, then you can search for the resources you want to nominate. Select the Evaluate Resources action on Edit Project Resource Request page or Manage Project Resource Requests page, select Nominate, and select the resources.

Update Status of the Resource

You or the project manager can update the resource status for nominated resources to communicate where resources are in the evaluation cycle for the request on the Manage Resources for Request page.

Withdraw Resource

You can withdraw a resource that you nominated on a request on the Manage Resources for Request page. You can't withdraw a resource that's in Requested or Rejected status.

Request Fulfillment

When the project manager has finalized the nominated resource to assign, if your set up allows the project manager to approve the resources, project manager can approve the resource for assignment. If not, then the project manager must request you for resource assignment. You can then approve the resource requested by project manager to fulfill the request.

If you reject the requested resource, the project manager can select another nominated resource if the request quantity is more than one and the status is In Process for Multiple Resources. If there are other resources still nominated, the request status remains Nominated. If all other nominated resources are Rejected or Withdrawn, the request status changes to Open.

After the request is fulfilled, the application changes the remaining nominated resources to the Rejected status.

Related Topics

- [Prerequisites for Searching for Suitable Resources](#)
- [Project Resource Request Statuses](#)

Cost and Bill Rates for a Project Enterprise Labor Resource

During the search and evaluation of resources to fulfill a project resource request, a resource manager can view resource cost and bill rates and select a resource that meets the financial requirements of a project.

Project assignment rates provide the data to calculate labor resource cost and bill amounts for analyzing margins and revenue forecasts. Resource and project managers can adjust the rates on project assignments to provide the most current reporting information.

Aspects of project enterprise labor resource cost and bill rates include:

- Defining resource rates
- Comparing rates when evaluating resources
- Populating project assignment cost and bill rates
- Adjusting project assignment rates
- Calculating project labor cost and bill amounts

Defining Resource Rates

Project application administrators can define cost and bill rates for a resource in the **Manage Project Enterprise Resources page > Create Project Enterprise Resource window**. Administrators can also define rates when importing resources from external sources such as third-party applications.

For financially-enabled projects, Project application administrators can setup cost rate schedules or define project overrides and bill rates at the contract-level.

Resource rates are optional.

The resource rate types are:

- **Cost Rate:** The rate for a unit of work that determines the cost for a resource on a project.
- **Bill Rate:** The rate for a unit of work that determines the invoice or revenue recognized amount for a resource on a project.

Units of work are stated in hours.

Comparing Rates when Evaluating Resources

A project resource request can contain the following resource rates:

- **Target cost and bill rates:** Project managers can specify target cost and bill rates on a project resource request. Rates are optional on the request.
- **Resource cost and bill rates:** When you specify a resource for a request, the application copies the resource's cost and bill rates to the request.

When a resource manager searches for resources to fulfill a request, the resource's cost and bill rates appear on the Search and Evaluate Resources page for all resources in the search results. The resource manager uses the Compare Resources page to compare the target rates to the rates for selected resources.

Tip: Project and resource managers can also view the resource rates on the Resource Details page. This is especially useful if the resource manager doesn't perform a search for resources, but instead is considering only one resource to fulfill a request.

Populating Project Assignment Cost and Bill Rates

Assignment rate currency is based on the project currency. The application doesn't copy rates from the resource or project resource request to the assignment if the rate currency is different than the project currency. If rates aren't specified for the resource or project resource request, or if all available rates are in a currency other than the project currency, then the assignment is created without bill or cost rates.

The following table describes the methods of populating cost and bill rates on project assignments.

Method of Creating Assignment	Method of Populating Assignment Cost Rate	Method of Populating Assignment Bill Rate
Resource fulfills a project resource request	Assignment uses the resource cost rate	<ul style="list-style-type: none"> • Assignment uses the target bill rate from the project resource request • If a target bill rate isn't specified on the request, then the assignment uses the resource bill rate
Resource is assigned directly to a project	Assignment uses the resource cost rate	Assignment uses the resource bill rate

Adjusting Project Assignment Rates

Project managers can adjust resource rates on the Manage Project Resources page for resources who are directly assigned to the project. Project managers can adjust the rates for any project resource on the Edit Project Resource Assignment page. Rate changes that you make in Project Management for confirmed resources are reflected on the assignment in Oracle Fusion Project Resource Management.

Resource managers can adjust resource rates on the Edit Project Resource Assignment page. Rate changes are reflected on the assignment in Project Management.

You can't adjust the assignment rate currency.

Adjusted rates are reflected in the labor cost and bill amounts on the resource's tasks.

Note: Cost and bill rate changes on the project or assignment don't affect the resource's cost and bill rates on the Manage Project Enterprise Resources page.

For financially-enabled projects, any manual updates to resource rates won't be considered when managing financial aspects of the project, such as financial plans, budgets, and forecasts. If the project manager selects the Refresh Rates action on the Manage Project Resources page, it replaces the manual updates with the default standard rates from the rate schedules or overrides from the project settings.

Calculating Project Labor Cost and Bill Amounts

To calculate the cost or bill amount of project labor resources, the application multiplies each resource's labor effort in hours by the resource's cost or bill rate.

FAQs for Resource Evaluation and Assignments

Can a resource manager approve a resource assignment to fulfill a project resource request?

Yes.

Resource managers with the Approve Project Resource for Project Assignment privilege can approve a resource assignment for proposed resources using the Submit and Approve button on the Propose Resources for Request page or the nominated resource that the project manager evaluated and requested for approval. You can't submit and approve resources if you selected multiple resources and the number of resources selected exceeds the remaining quantity or you nominated one or more resources to a resource request.

Can I change the search criteria on a project resource request while reviewing search results?

Yes. You can temporarily change the start and end dates, qualifications, keywords, and proficiency while you are searching for resources to fulfill a project resource request.

Changes that you make to the requested criteria on the Search and Evaluate Resources page are not saved to the project resource request. The changed criteria reverts to the original search criteria when you click the **Reset** button on the Search and Evaluate Resources page or leave the page to return to the request.

How can I filter by resource travel preferences when searching for resources?

You can filter resource search results on the Search and Evaluate Resources page to find resources who are available to travel domestically or internationally.

The **Travel Domestically** and **Travel Internationally** filter options apply to resources who select travel preferences in the Work Requirements area of their profile in Oracle Fusion HCM.

To focus your search on resources who don't select travel preferences in their profile or who aren't in HCM, select the **Unspecified** filter option.

Clear the options to disregard travel preferences when viewing to search results.

Can I search for qualified resources without a project?

Yes. You can submit a project resource request and evaluate resources against requested qualifications and keywords before you associate the request with a project.

You can add a project to the request at any time, or associate a project with the assignment when you fulfill the request.

However, the application doesn't calculate available capacity scores for a project resource request without a project.

Why can't I view project management or resource management pages?

You can view project management or resource management pages only if you're a project enterprise labor resource with an active user account.

In addition, you must have a job or abstract role with the security privilege to access specific pages in Project Execution Management applications.

For more information, refer to the Securing Project Execution Management Applications section of the Overview of Project Portfolio Management Security topic.

Related Topics

- [Overview of Project Management Security](#)

Why can't I perform certain actions on the Manage Project Resources page?

As a Project Manager, you expect to be able to perform certain actions, such as creating resource requests, but those might not be available on some of your projects.

This is because you have a role with limited privileges, restricting what you can do on the Manage Project Resources page. Because you can be assigned different roles on different projects, your privileges may vary across projects.

Project application administrators can create restricted project manager roles after they enable the Define Project Roles with Limited Actions for Managing Resources on a Project feature.

Related Topics

- [Project Roles with Limited Actions for Managing Resources on a Project](#)

When should I select the billable percent reason?

When you create a resource request for a billable assignment in the Manage Project Resource Requests or the Edit Project Resource Request pages, and if you have assigned the billable percent for this planned resource as less than 100%, you can also select a reason for the percentage specified. Suppose you have a junior resource who's still learning, you might want to assign only 40% of the resource's time to the request and select the reason that the resource is a shadow resource.

Can I add a resource with a specific role to a task?

Yes. The bill rate, cost rate, and allocation specified for that resource for the specific role in Manage Project Resources page will be used.

Can I assign variable hours to a resource?

You can request for or assign resources to a project assignment with a variable hours weekly pattern on some or all days.

For example, within a single assignment, a System Administrator may need to work Mondays and Tuesdays for 8 hours each day, Thursdays and Fridays for 4 hours each day and not work any hours on Wednesdays. So, you can assign accordingly.

Review Resource Suitability for Position

How Resource Available Capacity Score Is Calculated

The Resource Available Capacity score is a measure of a resource's suitability to fulfill a project resource request. The score is the percentage of time that a resource is available to work on a project assignment during the requested time period.

Calendars Used to Calculate Resource Available Capacity Scores

The application uses the resource calendar, and either the project calendar or the hours per day specified on the project resource request, to calculate the available capacity of a resource for a new project assignment. On the project resource request you can select the project calendar to determine the requested hours per day, or specify the number of hours

per day if they're different from the project calendar. The resource calendar determines the hours that a resource is available to work each day.

The resource calendar is a schedule of a resource's daily working hours. The number of hours that a resource is available to fulfill a project resource request is the working hours for the day minus the number of hours that the resource is committed to project assignments and nonproject events for that day. Examples of nonproject events are paid time off and training.

Available capacity is calculated only for active project and resource calendars with a schedule type of Elapsed, one workday pattern for 7 days, and one project shift. Alternatively, a predefined standard calendar is available for use as a resource or project calendar.

Note:

- The available capacity calculation considers schedule exceptions only from the project calendar.
- The effective dates of the project and resource calendars must span the date range of the project resource request for the application to calculate available capacity scores.

How the Resource Available Capacity Score Is Calculated

The application calculates a Resource Available Capacity score as follows.

1. For the requested time period on a project resource request, determine the working days and number of hours for each day based on either the project calendar or the number of hours per day specified on the project resource request.
2. Determine the days and number of hours during the requested time period that the resource is committed to project assignments or nonproject events. These are hours that the resource isn't available to fulfill the request.
3. For each work day in the requested time period, divide the number of available hours for the resource by the number of requested hours in the day, and multiply the result by 100. This determines the resource available capacity for each day, expressed as a percentage.

Note: The maximum available capacity is 100%, even if the number of available hours for a resource exceeds the number of requested hours for the day. For example, if a resource is available to work 10 hours a day and the request is for 8 hours a day, the available capacity for the resource is 100%.

4. Divide the sum of the available capacity for each day by the number of days in the requested time period. The result is the Resource Available Capacity score for the project resource request.

Related Topics

- [Why doesn't a resource have an availability score?](#)
- [What are the indicators for the qualification, available capacity, and overall scores on a project resource request?](#)

Examples of Resource Available Capacity Score

The Resource Available Capacity Score is the percentage of time that a resource is available to work during the requested time period on a project resource request.

The application uses the resource calendar, and either the project calendar or the hours per day specified on the project resource request, to calculate the available capacity of a resource.

Following are examples of Resource Availability Score calculations.

Example 1: Resource Available Capacity Score is 100%

In this example:

- The project resource request dates are from Thursday, August 22 to Wednesday, August 28 for the hours per day based on the project calendar.
- The standard working days on the project and resource calendars are 8 hours a day from Monday through Friday, with nonwork days on Saturday and Sunday.
- The resource has no project assignments or nonproject events scheduled during the requested time period.

The following table describes the resource available hours, requested hours, and daily resource available capacity from August 22 through August 28 that are used to determine an Available Capacity Score of 100%.

	Aug 22	Aug 23	Aug 24	Aug 25	Aug 26	Aug 27	Aug 28
Resource available hours	8	8	Nonwork day	Nonwork day	8	8	8
Requested hours	8	8	Nonwork day	Nonwork day	8	8	8
Resource available capacity	100%	100%	Not applicable	Not applicable	100%	100%	100%

The following formula calculates the resource available capacity score for this example in which the sum of the daily

$$\text{Resource Available Capacity Score} = \frac{500\% \text{ available capacity}}{5 \text{ working days on the request}} = 100\%$$

available capacity score is 500%.

Example 2: Resource Available Capacity Score is 70%

In this example:

- The resource is requested to work from Thursday, August 22 to Wednesday, August 28, for 4 hours per day as specified on the project resource request.
- The standard working days on the project and resource calendars are 8 hours a day from Monday through Friday, with nonwork days on Saturday and Sunday.
- The resource has an 8-hour project assignment previously scheduled for August 22, and a 6-hour training class on August 23.

The following table describes the resource available hours, requested hours, and daily resource available capacity from August 22 through August 28 that are used to determine an Available Capacity Score of 70%.

	Aug 22	Aug 23	Aug 24	Aug 25	Aug 26	Aug 27	Aug 28
Resource available hours	0	2	Nonwork day	Nonwork day	8	8	8
Requested hours	4	4	Nonwork day	Nonwork day	4	4	4
Resource available capacity	0%	50%	Not applicable	Not applicable	100%	100%	100%

The following formula calculates the resource available capacity score for this example in which the sum of the daily

$$\text{Resource Available Capacity Score} = \frac{350\% \text{ available capacity}}{5 \text{ working days on the request}} = 70\%$$

available capacity score is 350%.

Example 3: Resource Available Capacity Score is 65%

In this example:

- The project resource request dates are from Monday, December 2 to Friday, December 13 for the hours per day based on the project calendar.
- The project calendar is 8 hours a day from Monday through Friday, with nonwork days on Saturday and Sunday.
- The resource calendar is 10 hours a day from Monday through Thursday, with nonwork days for the resource on Friday, Saturday, and Sunday.
- For the first week in December the resource is working only half days (5 hours a day). The resource has a 2-hour training class scheduled for December 9.

The following table describes the resource available hours, requested hours, and daily resource available capacity from December 2 through December 13 that are used to determine an Available Capacity Score of 65%.

	Dec 2	Dec 3	Dec 4	Dec 5	Dec 6	Dec 7	Dec 8	Dec 9	Dec 10	Dec 11	Dec 12	Dec 13
Resource available hours	5	5	5	5	Nonwork day	Nonwork day	Nonwork day	8	10	10	10	Nonwork day
Requested hours	8	8	8	8	8	Nonwork day	Nonwork day	8	8	8	8	8

	Dec 2	Dec 3	Dec 4	Dec 5	Dec 6	Dec 7	Dec 8	Dec 9	Dec 10	Dec 11	Dec 12	Dec 13
Resource available capacity	62.5%	62.5%	62.5%	62.5%	0%	Not applicable	Not applicable	100%	100%	100%	100%	0%

The following formula calculates the resource available capacity score for this example in which the sum of the daily

$$\text{Resource Available Capacity Score} = \frac{650\% \text{ available capacity}}{10 \text{ working days on the request}} = 65\%$$

available capacity score is 650%.

Related Topics

- [How Resource Available Capacity Score Is Calculated](#)

How Resource Qualification Score Is Calculated

The resource qualification score is a measure of a resource's suitability to fulfill a project resource request. The application calculates a score by comparing the requested qualifications and keywords to a resource's qualifications on the resource profile and resume.

Objects that Impact the Resource Qualification Score

The following key objects impact the resource qualification score calculation:

- Qualifications
- Proficiency
- Keywords
- Project resource request
- Resource profile
- Resource resume attachment

How the Resource Qualification Score Is Calculated

A resource qualification score consists of two scores: a score for qualifications, such as competencies and language, and a score for keywords.

The following table explains how the resource qualification score is calculated based on content types and keywords on a project resource request.

Qualifications on the Project Resource Request	Resource Qualification Score
Structured content sections in content types templates	Sum of the resource's individual structured content section scores in each content template divided by the total number of content sections. Note: Each unique content item or content section combination is scored individually.
Unstructured keywords	Sum of the resource's individual keyword scores divided by the total number of qualifications
Structured content sections in content templates and unstructured keywords	Average of the structured content score and keyword score
No qualifications	No resource qualification score

Qualification Scores

To determine a resource's score for all qualifications on a request, the application divides the sum of individual qualification scores by the total number of requested qualifications.

The following table lists the rules that determine a resource's score for an individual qualification on a project resource request.

Proficiency Qualification on the Project Resource Request	Resource Profile	Individual Qualification Score
Yes	Resource has the requested qualification and content section with a proficiency that meets the requested proficiency.	100%
Yes	Resource has the requested qualification with a proficiency that's lower or higher than the requested proficiency	50%
Yes	Resource has the qualification but not the requested content section.	0%
Yes or No	Resource doesn't have the requested qualification and content section.	0%
Qualification, but no proficiency	Resource has the requested qualification and content section with a proficiency that is lower or higher than the requested proficiency.	100%

The following table lists the rules that determine a resource's score for a language qualification.

Language Qualification on the Project Resource Request	Resource Profile	Language Qualification Score
Reading, speaking, and writing	Resource has the requested language and content section with proficiency that meet the requested proficiency for reading, speaking, and writing.	Reading 100% Speaking 100% Writing 100% Separate scores for reading, speaking, and writing skills are calculated for a language qualification if you specify proficiency levels for those skills.
Reading and speaking; no proficiency is specified for writing	Resource has the requested language and content section with proficiency that meet the requested proficiency for reading and speaking.	Reading 100% Speaking 100% In this scenario, proficiency are specified for reading and speaking, but not for writing. Therefore, no score is calculated for the writing skill.
Reading and speaking	Resource has the requested language and content section with proficiency that's lower or higher than the requested reading proficiency, and a speaking proficiency that meets the requested speaking proficiency.	Reading 50% Speaking 100%
Language qualification with a specified proficiency	Resource doesn't have the requested qualification	0%
Language qualification with a specified proficiency	Resource has the language but not the requested content section.	0%
Language qualification; no proficiency is specified	Resource has the requested language and content section: The resource's proficiencies aren't considered in the score calculation.	100%

Relative Keyword Scores

This relative keyword score is combined with the qualification score to make up the resource qualification score. This resource qualification score is visible on the Search and Evaluate Resources page, Compare Resources page, and on the Resource Details page that you drill down to from either of these pages.

The application searches the resource's profile and resume attachment for requested keywords in the following resource attributes:

- Competencies
- Languages
- Degrees
- Honors and awards
- Licenses and certifications

- Memberships
- Resume text

For example, if you enter the keyword Financial on a project resource request, and a resource profile contains a competency of Financial Industry, the application counts it as a keyword occurrence for the resource.

When you search for resources on the Search and Evaluate Resources page, the application derives a relative keyword score for each requested keyword as follows:

- Compares the number of occurrences for a keyword in a resource's profile and resume to the number of occurrences for that keyword in the profiles and resumes of all resources in the search results.
- Calculates a resource's score for an individual keyword by dividing the number of keyword occurrences for the resource by the highest number of keyword occurrences for any resource in the search results.

The following table shows examples of resource scores for the keyword Java. Resource A has 10 occurrences of the word Java, which is the highest number of occurrences for all resources in the search results. Therefore, the scores for all resources in the search results are calculated by dividing the number of keyword occurrences in each resource profile and resume by 10.

	Resource A	Resource B	Resource C
Occurrences of Java in resource profile and resume	10	5	0
Keyword score calculation for Java	$10 / 10 = 100\%$	$5 / 10 = 50\%$	$0 / 10 = 0\%$

To determine a resource's score for all keywords on a request, the application divides the sum of individual keyword scores by the total number of keywords on the request.

Note: If you change the resource pools that you search on the Search and Evaluate Resources page, the resource with highest number of keyword occurrences may change in the search results. This change may impact resource keyword scores because the denominator changes in the relative calculation.

Simple Keyword Scores

If you're considering only one resource to fulfill a project resource request, the keyword score is based on whether the resource profile or resume has at least one occurrence of each requested keyword. This is a simple calculation, for example:

- If a resource has one or more occurrences of a requested keyword, then the individual keyword score is 100% for the resource.
- If a project resource request contains two keywords, and a resource has one occurrence of the first keyword and zero occurrences of the second keyword, then the individual keyword score for the resource is 50%.

Note: Because of the difference in relative and simple keyword score calculations, a resource qualification score might be different on the Resource Details page that you open directly from the project resource request than the score for the same resource on the Search and Evaluate Resources page. The score on the Resource Details page that you open from the request is based on the simple calculation because you aren't comparing resources. The score on the Search and Evaluate Resources page is based on the relative calculation for all resources in the search results.

Related Topics

- [Resource Qualification Score Components](#)
- [Example of Resource Qualification Scores](#)
- [Why can a project manager and a resource manager obtain different qualification scores for a resource?](#)

Resource Qualification Score Components

Each resource that you evaluate for a project assignment contains a resource qualification score. The resource qualification score and the available capacity score help you to decide if a particular resource is a suitable candidate for the assignment.

The following resource attributes impact the resource qualification score calculation:

- Qualifications
- Proficiency
- Keywords
- Project resource request
- Resource profile
- Resource resume attachment

Qualifications

Qualifications are attributes of a resource, such as competencies, languages, degrees, honors and awards, licenses and certifications, and memberships. You set up qualifications when you set up the workforce in Oracle Fusion Human Capital Management (HCM).

Proficiency

A proficiency can be associated with a competency or language to indicate the level of expertise that a resource has, or that a project assignment requires for the particular qualification.

Keywords

Keywords are words or phrases on a project resource request that represent general qualification requirements.

Project Resource Requests

The project resource request contains qualifications and keywords that identify the attributes that a resource needs for the project assignment.

Resource Profile

Resources maintain a resource profile of their qualifications, proficiency, and resume. A profile represents a resource's knowledge, skill, and expertise, and is used in the score calculation to determine if the resource has the requested qualifications and proficiency. The score calculation also takes into account the number of occurrences of a keyword in the resource's profile.

Resource Resume Attachment

The application counts the number of occurrences of keywords in a resource's resume when calculating the resource qualification score for a project resource request.

Example of Resource Qualification Scores

This

This examples illustrates how the resource qualification scores are calculated for three resources who are being considered to fulfill a project resource request based on content sections, qualifications, and keywords.

Project Resource Request and Qualification Scores

In this example, a project resource request contains qualifications for a competency, degree, and language. The request also contains one keyword. The resource manager is evaluating the suitability of each candidate based on the resource qualification scores.

The following table lists the individual qualification and keyword scores that make up each resource qualification score.

Competency, Degree, Language, or Keyword on Project Resource Request	Fred Jones	Elizabeth Mavery	Alex Morozov
Competency: Java Content Section: Technical Competencies Proficiency: Advanced	Java, Technical Competencies, Advanced: 100%	Java, Technical Competencies, Advanced: 100%	Java, Technical Competencies, Advanced: 100%
Competency: Oracle Financials Content Section: Technical Competencies Proficiency: Advanced	Oracle Financials, Technical Competencies, Advanced: 100%	Oracle Financials, Technical Competencies, Advanced: 100%	Oracle Financials, Technical Competencies, Advanced: 100%
Competency: Oracle Financials Content Section: Functional Competencies Proficiency: Expert	Oracle Financials, Functional Competencies, Expert: 100%	Oracle Financials, Functional Competencies, Intermediate: 50%	Does not have Oracle Financials in Functional Competencies: 0%
Competency: Reporting Content Section: Functional Competencies Proficiency: Expert	Reporting, Functional Competencies, Expert: 100%	Reporting, Functional Competencies, Intermediate: 50%	Does not have Reporting in Functional Competencies: 0%

Competency, Degree, Language, or Keyword on Project Resource Request	Fred Jones	Elizabeth Mavery	Alex Morozov
Education: MS in Computer Science Content Section: Education	MS in Computer Science, Education: 100%	MS in Computer Science, Education: 100%	MS in Computer Science, Education: 100%
Language: French Content Section: LanguageSpeaking Proficiency: Intermediate	French, Language, Speaking - Intermediate: 100%	French, Language, Speaking - Intermediate: 100%	French, Language, Speaking - Intermediate: 100%
Keyword: Finance	10 keyword occurrences/10 maximum occurrences = 100%	8 keyword occurrences/10 maximum occurrences = 80%	3 keyword occurrences/10 maximum occurrences = 30%
Qualification Score Calculation	<ul style="list-style-type: none"> Qualification Score $600\%/6 = 100\%$ Keyword Score: 100% Resource Qualification Score: $(100+100)/2 = 100\%$ <p>In this example, Fred Jones is the most qualified person to fulfill the project resource request.</p>	<ul style="list-style-type: none"> Qualification Score: $500\%/6 = 83\%$ Keyword Score: 80% Resource Qualification Score: $(83 + 80)/2 = 82\%$ 	<ul style="list-style-type: none"> Qualification Score: $400\%/6 = 67\%$ Keyword Score = 30% Resource Qualification Score: $(67+30)/2 = 49\%$

How Resource Overall Match Score Is Calculated

The Resource Overall Match score is a measure of a resource's suitability to fulfill a project resource request.

How the Resource Overall Match Score Is Calculated

The Resource Overall Match score is the average of the Resource Available Capacity score and Resource Qualification score. For example:

If the resource has an available capacity score of 50% and a qualification score of 80%, the following formula calculates

$$\text{Resource Overall Match Score} = (50\% + 80\%) / 2 = 65\%$$

the resource overall match score.

If the resource has an available capacity score of 0% and a qualification score of 80%, the following formula calculates

$$\text{Resource Overall Match Score} = (0\% + 80\%) / 2 = 40\%$$

the resource overall match score.

If no Resource Qualification score exists, then the Resource Overall Match score is equal to the Available Capacity score.

If a resource doesn't have a valid calendar to calculate the Available Capacity score, then the Resource Overall Match score is the average of the Resource Qualification score and 0% for the Available Capacity score.

Related Topics

- [How Resource Available Capacity Score Is Calculated](#)
- [How Resource Qualification Score Is Calculated](#)

Example of Matching Resource to Resource Request

This example illustrates how a resource manager can search and evaluate qualified resources to fulfill a project resource request.

The search for resources is an iterative process. If you don't find qualified resources to fulfill a project resource request with your initial search on the Search and Evaluate Resources page, then you can change the search attributes and search again.

Scenario

A project manager created and submitted a project resource request for a project engineer on an assignment for a strategic client project. You are a resource manager who must find the right resource for the assignment.

The project application administrator for your organization previously set up the project engineer role with default qualifications, proficiency levels, and keywords. These attributes populated the request when the project manager selected the project engineer role.

You search and evaluate resources to determine who is qualified and available to work on the assignment.

Search for Resources

You begin by navigating to the Manage Project Resource Requests page and clicking the **Evaluate Resources** icon for the project resource request. The application evaluates the resources in the resource pools that you own to find a match between the resource skill profiles in Oracle Fusion HCM and the requested qualifications, proficiency levels, and keywords. The application uses the resource and project calendars to calculate the available capacity of resources for the assignment.

On the Search and Evaluate Resources page, you review the resource cards in the initial search results. Each card shows the qualification, availability, and overall scores for a resource. The calendar bar on the resource card shows the resource's availability for the first five weeks of the requested date range.

Note: The search does not return more 99,999 resources

To evaluate more resources, expand the list of resource pools from which you want to search for qualified resources. Expand the resource match thresholds to include a wider range of qualification and available capacity scores to bring more resources into the view. To focus the resources in the view, select filters for specific competencies, languages, locations, project roles, and travel preferences. Only resources with the selected attributes appear in the view.

You determine that one of the default qualifications for the project engineer role is not a requirement for this particular assignment. You click the **Edit Requested Criteria** button to remove the unnecessary qualification. While in this window, you also change the requested start date. Review the resources on the Search and Evaluate Resources page based on the revised requested criteria.

During the evaluation, you find some resources that may be a good fit for the assignment. You want to evaluate more resources before making a decision, so you add the potential candidates to the resource shortlist. The shortlist enables you to keep a list of candidates that are a potential fit without having to search for them again. You continue to search for resources by changing the list of resource pools and score thresholds.

To view a side-by-side comparison of the potential candidates, you select the resources in the shortlist and click the **Compare** icon. Compare the qualification and availability scores, how well the resources match each requested qualification and keyword, and the project and nonproject commitments for each resource during the requested date range.

Select a Resource

You determine which resource is the best fit for the assignment, and propose the resource for project manager approval.

Related Topics

- [What are the indicators for the qualification, available capacity, and overall scores on a project resource request?](#)

FAQs for Review Resource Suitability for Position

How can I enter a keyword on a project resource request?

When you enter qualifications for a project resource request, you can either select a predefined qualification or enter a free form keyword. The search process attempts to match keywords against each resource's resume.

As you enter a qualification, if you select an item from the list of suggestions that appear, then it will become a structured qualification to match against the resources' talent profiles.

If you enter a free form word or phrase, then it becomes a keyword. To see this classification, select the **Show More** option in the Qualifications and Keywords section of the Create or Edit Project Resource Request pages.

Why doesn't a resource have an availability score?

Any of the following circumstances causes a resource to have no Available Capacity score.

- Project resource request dates are outside of the project or resource calendar effective dates.
- Number of working days on the project or resource calendar is zero.
- Project or resource calendar was deleted from the application or is no longer available.
- Project or resource calendar is complex. For example, the calendar doesn't contain seven days, or it contains more than one pattern and shift.

When are resume attachments included in a search for resource qualifications?

If a resource resume is a File attachment type, then the resume text is indexed during the Maintain Project Resource Qualification Index process. Indexed keywords are included in the Resource Qualification score calculation for a project resource request.

A resume attachment is included in the search index in the following circumstances:

- The resume has a **File** attachment type.
 - **Note:** Attachment types such as **URL** and **Text** aren't indexed.
- You attach the resume to the resource profile before the index process runs.

The process indexes only the most recent version of a resume with a **File** attachment type.

What are the indicators for the qualification, available capacity, and overall scores on a project resource request?

You can assess the qualification, available capacity, and overall scores for resources on the Search and Evaluate Resources page. The scores indicate how well a resource matches a project resource request.

Additionally, a colored indicator is present for each score, and the color is dependent on the score.

- If a score is 80% to 100%, the indicator is green.
- If a score is 50% to 79%, the indicator is yellow.
- If a score is below 50%, the indicator is red.

Why can a project manager and a resource manager obtain different qualification scores for a resource?

Resource managers can modify the qualifications that are associated with the requested project role on a project resource request.

If the resource manager modifies the qualifications on a project resource request, then the qualification scores that appear on the Search and Evaluate Resources page (for the resource manager) can be different from the qualification scores that appear on the Evaluate Resources page for the project manager.

Can I search for resources in any resource pool?

You can search for all unsecured resource pools for resources to fulfill project resource requests.

However, if the resource pools are secured in the Setup and Maintenance work area, then you can only search for a resource that belongs to resource pools that you manage.

13 Resource Assignments

Gantt Chart

Use the interactive Gantt Chart to create new assignments and events, adjust and view assignment schedules at a daily hour granularity, and approve, reject, or cancel adjustment requests.

You can also review and manage multiple resource schedules across projects. As a resource manager, you can see all the resource assignments and events and can adjust them to immediately see the impact in the resources' schedules using the interactive Gantt chart.

Open this interactive chart from the Manage Resource Schedule page from the Tasks drawer. If pool security is enabled, you can search for all the resources that you are a pool owner for or create your custom search. This page helps you to view and edit details about resource assignments, change resource schedule, and edit or delete any resource event.

You can right-click to view the details of an assignment. You can:

- Drag and drop scheduled assignments and events to extend, shorten or reschedule.
- Identify and fix the gaps where a resource is not assigned to project work and maximize resource utilization.
- View and track resource assignment nominations to identify potential upcoming assignments.
- Approve, reject, or cancel assignment adjustments.

For example, there is an urgent need to assign a technical consultant for a week. The resource manager can view all their technical consultants' schedules in the Gantt chart to see if any have availability for that time. The resource manager sees that there is one resource who scheduled an internal self-led training event during that time. The resource manager knows this training can be rescheduled for any time. The resource manager drags the training to another open week the person is available and creates the new project assignment in its place, directly in the Gantt chart.

Few points to note:

- You can't edit resource schedules in Nominated or Pending Approval status.
- When new assignments are created which overlap existing assignments currently in pending approval status, you receive a warning.
- You can cancel assignment adjustments only for assignment adjustments that you initiated and approve or reject assignment adjustments that were initiated by a project manager.
- To set daily assignment hours for an existing assignment, set the assignment hours for each day in the Daily Assignment view. Once an assignment's hours are saved at the daily level, it cannot be changed to a different schedule method. Assignments with hours that are defined daily can only be adjusted (start date, finish date, and hours) in the Gantt chart in the Manage Resource Schedules page.

Project Resource Assignment Statuses

Assignment statuses indicate the status of the resource's relationship to a project.

This table describes assignment statuses that can appear in the **Assignment Status** column on the Manage Project Resources page.

Assignment Statuses	Description
Planned	<p>The assignment status is Planned when the project manager adds a resource to the project using any of these methods:</p> <ul style="list-style-type: none"> • Allocate resources directly to the project on the Manage Project Resources page. • Add resources to a project task on the Manage Project Plan page. • Import a project plan in Microsoft Project into Project Management. • Create a project plan with a work plan template. • Import a project plan from a third-party application with the Import Project Plan process for Oracle Cloud. • Import a project plan with the Project Work Plan External Service. • Replace a resource on a confirmed assignment with a resource whose availability and staffing aren't managed in Oracle Fusion Project Resource Management. <p>If the project manager creates a project resource request to replace the Planned resource, and then cancels the request, the assignment status reverts to Planned.</p>
Requested	<p>The assignment status is Requested if the project manager creates a project resource request on the Manage Project Resources page to replace a planned resource.</p> <p>If the resource manager nominates a resource to fulfill the request, and the project manager rejects the proposed resource, then the assignment status reverts to Requested.</p> <p>If the project manager submits a nominated resource to the resource manager for approval, the assignment status is Pending Approval.</p>
Nominated	<p>The assignment status is Nominated when a resource manager nominates a resource for an assignment that's waiting for evaluation by the project manager.</p>
In Process	<p>The assignment status is In Process when a project manager is evaluating a nominated resource.</p>
Pending Approval	<p>The assignment status is Pending Approval when a project manager submits a nominated resource to the resource manager for approval and it's pending resource manager's approval.</p>
Pending Replacement	<p>The assignment status is Pending Replacement when the project manager submits a replacement resource request for a confirmed or reserved resource on a project.</p>
Confirmed	<p>The assignment status is Confirmed in any of these circumstances:</p> <ul style="list-style-type: none"> • The project manager approves a resource for a confirmed assignment to fulfill a project resource request. • The project manager confirms a reserved assignment directly on the project. • The project manager approves, rejects, or cancels a pending assignment adjustment for a confirmed assignment. • The project manager directly assigns a resource in a Confirmed status or replaces a resource on a confirmed assignment with another managed project enterprise labor resource. You must have the Assign Project Resource to Project privilege to perform this action.

Assignment Statuses	Description
	<ul style="list-style-type: none"> The resource manager assigns a resource in a Confirmed status without project manager approval. You must have the Approve Project Resource for Project Assignment privilege to perform this action. The resource manager proposed the resource as a Confirmed resource. When the project manager approves the resource, the resource is assigned with a Confirmed status. The project manager submits a nominated resource to the resource manager for approval as a Confirmed resource. When the resource manager approves the resource, the resource is assigned with a Confirmed status.
Reserved	<p>The assignment status is Reserved in any of these circumstances:</p> <ul style="list-style-type: none"> The project manager approves a resource for a reserved assignment to fulfill a project resource request. The project manager approves, rejects, or cancels a pending assignment adjustment for a reserved assignment. The resource manager assigns a resource in a Reserved status without project manager approval. You must have the Approve Project Resource for Project Assignment privilege to perform this action. The resource manager proposed the resource as a Reserved resource. When the project manager approves the resource, the resource is assigned with a Reserved status. The project manager submits a nominated resource to the resource manager for approval as a Reserved resource. When the resource manager approves the resource, the resource is assigned with a Reserved status.
Pending Adjustment	<p>The assignment status is Pending Adjustment in either of these circumstances:</p> <ul style="list-style-type: none"> After the project manager changes the assignment schedule and before the resource manager approves or rejects the adjustment. After a resource manager cancels an existing assignment or changes the assignment schedule and before the project manager approves or rejects the adjustment. Project manager approval isn't required if the resource manager has the Approve Project Resource for Assignment privilege.
Canceled	<p>The assignment status is Canceled in any of these circumstances:</p> <ul style="list-style-type: none"> After the project manager cancels the adjustment. After a resource manager cancels an assignment and the project manager approves the cancellation. <p>Project manager approval isn't required if the resource manager has the Approve Project Resource for Project Assignment privilege.</p>

Related Topics

- [Project Resource Request Statuses](#)

Project Resource Assignment Adjustments

A resource manager or project manager can cancel assignments or change the start date, finish date, and hours per day for project resource assignments that are in a Confirmed or Reserved status.

Aspects of assignment adjustments include:

- Assignment adjustment types
- Adjusting a single assignment
- Adjusting multiple assignments
- Approving and rejecting assignment adjustments

Assignment Adjustment Types

The project resource assignment adjustment types are:

- Change Assignment Schedule
- Cancel Assignment

Adjusting a Single Assignment

The methods to initiate an assignment adjustment are:

- On the Edit Project Resource Assignment page, in the **Actions** menu, click **Adjust** and select an adjustment type.
- Select an assignment on the Manage Project Resource Assignments page, and adjust the assignment by either changing the individual assignment or by canceling the assignment.
- On the Project Resource Assignments Ending Soon region of the Project Resources work area, Overview page, select an assignment and click the **Change Assignment Date** button.
- On the Manage Project Resources page, select a confirmed or reserved assignment and click the **Request Extension** action.

When you initiate an assignment adjustment:

- The application creates a project resource request to communicate and track the adjustment approval.
- The request name is a combination of the resource name and the requested start date.
- The request type is either Assignment Schedule Change or Assignment Cancellation.
- You can access adjustment requests from the Manage Project Resource Requests page.
- The application updates the assignment when the request is approved. For example, when a request to adjust an assignment start date is approved, the new start date appears on the assignment.

Adjusting Multiple Assignments

Resource managers can cancel or adjust multiple assignments together on the Manage Project Resource Assignment page. The assignments must be either reserved or confirmed.

Select multiple assignments and adjust them by using one of the following methods:

- Change the schedules as a group to apply the same change to the selected assignments.
- Change the schedules individually to make independent changes to the selected assignments.
- Cancel the assignments.

When you submit and approve multiple assignment adjustments, the application creates a project resource request in an Approved Adjustment status for each assignment.

Approving and Rejecting Assignment Adjustments

You can approve or reject an assignment adjustment in the following locations:

- Directly on the project resource request
- On the Manage Project Resource Requests page
- In the approver's workflow notification

The following table lists the approval requirements for assignment adjustments.

Action	Approver
Project manager initiates an assignment schedule change.	Resource manager (required)
Project manager initiates an assignment cancellation.	No approval required
Project manager cancels an adjustment that was initiated in the Project Management work area. Note: Only project managers can cancel an adjustment that was made by a project manager.	No approval required
Resource manager initiates a schedule change or cancellation to one assignment.	Project manager (optional)
Resource manager initiates a schedule change or cancellation to multiple assignments.	No approval required
Resource manager cancels an adjustment that was initiated in the Project Resources work area. Note: Only resource managers can cancel an adjustment that was made by a resource manager.	No approval required

No approval is required to add comments to an assignment.

Related Topics

- [Project Resource Assignment Statuses](#)
- [Workflow Notifications in Project Resource Management](#)
- [How can a resource manager adjust multiple resource assignments at the same time?](#)

Billable Assignment for Resource Requests

When you as a resource manager or a project manager creates a resource request, you can specify the resource assignment as a billable assignment type. You evaluate the potential resource based on the availability score calculated on the resources' current billable or nonbillable assignments.

Request for Billable Assignment

When you or a project manager submits a project resource request, you can specify if the request is for billable assignment on Create or Edit Project Resource Request pages.

Select the Assignment Type as billable or nonbillable. You can specify the billable percentage for the resource along with the reason for the assignment. Billable percent can represent the percentage of assigned hours that are billable.

You can set the assignment type for the existing assignments for Open requests and Confirmed or Reserved assignments.

Resource Evaluation

You can evaluate the resources based on their available capacity score and utilization for current billable assignments.

Depending on how your administrator has set up the available capacity score calculation, it's calculated on one of the following:

- Billable assignment only
- Billable assignments and non-project events such as vacation or training
- All assignments and non-project events

Before you fulfill a resource request, here's how you can view the utilization and current billable assignments of the resource:

- Review Search and Evaluate page.
- View Gantt chart in the Schedule region on the Resource Details page that display the billable and nonbillable assignments for Reserved statuses.
- Review resource projected and actual utilization in the Resource Manager Dashboard for billable assignments only or all assignments. Select the Billable assignments only option.
- Create analyses in Oracle Transactional Business Intelligence for billable and nonbillable assignments and review resource utilization.

Request Fulfillment

Now that you have evaluated and finalized the resource, approve, propose, or nominate the resource to fulfill the request for a billable assignment. You must have the Approve Project Resource Assignment to Project privilege to approve a resource assignment.

Depending upon how your administrator has set up the overbooking of resources, here's what you should consider:

- If overbooking isn't allowed and two billable assignments overlap, you can't assign the resource. But, if there is one billable and one nonbillable assignment that overlap, you get a warning and you can proceed.
- If overbooking is allowed and there is an overlap between two assignments, regardless of billable or nonbillable assignments you get a warning but you can still fulfill the request.

Variable Hours Assignment for Resource Requests

If you don't need the resource to work on the project full-time, you can request or assign one or more resources for variable hours on a project.

You can assign the resource to work various hours some or all days of the week (including non-working days) or request for number of hours per week with flexible days to meet the schedule requirements. This helps you schedule resources better.

Specify variable hours in the requested hours to create or update a resource request, assign resources for weekly pattern that's repeated for the duration of the assignment or the request. You can also adjust resource assignment schedule to add variable hours or weekly hours.

Note: You can update a resource request in Open status only.

If you request for a particular number of hours per week, the resource managers can review available capacity based on the resource's total weekly hours available. For example, if a request is for 25 hours each week, they can assign any resource that has 25 hours of remaining capacity for each week to fulfill the request.

Available capacity calculation is based on the requested hours. If the request is for weekly hours, the available capacity is based on the total remaining available hours a resource has each week of the requested duration. If the requested hours specifies using the project calendar hours, hours per day, or variable hours, the available capacity is based on the resource's available hours each day of the requested duration.

If you want to update the requests or assignments in group, you could adjust the hours by calendar or by working days in case the hours of the variable hours fall on non-working days.

Consider these examples:

- Within a single assignment, a resource may work Mondays and Tuesdays for 8 hours each day, Thursdays and Fridays for 4 hours each day and not work any hours on Wednesdays. A project manager can request for such a resource assignment.
- A project needs a system administrator to work once each week on Tuesday or Thursday to handle weekly builds. The project manager requests a resource for Thursdays 4 hours per day for the duration of the project. The resource manager adjusts the daily hours to Tuesday and assigns the resource.
- A project manager raises a request for a DBA analyst for 5 hours every week. The resource manager knows that there is a flexibility of days and assigns resource whose availability score is at least 5 hours every week.

- A resource manager created several assignments for a project where the work is scheduled to start on a Saturday, which is a non-working day on the project calendar. The project gets delayed by two weeks. To adjust these assignments, she can select all the impacted assignments on the Change Assignment Schedule page and adjust the start and finish dates by 14 calendar days to ensure the assignments start on the Saturday again but 2 weeks later than originally planned.

Import Project Resource Assignments Process

The Import Project Resource Assignments process creates and updates project resource assignments based on data from third-party applications that you load into the Project Resource Assignments Interface table (PJR_ASSIGNMENT_INT).

Once in the interface table, the assignment details are validated and processed by the Import Project Resource Assignments process.

Use the Project Resource Assignment Import macro-enabled Excel workbook template to prepare data for loading and importing, and ensure that your data conforms to the structure and format of the target application database tables. The workbook contains the following worksheets:

- Instructions and CSV Generation: Table-specific instructions, guidelines, and recommendations for preparing the data file for upload.
- PJR_RES_ASMT_CREATE: Worksheet used to create assignments. Contains columns that represent table fields for the assignment details such as resource, project, role, dates, rates, hours per day, requester, and staffing owner.
- PJR_RES_ASMT_UPDATE: Worksheet used to update assignment dates, hours per day, location, and rates.

After you prepare the data in the Project Resource Assignment Import Excel template, click the **Generate CSV File** button in the template to create worksheets to load to the interface tables. Optionally you can bypass the Excel template and manually create CSV files.

Load data into the interface table and application database tables using one of these two methods:

- Run the Load Interface File and Import Project Resource Assignments job set to transfer the data file from your specified location to the interface table and import resource assignment data from the interface into the database tables.
- Run the Load Interface File for Import process followed by the Import Project Resource Assignments process to separate the load and import steps.

For more information about file-based data import, see the File Based Data Import for Oracle Project Portfolio Management Cloud guide.

Run the load and import processes from the Scheduled Processes Overview page.

Parameters - Load Interface File for Import

Import Process

Select Import Project Resource Assignments.

Data File

Select the file that contains project resource assignment data to load.

Parameters - Import Project Resource Assignments Process

Project Resource Assignments to Import

Specify whether the import process imports all assignments or assignments for a project. The default value is All assignments.

Project

Select the project for the assignments.

Import Project Resource Assignments Execution Report

The Import Project Resource Assignments Execution report summarizes the number of processed, accepted, and rejected items encountered when you imported the project resource assignments. The report contains details for all assignments that generated errors during the import process.

Review the error message details for each project resource assignment and fix the issues. Load the data that you fixed in the CSV file into the interface table again and resubmit the Import Project Resource Assignments process.

Related Topics

- [Overview of External Data Integration Services for Importing Data](#)

FAQs for Resource Assignments

Can a resource manager directly assign a resource to a project without creating a project resource request?

Yes. Click the Create Assignment action on the Manage Project Resource Assignments page in the Project Resources work area and enter the assignment details for a single or multiple assignments. Then submit and approve the assignments.

The application creates project resource requests as described in the following table.

Type of Assignment	Project Resource Request Status	Assignment Status
Confirmed assignment	Fulfilled by Confirmed Assignment	Confirmed
Resource reservation	Fulfilled by Reserved Assignment	Reserved

The name of the request is a combination of the resource name and the assignment start date.

The assignment appears on the resource's schedule and on the Manage Project Resources page in the Project Management work area.

Note: Only resource managers with the Approve Project Resource Assignment to Project security privilege can perform this action.

Can I change a resource reservation to a confirmed assignment on a project?

Yes. Resource managers and project managers can change the status from Reserved to Confirmed directly on an assignment.

In addition, resource managers can make this change on the Manage Project Resource Assignments page, and project managers can make the change on the Manage Project Resources page.

How can a resource manager adjust multiple resource assignments at the same time?

Select more than one confirmed or reserved assignment on the Manage Project Resource Assignments page, and click Adjust Assignment. Then select whether to change the assignment schedules as a group or individually.

- To adjust the assignment schedule, enter a new start date, finish date, or hours per day and the adjustment reason in the Change Assignment Schedule window. If you're changing the assignment schedule for a group, you also have the option to move the start date and finish date by a specific number of working days. Then submit and approve the adjustments. The new values apply to all selected assignments.
- To cancel assignments, enter the adjustment reason in the Cancel Assignments window, and then submit and approve the adjustments.

The application creates a project resource request for each adjusted assignment to communicate and track the adjustment approval.

When does a resource appear in the list of resources to request for an assignment?

A resource is available to select for a project resource request or project assignment if these conditions exist:

- The resource's **Manage resource availability and staffing** option is enabled on the project enterprise resource definition.
- The resource's to date on the project enterprise resource definition is the current date, a future date, or blank.
- The resource belongs to a resource pool that you manage, if your enterprise has secured resource pools in the Setup and Maintenance work area.

What's a project resource request type?

An attribute that's assigned by the application to track the progress and purpose of a project resource request.

For example:

- The *New Resource* request type identifies requests that you create to find resources for a project.
- The *Assignment Schedule Change* request type identifies requests that the application creates to track assignment schedule change adjustments.
- The *Assignment Cancellation* request type identifies requests that the application creates to track assignment cancellation adjustments.

Why can't I cancel a resource assignment?

You can't cancel a resource assignment in any of these circumstances:

- The resource assignment status is Confirmed and a task assignment exists for this resource
- The resource assignment status is Confirmed and the resource is the primary project manager
- The resource assignment status is Planned or Pending Adjustment
- The resource pools are secured, and the resource belongs to a resource pool that you don't manage

What's a reservation expiration date on a project assignment?

The date by which you should confirm the assignment or cancel the reservation. The reservation expiration date is only informational, and the project assignment won't be canceled if you don't confirm or cancel the reservation by this date.

How can I edit the list of valid assignment reservation reasons?

You must edit the lookup codes for the standard lookup type Project Assignment Reservation Reason (ORA_PJR_ASGN_RESERVE_REASON).

Go to the **Manage Standard Lookups** task in the Setup and Maintenance work area. Then find the **ORA_PJR_ASGN_RESERVE_REASON** lookup type, and edit the lookup codes.

Related Topics

- [Overview of Lookups](#)

Can I assign a future-hired resource to a project resource request?

Yes. You can view the future-hired resources in the Search and Evaluate Resources or in Propose Resources for Request pages if they are active as a project enterprise resource as of or earlier than the requested start date.

It lets you review accurate resource pool utilization that takes into account future resources.

You can review the details of a future-hired resource in the Manage Project Resources page if you select the Include future hires check box.

You can create a resource assignment with an assignment start date equal or later than the date the resource is active as a project enterprise resource.

14 Resource Utilization and Analytics

Import Resource Actual Hours

The Import Resource Actual Hours job imports actual hours into the Resource Actual Hours Interface table (PJR_ACTUAL_HOURS_INTERFACE) based on data from Project Costing or from another source using a spreadsheet.

Once in the interface table, the actual hours are validated and processed by the Import Resource Actual Hours job. Any exceptions are described in the Import Resource Actual Hours Execution report.

Run the load and import jobs from the Scheduled Processes Overview page.

Using the Spreadsheet

Note: This section explains how to prepare data if you import data from a spreadsheet instead of Project Costing.

Use the Resource Actual Hours Interface macro-enabled Excel workbook template to prepare data for loading and importing, and ensure that your data conforms to the structure and format of the target application database tables. The workbook contains the following worksheets:

- Instructions and CSV Generation: Table-specific instructions, guidelines, formatted spreadsheets, and recommendations for preparing the data file for upload.
- PJR_ACTUAL_HOURS_INTERFACE: Worksheet columns that represent table fields for:
 - Work and utilization dates
 - Details about the resource, project, and task
 - Actual hours worked category
 - Eligibility indicators for utilization and billing
 - Indicator for adjustment entry
 - Transaction references
 - Comments

After you prepare the data in the Resource Actual Hours Interface Excel template, click the **Generate CSV File** button in the template to create worksheets to load to the interface table. Optionally you can bypass the Excel template and manually create the CSV file.

Importing Resource Actual Hours and Updating Utilization

You can update resource utilization data after importing actual hours from the Resource Actual Hours Excel template or Project Costing. The actual hours import source for your enterprise comes from the option selected on the Manage Project Resource Management Implementation Options page in the Setup and Maintenance work area.

Spreadsheet Import

If you import hours from a spreadsheet, you create resource actual hours from the Import Resource Actual Hours file-based data import XLSM template. After preparing the data in the template and generating the CSV file, you import the hours and update utilization data. The following table lists the methods and jobs or job set names to import resource actual hours and update resource utilization data.

Method	Job or Job Set Names
Submit jobs	<ol style="list-style-type: none"> 1. Load Interface File for Import 2. Import Resource Actual Hours 3. Update Resource Utilization Data
Submit job set	Import Resource Actual Hours and Update Utilization Data

For more information about file-based data import, see the File Based Data Import for Oracle Project Portfolio Management Cloud guide.

Project Costing

If you import actual hours from Project Costing, then the actual hours from the Costs work area are used to calculate resource utilization. The following table lists the methods and jobs or job set names to import resource actual hours and update resource utilization data.

Method	Job or Job Set Names
Submit jobs	<ol style="list-style-type: none"> 1. Import Resource Actual Hours 2. Update Resource Utilization Data
Submit job set	Import Resource Actual Hours and Update Utilization Tip: You can maintain current hours for utilization reporting by scheduling the job set to run on a regular basis.

Parameters - Load Interface File for Import

Note: The parameters for this process depend on the Actual Hours Source selected on the Manage Resource Management Implementation Options page. If the source is **Project Costing**, then no parameters exist as the job loads the data directly from Project Costing. If the source is **Spreadsheet import**, then you must select values for the Import Process and Data File parameters.

Import Process

Select Import Resource Actual Hours.

Data File

Select the file that contains resource actual hours data to load.

Parameters - Import Resource Actual Hours

Actual Hours Worked Category

Select the type of activity that's represented by the actual hours worked. Examples are Project Work, Paid Time Off, Training, and Other. The default value is All Categories.

Resource

Select the project enterprise labor resource who reported the actual hours worked.

Project

Select the project for which the project enterprise labor resource reported actual hours worked.

Actual Hours Worked Through Date

Enter the date through which the project enterprise labor resource worked.

Import Resource Actual Hours Execution Report

The Import Resource Actual Hours Execution report summarizes the number of processed, accepted, and rejected items encountered when you imported resource actual hours. The report contains details for all actual hours that generated errors during the import process.

Review the error message details for the actual hours and fix the issues. Load the data that you fixed in the CSV file into the interface table again and resubmit the Import Resource Actual Hours job.

Note: After importing actual hours, the the Update Resource Utilization Data job is automatically launched to summarize actual utilization that appears on the Resource Manager Dashboard.

Related Topics

- [How Resource Actual Utilization Is Calculated](#)
- [Overview of External Data Integration Services for Importing Data](#)

How Resource Actual Utilization Is Calculated

Resource actual utilization is the percentage of hours worked or projected to be worked compared to available hours. The Update Resource Utilization Data process calculates actual utilization for individual resources and resource pools.

Run the Update Resource Utilization Data process often enough to account for:

- New resources or assignments
- Changes to resource pool membership dates
- Changes to resource calendars
- Updated actual hours

Settings That Affect Resource Actual Utilization

The following factors affect Resource Actual Utilization.

- Ensure that the most recent resource actual hours were imported into the application before you run the Update Resource Utilization Data process. The process for importing actual hours differs depending on whether you import actual hours from Project Costing or from another source using a spreadsheet.
- During import processing you indicate which actual hours are eligible to be included in utilization calculations for the resource. Eligible actual hours can include time spent on project assignments, or nonproject events such as training and paid time off.
- The application determines the current quarter by the Utilization Data Updated date shown on the Resource Manager dashboard, which is the last date that the Update Resource Utilization Data process ran.
- A resource's available hours are based on the resource calendar. An example of a resource calendar is Monday through Friday, 8 hours a day. If your administrator has set up to exclude the non-work hours, the application subtracts the paid time off or absence hours when determining a resource's available hours.
- The number of hours that a resource is assigned to work on project assignments includes assignments that are in a status of Confirmed, Reserved, or Pending Adjustment.
- The Update Resource Utilization Data process calculates actual utilization for all resources who are current members of a resource pool except for the Inactive Resource Pool Memberships pool.

How Resource Actual Utilization Is Calculated

The Update Resource Utilization Data process calculates actual utilization using actual hours that are designated as eligible for utilization.

For the current quarter, the calculation first uses actual hours worked through the day before the Utilization Data Updated date shown on the Resource Manager dashboard. For the remainder of the quarter, the process uses the hours that resources are projected to work on project assignments.

For previous quarters, resource actual utilization is the percentage of actual hours worked compared to the available hours.

Note: The calculation includes the resource's actual, assigned, and available hours only for the days that are within the resource's date range in the resource pool.

Related Topics

- [Example of Resource Actual Utilization Calculation](#)
- [Import Resource Actual Hours](#)

Example of Resource Actual Utilization Calculation

Actual utilization for the current quarter is the percentage of actual hours worked at the beginning of the quarter, plus projected project assignment hours from the date the process ran through the end of the current quarter, compared to the available hours.

Scenario

Following is an example of an actual utilization calculation for the current quarter.

Example scenario:

- Resource name: Lisa Jones
- Current quarter date range: January 1 - March 31, 2016
- Today's date: February 15, 2016
- Latest run date of the Update Resource Utilization Data process: February 15, 2016
- Work category that is eligible for utilization: Project Work
- Work categories that aren't eligible for utilization: Training and Paid Time Off

Lisa Jones is available to work for 8 hours a day, 5 days a week. Weekends are nonworking days.

The following table lists the actual, projected, and available hours in the current quarter for Lisa Jones. The table doesn't include weekend nonworking days.

Work Dates by Week	Work Category	Eligible for Utilization	Project Name	Worked Hours	Projected Hours	Available Hours
January 1 (holiday)	Not applicable	Not applicable	Not applicable	0	Not applicable	8
January 4-6	Project Work	Yes	Electrical	24	Not applicable	24
January 7-8	Training	No	Not applicable	16	Not applicable	16
January 11-15	Project Work	Yes	Electrical	24 (worked partial days)	Not applicable	40
January 18-22	Project Work	Yes	Hardware	40	Not applicable	40
January 25-28	Paid Time Off	No	Not applicable	32	Not applicable	32
January 29	Training	No	Not applicable	8	Not applicable	8
February 1-5	Project Work	Yes	Hardware	40	Not applicable	40
February 8-11	Project Work	Yes	Hardware	32	Not applicable	32
February 12	Project Work	Yes	Hardware	8	Not applicable	8
February 15-19	Project Work	Yes	Hardware	Not applicable	40	40
February 22-26	Project Work	Yes	Hardware	Not applicable	40	40

Work Dates by Week	Work Category	Eligible for Utilization	Project Name	Worked Hours	Projected Hours	Available Hours
February 29-March 4	Not applicable	Not applicable	Not applicable	Not applicable	0 (no projected work)	40
March 7-11	Project Work	Yes	Install	Not applicable	40	40
March 14-18	Project Work	Yes	Install	Not applicable	40	40
March 21-25	Not applicable	Not applicable	Not applicable	Not applicable	0	40
March 28-31	Project Work	Yes	Launch	Not applicable	32	32

Results for the current quarter example:

- Actual worked hours that are eligible for utilization: 168
- Projected hours for project work: 192
- Available hours: 520

The following formula calculates the resource actual utilization for this example.

$$\text{Resource Actual Utilization} = (168 + 192) / 520 = 69.23\%$$

How Resource Projected Utilization Is Calculated

The Update Resource Utilization Data process updates projected utilization for individual resources and resource pools for the current week and cumulative intervals for the next 2 weeks, 4 weeks, 8 weeks, and 13 weeks.

Run the Update Resource Utilization Data process often enough to account for:

- New resources or assignments
- Changes to resource pool membership dates
- Changes to resource calendars

Factors That Affect Resource Projected Utilization

The following factors affect Resource Projected Utilization.

- The Update Resource Utilization Data process defines a week as Sunday through Saturday. The current week includes all 7 days from Sunday through Saturday, regardless of the day that you run the process.
 - If you run the Update Resource Utilization Data process after Sunday, the first day of the current week is the preceding Sunday.
 - If you run the process on Sunday, the current week begins that day.
- A resource's available hours are based on the resource calendar. An example of a resource calendar is Monday through Friday, 8 hours a day. The application doesn't consider company holidays when determining a resource's available hours.
- The number of hours that a resource is assigned to work on project assignments includes assignments that are in a status of Confirmed, Reserved, or Pending Adjustment.
- The Update Resource Utilization Data process calculates projected utilization for all resources who are current members of a resource pool except for the Inactive Resource Pool Memberships pool.

How Resource Projected Utilization Is Calculated

Projected utilization is calculated for individual resources in a resource pool and rolled up to a projected utilization for the pool.

To calculate a resource's projected utilization for the current week and the next 12 weekly intervals, the Update Resource Utilization Data process divides the number of hours that a resource is assigned to work on project assignments each week by the number of available hours for the resource that week.

The process also calculates cumulative projected utilization for the 13 week period. For example, the process calculates projected utilization for a 4 week interval by dividing the sum of hours that a resource is assigned to work on project assignments by the number of available hours for the resource for the current week and the next 3 weeks.

On the Resource Manager Dashboard you can view projected utilization for resources or resource pools for the current week and cumulative intervals for the next 2 weeks, 4 weeks, 8 weeks, and 13 weeks.

Note: The process includes the resource's assigned and available hours only for the days that are within the resource's date range on the resource pool.

Related Topics

- [Example of Resource Projected Utilization Calculation](#)

Example of Resource Projected Utilization Calculation

Resource projected utilization is the percentage of hours that project enterprise labor resources are confirmed or reserved to work on project assignments compared to their available hours.

Scenario

This example shows the projected utilization components for three resources, and the resource pool to which they belong, over two weekly intervals.

The following table shows an example of the projected utilization components for three resources, and the resource pool to which they belong, for the first week.

Resource and Resource Pool	Week 1 - Hours on Project Assignments	Week 1 - Available Hours on Resource Calendar	Week 1 - Projected Utilization Calculation
Resource A	40	40	100%
Resource B	20	40	50%
Resource C	10	20	50%
Resource Pool	70	100	70%

The following table shows an example of the projected utilization components for three resources, and the resource pool to which they belong, for the second week.

Resource and Resource Pool	Week 2 - Hours on Project Assignments	Week 2 - Available Hours on Resource Calendar	Week 2 - Projected Utilization Calculation
Resource A	40	40	100%
Resource B	48	40	120%
Resource C	20	20	100%
Resource Pool	108	100	108%

How the Resource Target Utilization Percentage is Determined

You can set up target utilization percentage from the Manage Target Utilization Percentage setup page. It is the percentage of hours that project enterprise labor resources are expected to work on project assignments compared to their available hours.

Once set, it shows in the Resource Manager Dashboard, against which actual and projected utilization can be compared.

How to Set Up Resource Target Utilization Percentage

You can setup the target utilization at two levels

Level	UI Component	Description
Enterprise	Enterprise Target Utilization Percentage	Applies to all managed project enterprise labor resources unless specific override percentages exist for a resource's job.
Resource Job	Target Utilization Percentage Overrides	Sets the percentage for resources with specific jobs and overrides the enterprise target utilization percentage for this role . The resources must be assigned this job in Oracle HCM

Target Utilization Percentage Calculation

The Update Resource Utilization Data process calculates target utilization for all resources assigned to resource pools.

Example

Assume that the target utilization for the enterprise is 80%. To set up the target utilization, change the default enterprise target utilization percentage from 100% to 80% on the Manage Target Utilization Percentages setup page.

Also assume that Senior Architects spend half their time on internal activities. To set up the target utilization for Senior Architects, enter 50% as the target utilization override for the job of Senior Architect.

The application uses 80% as the target utilization percentage for all resources but overrides for the job of Senior Architect and instead use 50% to calculate the percentage.

Related Topics

- [How Resource Target Hours Are Calculated](#)
- [How Resource Projected Utilization Is Calculated](#)

How Resource Target Hours Are Calculated

Resource target hours are the available hours multiplied by the target utilization percentage for the resource. Target hours for a resource pool include the target hours of all current resources in the pool.

The Update Resource Utilization Data process updates target hours for individual resources and resource pools for the current week and cumulative intervals for the next 2 weeks, 4 weeks, 8 weeks, and 13 weeks.

Run the Update Resource Utilization Data process often enough to account for:

- New resources or assignments
- Changes to resource pool membership dates
- Changes to resource calendars

Factors That Affect Resource Target Hours

The following factors affect Resource Target Hours.

- A resource's available hours are based on the resource calendar. An example of a resource calendar is Monday through Friday, 8 hours a day. The application doesn't consider company holidays when determining a resource's available hours.
- The Update Resource Utilization Data process defines a week as Sunday through Saturday. The current week includes all 7 days from Sunday through Saturday, regardless of the day that you run the process.
 - If you run the Update Resource Utilization Data process after Sunday, the first day of the current week is the preceding Sunday.
 - If you run the process on Sunday, the current week begins that day.

How Resource Target Hours Are Calculated

To calculate a resource's target hours for the current week and the next 12 weekly intervals, the Update Resource Utilization Data process multiplies the target utilization percentage for the resource by the number of available hours on the resource calendar for the week.

To calculate the target hours for a resource pool, the process adds together the weighted average of target hours of all resources in the resource pool.

Note: The process includes the resource's available hours only for the days that are within the resource's date range on the resource pool.

Example

The following example shows the calculation of target hours for three resources, and the resource pool to which they belong, for a 1 week period.

Resource and Resource Pool	Resource Target Utilization	Available Hours on Resource Calendar	Resource Target Hours Calculation	Target Utilization Percentage for Pool
Resource A	75%	40	30	Not applicable
Resource B	80%	40	32	Not applicable
Resource C	80%	30	24	Not applicable
Resource Pool	Not applicable	40 + 40 + 30 = 110	30 + 32 + 24 = 84	84 / 110 = 76%

FAQs for Resource Utilization and Analytics

Can I change the colors that appear on the Resource Manager Dashboard?

Yes. Use the Actions menu in the Projected Utilization, Unassigned Resources, and Actual Utilization regions to open a window to edit the display colors. Select colors to alert you to resource and resource pool metrics that are greater or less than expectations.

The selected colors are specific to each application user. You can return to the default colors at any time.

How can I update utilization data for resources and resource pools on the Resource Manager Dashboard?

Use the Scheduled Processes page to run or schedule the Update Resource Utilization Data process to summarize the target, projected, and actual utilization for resources and resource pools.

What's the order of resource pools and resources in the Projected Utilization and Actual Utilization regions?

The selected resource pool appears at the top of the list in the region, followed by child resource pools that belong to the selected pool. Child resource pools are listed in order of the most unfavorable variance first to the most favorable variance last.

Following the resource pools is the list of resources that are members of the selected pool. The resources are also sorted with the most unfavorable variance between the projected and target utilization (or actual and target utilization) at the top of the resource list. Resources with the same variance are listed in alphabetic order by resource name.

What's a work week in Project Resource Management?

Work weeks are based on a Sunday to Saturday schedule.

How can I edit the default billable percent reason?

Go to the Manage Standard Lookups task in the Setup and Maintenance work area. Then find the ORA_PJR_BILLABLE_PERCNT_REASON lookup type, and add or edit the lookup codes as required.

How can I view the metrics for billable assignments only?

Select the Billable assignments only option in the Resource Manager Dashboard to review resource projected and actual utilization for billable assignments only.

15 Oracle Digital Assistant for Project Management

Introduction to Oracle Digital Assistant

Oracle Digital Assistant helps you accomplish your tasks using natural conversation through channels such as SMS and mobile app.

It uses skills, which are individual bots, to interact with you and perform specific types of tasks. Skills contain conversational elements to identify your inputs and identify the intent. Project application administrators must enable the required skills before you can use them.

Each skill enables you to perform multiple actions. An action that you can perform using the Oracle Digital Assistant is known as an intent.

Before You Start

- Ensure that project application administrator has enabled the required skill.
- Ensure that you have the required privileges. The existing functional privileges and business rules in the PPM Cloud application also secure intents. For example, you must be an employee or contingent worker and have the Project Time Entry Mobile Duty to enter time.
- Get access to one of the supported channels. Supported channels are SMS and Mobile App.

Considerations for Interacting with Intents

- To identify a specific project, task, or deliverable by name, you must qualify the name with the business object type. For example, Show me details for project Stark Designs. Adding the word 'project' directly before the project name, 'Stark' in this case, instructs the digital assistant to look for the project whose name is 'Stark Designs' or contains 'Stark'.
- If the assistant doesn't find an exact match for a business object, it looks for similar names. For example, 'Mark task Design as started' can be used to start a task with the name, 'Design Test Plan'.
- If the assistant can't uniquely identify your project, task, or deliverable, then it presents a list to choose from. For example, if you enter 'Mark task Design as complete' and there are multiple tasks whose names start with 'Design', then the digital assistant will display those task names and prompt you to select one.
- English is the only supported language. However, you can use a translation service to translate requests to English and responses from English.

Getting Started

To get started, greet the digital assistant or ask for help to find out what you can do. Here are some sample phrases you can use:

- Hi

- Hello
- Hey
- What can I do?
- What can you do?
- What can you do for me?

Project Management Using Oracle Digital Assistant

If the Project Management skill is enabled, project managers and team members can use Oracle Digital Assistant to perform project management activities such as view and update projects, tasks, deliverables, and issues.

Show My Projects

View high-level information for projects you manage. The information includes project execution progress, count of tasks completing and starting late within the last two weeks, actual and committed costs, approved invoiced total, actual revenue total, and indicates if the project is over or under budget.

Intended user: Project manager

Sample phrases you can use:

- How are my projects doing?
- Show my projects
- Show project <your project name>
- What's the status of my projects?
- What's happening with my projects?
- What's the cost for project <your project name>?
- What's the invoice amount for project <your project name>?
- What's the revenue for project <your project name>?

Things to consider: You can only view the financial details for financial projects. You can also create issues for projects using this flow.

List My Project Tasks

View the tasks assigned to you. The digital assistant groups your tasks into and displays them in three categories: ready to mark as complete, ready to mark as started, and in-progress and upcoming tasks. You can also mark the task as started or completed from the list of tasks displayed.

Intended User: Team Member

Sample phrases you can use:

- List my project tasks
- What are my project tasks?

Things to Consider: You can only view the tasks for which you're the primary resource in Project Execution Management.

Update My Project Tasks

Mark tasks assigned to you as started or completed. You can do this in two ways:

- Request a list of tasks and then start or complete the required task when prompted by the digital assistant.
- Instruct the digital assistant to mark a specific task as started or completed using a direct request that includes the action and task name.

Intended User: Project Manager, Team Member

Sample phrases you can use:

- Mark project task <your task name> as started
- Mark project task <your task name> as completed
- Mark project task <your task name> as done
- Mark project task <your task name> as finished
- Complete project task <your task name>
- Update project task <your task name> to started
- List my project tasks

Then reply with the number from the list for the task you want to mark as completed or started.

Things to Consider: You can only update the tasks where you're the primary resource on the task in Project Execution Management.

List My Deliverables

View the details of the deliverables that you own. The digital assistant groups your open project deliverables by status and then sorts by the need-by date. You can also ask the digital assistant to list only deliverables with a specific priority.

Intended User: Deliverable Owner

Sample phrases you can use:

- List my deliverables
- Show high priority deliverables

Update My Deliverables

Mark project deliverables assigned to you as started or completed. You can do this in two ways:

- Request a list of deliverables and then start or complete the required deliverable when prompted by the digital assistant.
- Instruct the digital assistant to mark a specific deliverable as started or completed using a direct request that includes the action and deliverable name.

Things to Consider: The digital assistant requires three pieces of information to update a deliverable: the action verb, the specific deliverable, and the new attribute value.

- Start your request with an action verb such as update, adjust, mark, or move.
- To identify the deliverable, enter a keyword in the deliverable name. The digital assistant searches for the deliverable using the first word after the word 'deliverable'. When multiple deliverables match the search criteria, the assistant displays the list of deliverables and enables you to select the one that must be updated.
- Enter a phrase about the attribute value. In most cases, the assistant recognizes the attribute that you want to update based on the value you provide. For example, if your phrase includes status values such as in progress and completed, then the assistant knows that you want to update the deliverable status.

Intended User: Deliverable Owner

Sample phrases you can use:

- Mark deliverable <your deliverable name> as completed
- Update deliverable <your deliverable name> to in progress

List My Issues

View open project issues that you own. Additionally, you can view the status and current owner of the action items for an issue. You can also add an action item for an issue.

Intended User: Issue Owner

Sample phrases you can use:

- Show the issues
- List the issues

Create Issues and Action Items

Create an issue and action items for your project. Create an issue by first requesting to view your projects and replying to the create issue prompt or you can simply request to 'create an issue' and the digital assistant provides the list of projects for you to choose from. You will be prompted to provide a short summary, and optionally add a longer description. Once the issue is created, the digital assistant will prompt you to enter action items. You can enter the action items then or later from the list of issues that you own.

Intended User: Project Manager

Sample phrases you can use:

- Create an issue
- Record an issue

Then reply with the number corresponding to the project that you want to create the issue for.

Other same phrases you can use:

- List my projects
- Show project <your project name>

Then reply with the 'create an issue' prompt for the desired project.

Things to Consider: you're the default owner for the issues and action items that you create. You can reassign ownership using the My Work work area in Project Management.

