Project Management

User Guide

Changepoint PSA 2017 SP2

Copyright © 2019 Changepoint Canada ULC. All rights reserved.

U.S. GOVERNMENT RIGHTS-Use, duplication, or disclosure by the U.S. Government is subject to restrictions as set forth in Changepoint Canada ULC license agreement and as provided in DFARS 227.7202-1(a) and 227.7202-3(a) (1995), DFARS 252.227-7013(c)(1)(ii) (OCT 1988), FAR 12.212(a) (1995), FAR 52.227-19, or FAR 52.227-14 (ALT III), as applicable.

This product contains confidential information and trade secrets of Changepoint Canada ULC. Disclosure is prohibited without the prior express written permission of Changepoint Canada ULC. Use of this product is subject to the terms and conditions of the user's License Agreement with Changepoint Canada ULC.

Documentation may only be reproduced by Licensee for internal use. The content of this document may not be altered, modified or changed without the express written consent of Changepoint Canada ULC. Changepoint Canada ULC may change the content specified herein at any time, with or without notice.

Contents

1. Project Management Introduction **13**

About project management 13
About project resources 13
About resource leveling 14
About soft-bookings 14

2. Creating Projects **15**

About methods for creating projects 15
Accessing a project 15
About the noneditable sections in the project profile 15
Icons in the Projects tree view 16
About creating projects 16
About project statuses 17
About project phases 18
About task status updates 18
About using fiscal periods on projects 19
About restricting time entry for projects 19
About setting or changing time entry restrictions when there are existing projects 19
Creating a project 20
Create/Edit Project dialog, General tab options 20
Entering budget information for a project 22
About specifying time approvers for projects 23
Specifying time approvers for a project 23
Setting default time entry restrictions for a project 24
Create/Edit Project dialog, Budget and approval information tab options 24
About specifying work locations and work codes for a project 25
Specifying a work location and work code for a project 26
Setting up split billing for a project 26
About granting access to projects 27
Granting a resource view access to a project 27
Removing view access restrictions to project requests 28
About specifying access for project plan editors 28
Specifying access for project plan editors 29
Granting access to summary task managers 29
Granting access to subprojects 30
Allowing resources to save baselines 30

Allowing resources to submit project expenses 31
Associating a project to a product 32
Removing the association between a project and a product 32
About creating subprojects 33
Creating a subprojects 33

3. Project Teams 35

About project teams 35
Creating a project team entry 35
Edit Project dialog, Project team tab options 36
Copying projected resources to a project team 37
Submitting a resource request for a project team 38
Editing a project team entry 39
Deleting a project team entry 39
Assigning a project team resource to a task 39

4. Managing Projects 41

About editing projects 41
Editing a project 42
About deleting a project 42
Deleting a project 42
About copying projects 43
Copying a project 44
Copy Project dialog box options 44
About completing the Copy Project dialog box 46
Reassigning a project 48
Taking ownership of a project 48
About saving project baselines 48
Saving a project baseline 49
About rolling up projects 50
Rolling up a project 51

5. Managing Tasks 53

About tasks 53
Task icons 53
Accessing a task 54
About creating tasks 54
Task editing view, General section options 55
Creating a task 58
Completing the General section of the task editing view 59

Associating a task to a product 59
Assigning a resource to a task assignment 60
Task editing view, Assignments section options 61
About selecting resources for tasks 62
Checking the available hours of a resource 63
About checking the available hours for resources 63
Example of Check Available Hours calculations 64
About viewing billing rates and cost rates in task assignments 66
About allocating planned hours for a task assignment automatically 66
Allocating effort for a task assignment automatically 67
Submitting resource requests for tasks 68
Deleting resources from task assignments 69
About saving task baselines 69
Example of saving task baselines 70
Saving a task baseline 71
About saving a task baseline without affecting higher level tasks 71
Saving a task baseline without affecting higher level tasks 72
Restricting access to an open task 72
About task dependencies (linked tasks) 73
Task dependency options 74
Linking tasks from the task profile 74
Unlinking tasks from the task profile 75
Accessing the task editing view 76
About editing the Billable status of a task 76
About editing configurable fields on tasks 77
Changing the billing role for a task 77
Changing the work location and work code settings for a task 78
Deleting a task 79
About reopening a completed task 79
Reopening a completed task (for project managers) 80
Sorting tasks 80

6. Project Worksheet 81

Project worksheet basics 81
Accessing the project worksheet 81
Expanding and collapsing tasks in the project worksheet 82
Switching between fiscal and daily periods in the project worksheet 82
Displaying time periods that start from a specific date in the project worksheet 83
Displaying the previous or next specified number of periods in the project worksheet 83
Running reports in the project worksheet 84

Performing searches in the project worksheet 84
About errors in the project worksheet 85
About printing the project worksheet 85
Printing the project worksheet 85
About exporting the project worksheet data to Microsoft Excel 86
Exporting the project worksheet data to Microsoft Excel 86
About working on linked MSP projects in the project worksheet 86
About creating project worksheet views 87
About related columns 87
Creating a project worksheet view 87
Copying a project worksheet view 88
Editing a project worksheet view 89
Deleting a project worksheet view 90
About filtering the information displayed in the project worksheet 90
Manage Filters (PW) dialog box options 91
About calculated columns 92
Filter examples 92
Creating a project worksheet filter 93
Editing a project worksheet filter 94
Deleting a project worksheet filter 95
Applying a project worksheet filter 95
Clearing a project worksheet filter from the view 95
About managing tasks in the project worksheet 95
About locking tasks for editing in the project worksheet 96
Locking a task for editing in the project worksheet 97
Unlocking a task in the project worksheet 97
Selecting multiple tasks or task assignments in the project worksheet 97
About moving tasks in the project worksheet 98
Moving multiple tasks in the project worksheet 98
Moving a single task in the project worksheet 98
About creating summary tasks and subtasks in the project worksheet 99
Indenting and outdenting tasks in the project worksheet 99
About creating tasks in the project worksheet 99
About validation, rollup, and critical path calculations in the project worksheet 100
Creating a task in the project worksheet 101
About copying tasks in the project worksheet 102
Copying a task in the project worksheet 102
About linking tasks in the project worksheet 103
Linking tasks in the project worksheet 103
Identifying predecessor and successor tasks in the project worksheet 104

About editing settings for linked tasks in the project worksheet 104
Editing settings for linked tasks in the project worksheet 104
Unlinking tasks in the project worksheet 105
About creating task assignments in the project worksheet 106
Creating a task assignment in the project worksheet 106
About using resource searches for task assignments in the project worksheet 107
Using resource searches for task assignments in the project worksheet 107
About copying task assignments in the project worksheet 108
Copying a task assignment in the project worksheet 108
About resource requests and task assignments in the project worksheet and PPW 109
Adding resources to your preferred resources from the project worksheet 110
About editing tasks in the project worksheet 110
Editing draft tasks in the project worksheet 110
Related columns in the project worksheet 111
Editing a task in the project worksheet 111
About deleting a task in the project worksheet 111
Deleting a task in the project worksheet 112
About deleting task assignments in the project worksheet 112
Deleting a task assignment in the project worksheet 112
Editing a check box in the project worksheet 113
Specifying multiple values in a list in the project worksheet 113
Editing multiple values in a list in the project worksheet 114
Clearing values selected from a list in the project worksheet 115
Specifying dates in the project worksheet 115
Copying a value to multiple tasks and task assignments in the project worksheet 117
About allocating planned hours in PPW and the project worksheet 117
Differences between PPW and project worksheet 118
About selecting loading methods 118
Selecting a loading method for a task or task assignment in the project worksheet 123
About automatically allocating planned hours in the project worksheet 124
About manually allocating planned hours in the project worksheet 124
Manually allocating planned hours in the project worksheet 124
Allocating recurring planned hours in the project worksheet 125
Editing recurring planned hours in the project worksheet 126
About displaying resource availability in the project worksheet 126
Displaying resource availability in the project worksheet 127
Allocating planned hours to match resource availability 128
Replacing planned information with forecast and actual information 128
Editing the forecast information for task assignments in the project worksheet 129
About updating remaining effort and percent complete based on actual effort 130

Updating remaining effort and percent complete based on actual effort 130
Viewing task status information in the project worksheet 130
About viewing critical path information in the project worksheet 131
Viewing critical path information in the project worksheet 131
Examples of allocating planned hours in the project worksheet 132
About date and effort calculations in the project worksheet 136
About using the Level option in project worksheet calculations 137
Performing date and effort calculations in the project worksheet 137
Project worksheet view for calculations, required columns 138
Examples of project worksheet calculations 139
About the project worksheet Gantt chart 143
Accessing the project worksheet Gantt chart 144
Changing the timescale in the project worksheet Gantt chart 144
About managing tasks using the project worksheet Gantt chart 145
Changing the duration of a task in the project worksheet Gantt chart 145
Moving a task in the project worksheet Gantt chart 145
About task dependencies in the project worksheet Gantt chart 146
Linking tasks in the project worksheet Gantt chart 146
Unlinking tasks in the project worksheet Gantt chart 146
Showing the progress of tasks and task assignments in the project worksheet Gantt chart 146
Showing the critical path in the project worksheet Gantt chart 147
Showing forecast or baseline information in the project worksheet Gantt chart 147
Print Setup dialog box options for the project worksheet Gantt chart 147

7. Project Planning Worksheet (PPW) 149

PPW basics 149
PPW settings 149
PPW best practices 150
Accessing PPW 152
About the project summary totals in PPW 152
PPW keyboard shortcuts 153
Expanding and collapsing tasks in PPW 154
Indenting and outdenting tasks in PPW 154
Searching in PPW 155
Moving a task in PPW 155
About printing in PPW 155
Running a report from PPW 155
Exporting PPW to Microsoft Excel 156
Copying values in rows in PPW 156

Saving baselines in PPW 156
Showing actual effort or availability in PPW 157
About PPW views 157
Task views 157
Task assignment views 158
About creating PPW views 158
About related columns 159
Creating a PPW view 159
Manage Views (PPW) dialog box options 160
Available columns for PPW task views 161
Available columns for PPW task assignment views 166
About sorting rows in PPW 170
Sorting the rows in PPW 170
Editing a PPW view 171
About switching PPW views and filters 171
About using the split view in PPW 172
Using the split view in PPW 172
About filtering data in PPW 173
About PPW filters 173
Creating a PPW filter 174
Manage Filters (PPW) dialog box options 175
Editing a PPW filter 175
About filtering rows based on column data in PPW 176
Filtering rows based on column data in PPW 176
Creating a task in PPW 177
About rollup in PPW 178
About linking tasks in PPW 178
Specifying a default dependency type and lag time 179
Specifying time entry restriction settings in the project planning worksheet (PPW) 180
Copying a task in PPW 180
About assigning resources to tasks in PPW 181
About duration calculations in PPW 182
Assigning resources to a task in PPW 182
Assigning resources to multiple tasks in PPW 183
About displaying resource availability in PPW 184
Setting up a warning when effort distribution on task assignments is overridden 185
About reenabling the message that the planned effort is different for one or more tasks 185
Creating a task assignment in PPW 185
About resource requests and task assignments in the project worksheet and PPW 186
Editing a task assignment in PPW 187

About marking task assignments as completed in PPW 188
About replacing assigned resources in PPW 189
Replacing an assigned resource in PPW 190
About allocating planned hours in PPW and the project worksheet 190
Differences between PPW and project worksheet 191
About selecting loading methods 191
About allocating planned hours to daily or fiscal periods in PPW 195
Allocating recurring planned hours in PPW 196
About replacing planned effort or forecast effort in PPW 197
Replace planned effort with past actual effort plus forecast effort 197
Replace past planned effort with actual effort 197
Replace forecast remaining effort with planned effort minus actual effort 198
Specifying the default settings for replacing past effort in PPW 198
About activating tasks in PPW 198
Activating a task in PPW 199
Validating changes in PPW 200
Automatically activating draft tasks in PPW 200
About editing tasks in PPW 200
Editing a task in PPW 201
About marking tasks and task assignments as completed in PPW 201
About the Gantt chart in PPW 202
Changing the timescale in the Gantt chart in PPW 203
Managing tasks in the Gantt chart in PPW 203
Linking tasks in the Gantt chart in PPW 204

8. Reporting Project Progress 205

Viewing the Task Status Compliance report 205

9. Creating quick plans and quick projects 207

Creating a project using the Create Quick Plan report 207
Create Quick Plan report, engagement options 207
Defining the project for a quick plan 210
Create Quick Plan, project options 211
Adding and assigning tasks for a quick plan 212
Create Quick Plan, task options 213
Creating a project based on the projected resources of an engagement 214

10. Microsoft Project Integration 215

About Microsoft Project integration 215
About data transfer between linked MSP projects and Changepoint 215

Steps required before linking a project 217
About creating a list of resources for a linked MSP project 217
Installing the Changepoint MSP COM Add-in 218
Default schedule settings for Microsoft Project 219
Configuring the Changepoint website settings 219
Accessing a linked MSP project 220
About linking Changepoint projects to Microsoft Project 220
Link Changepoint Project dialog box options 221
Linking a Changepoint project to Microsoft Project 223
About editing a linked MSP project 224
Editing a linked MSP project 224
Deleting a task or task assignment from a linked MSP project 225
Updating actual time and dates in a linked MSP project 225
About identifying Changepoint resources in a linked MSP project 226
About forecast start and finish dates in linked MSP projects 226
Viewing task usage information in a linked MSP project 226
About removing the MSP link 226
Removing the MSP link 227
Microsoft Project and Changepoint field mappings 227
About editing tasks and task assignments in linked MSP projects 235
Editing a task in a linked MSP project 236
Editing a task assignment in a linked MSP project 236
About setting baselines in linked MSP projects 237
About saving interim plans in linked MSP projects 237
Setting up multiple baselines in a linked MSP project 237

11. Project Management Troubleshooting 241

Scenarios for saving baselines 241
Troubleshooting projects 244
Troubleshooting linked MSP projects 246
Troubleshooting tasks 247
Troubleshooting the project worksheet 248
Troubleshooting PPW 251

Index 255

1. Project Management Introduction

About project management

After an engagement is created for a company, you can create projects for the engagement. The approval rules for projects for customers are defined in engagements.

You use projects to define and track work that is being done for a company or an engagement. You can set up projects as billable or non-billable. The progress of a project is tracked through tasks that define the project work. You assign tasks to resources, and the resources enter their time and expenses for the tasks into Changepoint.

You can group related tasks under summary tasks and create dependencies between tasks. If a project is large or complex, you can divide it into subprojects. Each project can support up to 20 levels of tasks and subprojects. These levels are displayed in the **Projects** tree view.

When you no longer require the project to be available in Changepoint, you can archive the project data.

About project resources

The typical resources that work with projects are the following:

- Project manager – has full edit access to the project and its tasks. The project manager is specified on the project profile. There can only be one project manager for a project at a time.
- Project plan editors – can edit existing project tasks and can view the project dialog box but cannot edit the project profile. Project plan editors are granted access to the project by the project manager. The project manager can also specify whether project plan editors can create and delete project tasks, save project baselines, and take over the project to become the project manager.
- Summary task managers – can view the summary tasks and subtasks under the summary tasks that they have been assigned to. The project manager can also specify whether summary task managers can create, edit and delete the subtasks under their summary tasks.
- Resources assigned to project tasks – can view and update the status of the tasks that they have been assigned to.

About resource leveling

If resource leveling is enabled for your Changepoint installation, all entries that affect task assignments are validated. If the task assignments will result in a resource being overbooked, a validation report displays a list of the affected task assignments.

Depending on how the staffing workgroup for the engagement that is associated with the project has been configured, the validation report will contain either warnings or failures:

- If the validation report contains warnings, then you can choose either to accept the warning and save the task assignment or cancel the task assignment.
- If the validation report contains failures, the task assignment cannot be saved.

About soft-bookings

Soft-bookings are tentative bookings of resources for planning purposes. Soft-booked time is shown as flexible on the resource schedule calendar. Available for task assignments, project team entries, request demand items, projected resources and calendar entries.

If resource request workflow is not used and soft-booking is allowed, resource request initiators determine whether a resource is soft-booked at the time they create the resource request.

If resource request workflow is used and soft-booking is allowed:

- Resource requests created by non-resource managers are treated as soft-bookings until they are approved by the resource manager.
- When a resource request is approved, the booking changes to hard-booked and the resource is committed for the duration of the request.

Resource managers can directly hard-book resources. The default setting for engagements and projects is soft-booked, and for tasks it is hard-booked.

2. Creating Projects

About methods for creating projects

The following methods for creating a project are available:

- Create project – you can create a detailed project plan, and the related tasks, and task assignments. The related company, engagement, and billing office must already exist. For more information, see "Creating a project" on page 20.
- Quick Plan – you can set up a simple engagement, project and task in one step. For more information, see the "Creating a project using the Create Quick Plan report" section on page 207.
- Quick project – if you do not require a detailed project plan, you can create a quick project from an engagement. A quick project is based on the work team information that is defined on the **Projected resources** tab of the engagement dialog box. For more information, see "Creating a project based on the projected resources of an engagement" on page 214.
- Copy an existing project – you can use an existing project as a template to create a project or a project and its tasks. For more information, see "About copying projects" on page 43.

Accessing a project

1. Click **General** > **Projects**.

   The **Projects** tree view appears.

2. Expand the tree view, and then select the project.

   The project profile appears.

About the noneditable sections in the project profile

The project profile contains the following sections that cannot be edited:

- **Record information** – displays information about when the project was created and by whom, and when the project was last updated.
- **Fiscal year breakdown** – displays the planned, actual and remaining hours for the project distributed across the fiscal years that the project covers. This section displays only if fiscal periods have been specified for the project.

- **Portfolio memberships** – displays only if the project is part of a portfolio. You can click the portfolio names to view the portfolios.
- **Project dependencies** – displays all of the information related to both predecessor and successor tasks.

Icons in the Projects tree view

The following table describes the project icons that display in the project tree view.

	Blue project icon indicates that you are the project manager for the project.
	Gray project icon indicates that you have view access to the project.
	Microsoft Project icon indicates that the project is linked to a Microsoft Project project.

About creating projects

After companies and engagements have been created, you can create your project, add tasks and assign resources. All projects in Changepoint are associated with an engagement.

You can create a project using the **New** option or from an entity (engagement, company, opportunity or request) profile. When you create a project from an entity profile, the entity-related information is automatically added to the project.

You can create a project by completing only the following fields and then saving the project:

- **Project**
- **Company**
- **Engagement**

You can then enter the rest of the information for the project in stages.

The following fields are required, but because they have default values, you do not have to enter values for them:

- **Planned start**
- **Planned finish**
- **Planned hours**

- **First status** (required only if **Status required** is selected in the **Project type** field)

You can enter values for the planned fields when you create the project, but the actual values based on the project data can be determined by rolling up the project after the tasks have been added.

About project statuses

The project status affects all of the tasks related to the project, and controls the project-related functionality that resources are able to perform.

The following table lists the standard project statuses and descriptions of how the statuses can be changed in the workflow.

Status	Description
Draft	The project is under revision. Only the project manager has access to the project profile while it is in **Draft** status. Assigned resources cannot view the project, update the status of project tasks, or enter time and expenses. When you create a new project, it is in **Draft** status. **Draft** can be changed to any other status.
Active	The project is in progress. Only the project manager can edit the project profile and tasks. All other resources can access the project and its tasks and enter time and expenses according to their access rights. **Active** can be changed to **Completed** or **Inactive**. When project managers change the status from **Active** to **Completed**, all associated tasks are marked as **Completed** and are locked.
Completed	The project has been completed. Resources cannot enter project expenses or time for project tasks. **Completed** can be changed to **Active** or **Inactive**.
Inactive	The project is suspended. Resources cannot enter project expenses, or time against project tasks until the status is changed back to **Active**. Inactive can be changed to **Active** or **Completed**.

About project phases

Project phases represent the stages in a project's life cycle. When you create tasks, you can specify the project phase in which the work should be done. When a project is rolled up, the current project phase is based on the latest phase of the tasks that have actual hours recorded, and is displayed in the **Project phase** field on the project profile.

> **Note:** The **Project phase** field displays on the project profile only after the project is rolled up.

If the project includes summary tasks, the project phase is based on the summary task and not its subtasks. As a best practice, you should ensure that either all tasks under a summary task have the same project phase as the summary task, or that no phase is specified (provided that project phases are not mandatory). If no project phase is specified for the summary task, then the project phase of its subtasks is taken into consideration.

The **Proposed phase** field on the project profile displays the phase that the project is working towards. If project workflow is enabled, the field displays the workflow step that is currently in progress. By comparing the proposed phase with the actual phase, you can see if work is occurring within a phase that has not yet been approved to start.

About task status updates

Status updates for project tasks can be mandatory or not required:

- **Status required** – Resources must update the status of their assigned tasks. However, you can remove the status requirement for specific tasks and task assignments if necessary.
- **Status not required** – Resources are not required to update the status on their assigned tasks. You cannot specify that certain tasks require status updates. Therefore, if you require updates on any tasks in your project, you must select the **Status required** project type when setting up your project.

For task assignments that do not require status updates:

- Only the project manager, project plan editor, or the resource who is assigned to the task can specify when the task is completed. Rolling up a project does not automatically set the task assignments as complete.
- When a project is rolled up, the remaining hours are calculated as:

  planned hours – actual hours

If the actual hours are greater than or equal to the planned hours, the remaining hours are set to 1. The percentage complete is calculated as follows:

actual hours/(actual hours + remaining hours).

About using fiscal periods on projects

If you want to use fiscal periods on a project, you must add them before you create tasks and task assignments.

When you add fiscal periods to a project, the planned effort is recalculated using a specific default loading method and can result in changes to planned hours totals and allocations. Also, you cannot edit dates and planned hours in past fiscal periods.

About restricting time entry for projects

You can restrict resources to entering time only when the time entry complies with one or both of the following conditions:

- date of the time entry is within the planned start and planned finish dates of the project, task or task assignment
- total amount of time entered for the task or task assignment is within the total planned effort of the project, task or task assignment

You can set default settings for the time entry restrictions on the following entities:

- billing offices – for projects for the billing office engagements
- projects – for the tasks and task assignments for the project
- tasks – for the task assignments for the task

The default settings are automatically applied to new entities, but can be overridden on individual projects, tasks, and task assignments. The options selected on task assignments take priority over task settings, which take priority over the project settings.

About setting or changing time entry restrictions when there are existing projects

The time entry restriction settings are not automatically applied to projects, tasks, and task assignments that exist when you enable or change the settings. Therefore you must manually apply the settings to existing entities as follows:

- To restrict time entries based on project planned data, enable the setting on each project.

- To restrict time entries based on task planned data, enable the setting on each task.
- To restrict time entries based on task assignment planned data, enable the setting on each task assignment.

You can specify time entry restriction settings for tasks and task assignments on projects as well as in PPW and the task editing view.

Creating a project

1. Click **New** > **Project**.

   The **Create Project** dialog box appears.

2. In the **General** tab, complete the fields as required. For more information, see "Create/Edit Project dialog, General tab options" on page 20.

3. Click **Save**. The project is created.

4. To complete the project, see the following topics:

   - "Entering budget information for a project" on page 22
   - "Specifying time approvers for a project" on page 23
   - "Specifying a work location and work code for a project" on page 26
   - "Allowing resources to submit project expenses" on page 31
   - "About granting access to projects" on page 27
   - "Associating a project to a product" on page 32

Create/Edit Project dialog, General tab options

Field	Description
Project field	Name of the project.
Alternate name field	Specifies the alternate name for the project. Typically used to display the project name in a different language
Company type-ahead field	Company for which the project is being created.
Engagement list	Engagement for which the project is being created.

Field	Description
Planned start field	Start date for the project.
Planned finish field	Finish date for the project.
Planned hours field	Planned hours for the project.
Status list	Overall status of the project.
Proposed phase list	Project phase that the project is currently working towards. If project workflow is enabled, the field displays the state in the current workflow process.
Project ID field	ID for the project. Depending on the organization, the project ID may be automatically assigned by the system.
Billable project check box	When selected, specifies that the project is billable.
Project contact list	Contact from the company that is associated to the project.
Billing contact list	Contact to whom the invoices will be sent.
Project type list	Option that specifies whether resources must update the status of their assigned tasks. Options are: • **Status required** • **Status not required**
First status date field	Date that resources must start updating the status of their assigned tasks, if the project type is set to **Status required**.
Status every [ ] weeks field	Frequency in weeks that resources are required to enter a status update for their assigned tasks.
CP project type list	Custom project type that allows the project to be categorized within Changepoint.
Fiscal period type-ahead field	Billing office whose fiscal periods apply to the project worksheet.

Field	Description
Cost center type-ahead field	Cost center that is associated with the project. The cost center determines the burden rate that applies to cost rates for budgeted services, when specific resources are not selected.
Work performed for type-ahead field	Company for which the work is performed, as specified in the associated engagement.
Opportunity type-ahead field	Opportunity to associate to the project
Request field	Request number of the originating request, if applicable.
View in Client Portal check box	When selected, Client Portal users can view the project and its tasks, and create requests for the project.
Display MSP WBS in tree view check box	When selected, displays the Microsoft Project work breakdown structure (WBS) number for a task before the task name in the **Projects** tree view.
Calculate critical path check box	When selected, critical path is calculated for the project.
Comments field	Comments regarding the project.

Entering budget information for a project

The budget information that you enter here is for information purposes only and is displayed in the **Budget information** section of the project profile. To estimate and track the labor, material and expenses required to perform the work defined in the project, you can create a project-specific budget.

1. Access the project.
2. Click **Actions** > **Edit**.

   The **Edit Project** dialog box appears.
3. Click the **Budget and approval information** tab.
4. Complete the fields as required. For more information, see "Create/Edit Project dialog, Budget and approval information tab options" on page 24.

5. Click **Save**.

About specifying time approvers for projects

By default, the time approver specified for a resource in user setup approves all time for a resource. However, if a time approver has been specified for an engagement, then the engagement time approver approves time for all projects under the engagement.

If an engagement is configured to allow time approval on projects, you can also enable time approval and specify a time approver for individual projects under the engagement. In this case, the specified project time approver approves the project time, followed by the engagement approver. If a project time approver is not specified, then the resource approver approves the time, followed by the engagement approver.

If a time approver is not specified for the engagement, then the project time is approved by the project time approver only.

The following table shows the time approvers when time approvers are specified on more than one entity.

Engagement Time Approver	Project Time Approver	Resource Time Approver	Time entry approvers
Specified	Specified	Specified or not specified	The project time approver, then the engagement time approver.
Not specified	Specified	Specified or not specified	The project time approver.
Specified	Not specified	Specified	If time approval is enabled for the project: the resource time approver, then the engagement time approver If time approval is *not* enabled for the project: the engagement time approver.

Specifying time approvers for a project

1. Access the project.
2. Click **Actions** > **Edit**.

The **Edit Project** dialog box appears.

3. Click the **Budget and approval information** tab.
4. Complete the fields as required. For more information, see "Create/Edit Project dialog, Budget and approval information tab options" on page 24.
5. Click **Save**.

Setting default time entry restrictions for a project

The time entry restrictions that you specify for a project are the default settings for the tasks and/or task assignments for the project.

1. Access the project for editing
2. Click the **Budget and approval information** tab.
3. To prevent resources from entering time entries that are not within the planned dates for the project, task, and/or task assignment, in the **Restrict time entries to within the planned dates for** option, select the applicable entity check boxes.
4. To prevent resources from entering time entries when the planned effort for the project, task, and/or task assignment is exceeded, in the **Restrict time entries to within the planned effort for** option, select the applicable entity check boxes.
5. Click **Save**.

Create/Edit Project dialog, Budget and approval information tab options

Field	Description
Labor field	Proposed labor budget for the project.
Expenses field	Proposed reimbursable expense budget for the project.
Other expense field	Proposed budget for other expenses for the project.

Field	Description
Project value field	Value of, and currency for, the project. The project value is one of the search criteria for resources.
Enable project time approval check box	When selected, the time worked on the project must be approved at the project level.
Time approver field	Resource who approves the time submitted for the project.
Secondary time approver field	Resource who approves the time that the time approver submits.
Time entry restrictions section	
Restrict time entries to within the planned dates for [project, task, task assignment] check boxes	Prevents resources from entering time for dates that are outside of the planned start and planned finish dates of the selected option. (project, task, task assignment).
Restrict time entries to within the planned effort for [project, task, task assignment] check boxes	Prevents resources from entering time when the total time entered for the selected option exceeds the planned effort.

About specifying work locations and work codes for a project

Work locations and work codes are required to assign the correct taxation information when invoicing the customer. Work locations specify where the work is performed, and work codes specify the type of work.

The work locations and codes for a project come from the associated engagement. However, you can specify different work locations and work codes or change the default ones for the project. The default work location and work code display on all time and expense records for the project.

You can allow resources to change the work location on time and expense entries. You can also allow resources to select a work location that has not been specified for the project. The system administrator can set up an email notification to let you (the project manager) know when expenses are being entered for a location that is not specified on the project.

If work locations or work codes are changed or removed from the engagement, they display in red. They are still available to select at another time.

Specifying a work location and work code for a project

1. Access the project.
2. Click **Actions** > **Edit**.

   The **Edit Project** dialog box appears.
3. Click the **Work locations/work codes** tab.
4. In the **Selected work locations** list, expand the tree view and select the work location.
5. To change the default work location:
   a. Right-click a work location.
   b. Select **Set as default**.
6. To allow resources to select a different work location for expenses, select the **Allow expense location override** check box.
7. To allow resources to choose a work location that is not in the **Selected work locations** list for an expense, select the **Allow non-project locations** check box.
8. In the **Selected work codes** list, expand the tree view and select the work codes.
9. To change the default work code:
   a. Right-click a work code.
   b. Select **Set as default**.
10. Click **Save**.

Setting up split billing for a project

You select companies and specify the percentage that each company will be invoiced. You can either specify the percentage manually as you select each company, or select all of the companies first and then select the option to automatically split the billing amount evenly between the companies.

1. Access the project for editing.

   The **Edit Project** dialog box appears.

2. Click the **Split billing** tab.
3. To specify a company:
   a. Right-click in the table, and then select **Insert**.
   b. In the **Company** type-ahead field, select the company.
4. To add the companies that have already been for the engagement, right-click in the table and select **Load engagement split billing**.
5. To specify the percentage, do one of the following:
   - To specify the percentage manually, enter the value in the **Percentage** field.
   - To split the billing evenly between all companies, right-click in the table and select **Auto-split**.
6. Click **Save**.

About granting access to projects

As project manager, you automatically have access rights to view and edit all aspects of the project.

However, you can manage the access for other resources. For more information, see the following:

- "Granting a resource view access to a project" on page 27
- "Removing view access restrictions to project requests" on page 28
- "Specifying access for project plan editors" on page 29
- "Granting access to summary task managers" on page 29
- "Granting access to subprojects" on page 30
- "Allowing resources to save baselines" on page 30
- "Allowing resources to submit project expenses" on page 31

Granting a resource view access to a project

When you grant view access to a project to a resource, the resource can view the project and all of its tasks, including in the project worksheet.

1. Access the project.

2. Click **Actions** > **Edit**.

   The **Edit Project** dialog box appears.

3. Click the **Access** tab.

4. In the **View project** list, select the resources.

   Tip: To add resources to the **View project** list, and optionally to your preferred resources, right-click in the list and then select **Manage Resources**.

5. Click **Save**.

Removing view access restrictions to project requests

If system-wide restrictions for viewing requests have been set up by your organization, only the resources that have been granted specific access to a project can view the project requests. However, you can remove the restrictions for a project.

If system-wide restrictions have not been set up, you cannot add access restrictions to a project.

1. Access the project.

2. Click **Actions** > **Edit**.

   The **Edit Project** dialog box appears.

3. Click the **Access** tab.

4. In the **Request access** section, select the **Disable view access restrictions for viewing all requests under this project** check box.

5. Click **Save**.

About specifying access for project plan editors

You can designate resources as project plan editors for a project. Only resources who have the security access to manage tasks are available as potential project plan editors. By default, project plan editors can only view and edit project tasks. However, you can set additional options to allow them to also create and delete project tasks, assign summary tasks, and take ownership of the project.

You can remove project plan editor access from resources at any time, except for the default project plan editors.

Specifying access for project plan editors

1. Access the project.
2. Click **Actions** > **Edit**.

   The **Edit Project** dialog box appears.
3. Click the **Access** tab.
4. In the **Edit project plan** list, select the resources to be project plan editors for your project.

   Tip: To add resources to the **Edit project plan** list, and optionally to your preferred resources, right-click in the list and then select **Manage Resources**.
5. In the **Project plan editor access** section, do the following:
   - To allow project plan editors to assign summary tasks to resources, select the **Allow to assign summary tasks** check box.
   - To allow project plan editors to create new tasks for the project, select the **Allow to create new tasks** check box.
   - To allow project plan editors to delete tasks from project, select the **Allow to delete tasks** check box.
   - To allow project plan editors to take ownership of the project, select the **Allow to take ownership of the project** check box.
6. Click **Save**.

Granting access to summary task managers

A summary task manager is a resource who has been assigned to a summary task for the project. You can set options to allow summary task managers to create, edit and/or delete the subtasks under their assigned summary tasks.

1. Access the project.
2. Click **Actions** > **Edit**.

   The **Edit Project** dialog box appears.
3. Click the **Access** tab.
4. In the **Summary task manager access** section, do the following:

- To allow summary task managers to edit the subtasks under the summary tasks to which they are assigned, select the **Allow to edit tasks** check box.
- To allow summary task managers to add new tasks under the summary task, select the **Allow to add new tasks** check box.
- To allow summary task managers to delete subtasks associated with the summary task, select the **Allow to delete tasks** check box.

5. Click **Save**.

Granting access to subprojects

1. Access the project.
2. Click **Actions** > **Edit**.

   The **Edit Project** dialog box appears.
3. Click the **Access** tab.
4. In the **Subproject settings** section, do the following:
   - To allow resources to create a subproject under the project, select the **Allow subprojects to be created** check box.
   - To automatically make the project manager a project plan editor for all subprojects, select the **Allow the project manager complete access to all subprojects** check box.
   - To display all subprojects in the **Projects** tree view, select the **Display subprojects in the project tree view** check box. If this check box is cleared, only the project manager of the subproject can view it in the tree view only.
   - To have planned start, planned finish and planned hours roll up from subprojects to the parent project task when the project is rolled up, select the **Roll up planned information from subprojects to parent task** check box.
5. Click **Save**.

Allowing resources to save baselines

You can control whether project plan editors and summary task managers can save baselines. You can also give resources the option to save a baseline for a task with or without affecting

higher-level tasks. For more information, see "About saving a task baseline without affecting higher level tasks" on page 71.

1. Access the project.
2. Click **Actions** > **Edit**.

   The **Edit Project** dialog box appears.
3. Click the **Access** tab.
4. In the **Baseline settings** section, do the following:
   - To allow project plan editors to save baselines for the project, select the **Allow project plan editors to save baselines** check box.
   - To allow summary task managers to save baselines for their summary tasks and subtasks, select the **Allow summary task managers to save baselines** check box.
   - To give resources the option to save baselines without affecting higher-level tasks, select the **Allow users to save task baselines without affecting higher-level tasks** check box.
5. Click **Save**.

Allowing resources to submit project expenses

You can allow all of the resources who are assigned to project tasks to submit expenses for the project. You can also allow:

- individual resources to submit expenses even if they are not assigned to any project tasks
- all resources who are assigned to the project to override the billable status on expenses, even if the expenses for the project are billable

The **Expense only users list** includes your preferred resources who have access rights to create expenses. If resource requests are enabled at the project level, then list also includes the resources from the project team who have access rights to create expenses.

1. Access the project.
2. Click **Actions** > **Edit**.

   The **Edit Project** dialog box appears.
3. Click the **Expense access** tab.

4. To allow resources to submit expenses even if they are not assigned to any project tasks, select the resources in the **Expense only users** list.

   Tip: To add resources to the **Expense only users** list, and optionally to your preferred resources, right-click in the list and then select **Manage Resources**.

5. To allow all of the resources who are assigned to the project to submit expenses, select the **Allow resource with task assignments to enter expenses** check box.

6. To allow all of the resources who are assigned to the project to override the billable status for a particular expense, select the **Allow users to override the [Billable] status on expenses entered for this project** check box.

7. Click **Save**.

Associating a project to a product

You can associate projects to the products for which the work is being done. When you associate a project to a product, all of the project tasks are automatically associated with the product. You can also associate individual tasks in the same project to different products. For more information, see "Associating a task to a product" on page 59.

The first product you select is marked as the primary product and is used for reporting purposes.

1. Access the project.

2. Click **Actions** > **Edit**.

   The **Edit Project** dialog box appears.

3. Click the **Products** tab.

4. In the **Products** list:

   a. Expand the tree view and select the primary product associated with the project.

   b. Select additional products, as required.

5. To change the primary product, click the name of the product instead of the check box.

6. Click **Save**.

Removing the association between a project and a product

1. Access the project.

2. Click **Actions** > **Edit**.

   The **Edit Project** dialog box appears.

3. Click the **Products** tab.

4. To remove the association to a primary product, you must first select a different primary product by clicking the name of the product instead of the check box.

5. Clear the check box for the primary product.

6. Click **Save**.

About creating subprojects

You can create subprojects when you require a more complex project structure. Subprojects appear the same as projects in all tree views.

By default, only the project manager of the subproject can view it in the **Projects** tree view. To allow all resources who have access to the project to view the subproject, you must select the option for displaying subprojects on the parent project.

Creating a subproject

You must create a subproject from the profile of a task that has been created for that purpose, and you must be assigned to that task.

1. Create a task.

2. Assign the task to yourself.

3. From the task profile, click **Actions** > **Create** > **Subproject**.

   The **Edit Project** dialog box appears.

4. Complete the fields as required. For more information, see "Creating a project" on page 20.

5. Click **Save**.

3. Project Teams

About project teams

If resource requests are enabled at the project level, the **Project team** tab is available on the project dialog box. You define your general resource requirements by adding project team entries. Project team entries consist of combinations of billing roles, functions, and the duration and estimated effort of assignments.

You manage the project team resources as follows:

- add project team entries
- submit the resource requests for approval
- track the progress of resource requests
- after resource requests have been approved, assign resources to project tasks

Creating a project team entry

For planning purposes, you can create project team entries that are based on billing roles, instead of naming specific resources. Later, you can use these project team entries to submit resource requests.

1. Access the project for editing.
2. Click the **Project team** tab.
3. In the **Project Team Details** section, complete the fields as required. For more information, see the "Edit Project dialog, Project team tab options" section on page 36.
4. To add resources to your preferred resources list, in the **Project Team Details** section, click **Actions > Manage resources**.
5. In the section, click **Actions > Apply**.

   The entry is added to the project team table.
6. Click **Save**.

Edit Project dialog, Project team tab options

Field	Description
Assigned resource type-ahead field	Resource that has been assigned to the project team. This field is editable when no resource request is associated with this project team. This list includes resources who are exempt from the resource request process.
Requested resource list	Resource that you request for project team entry. Available only when no resource has been assigned. When you submit the resource request, the requested resource in this section is set by default from the requested resource in the project team. You can modify this value later, if required.
Billing office list	Billing office from the project. You can select a different billing office to access a different set of billing roles.
Billing role list	Billing role of the project team entry.
Function type-ahead field	Job function of the resource.
Start date field	Date the resource will start.
Finish date field	Date the resource will finish.
Estimated hours field	Number of hours that you require the resource.
Soft-booked check box	When selected, indicates that the resource is tentatively booked for planning purposes. Available only if soft-booking is enabled on the billing office.For more information, see "About soft-bookings" on page 14.
Add to calendar check box	When selected, adds the project team entry to the resource's personal calendar and the resource scheduling calendar
Submit request check box	When selected, displays the **Requested resource** and the **Number of resource requests** fields that are required to submit a resource request.

Field	Description
Requested resource list	Resource that you request.
Number of resource requests field	Number of resources that you require.
Comments field	Instructions for the resource manager.
Resource request status field	After the resource request has been submitted, the project team entry displays the request number.
Specified qualifications field	Qualifications that the resource must have.
Assigned tasks field	List of project tasks that can be assigned to resources.
Project team comments field	Comments about the project team entry.

Copying projected resources to a project team

The projected resources from the engagement that is associated with a project can be copied to the project team as project team entries. Assigned resources are copied only if they are exempt from resource requests. You can then edit the project team entries as required.

1. Access the project for editing.
2. Click the **Project team** tab.
3. Click **Actions** > **Copy from projected resources**.

   The projected resources records from the engagement are added to the project team table.
4. To edit a project team entry:
   a. Select the row in the project team table. The details appear in the **Project Team Details** section.
   b. Make the necessary changes.
   c. Click **Actions** > **Apply.**

5. To include an entry in the resource's personal calendar and the resource scheduling calendar, select the **Add to calendar** check box.
6. Click **Save**.

Submitting a resource request for a project team

When you submit a resource request, you can either request a specific resource or leave the resource field blank and have the resource manager assign the resource. The resources available for selection are the resources from your preferred resources list. You can also submit a resource request for multiple resources based on a billing role only. For example, you could submit a resource request for 5 developers.

1. Access the project for editing.
2. Click the **Project team** tab.
3. In the table, select the project team entry for which you want to submit a request.

   The details of the project team entry are displayed in the **Project Team Details** section.
4. In the **Project Team Details** section, select the **Submit request** check box.

   The **Requested resource** type-ahead field, the **Number of resource requests** field and the **Comments** field appear.
5. To request a specific resource, in the **Requested resource** type-ahead field, select the resource.
6. To request multiple resources:
   a. Leave the **Requested resource** field blank.
   b. In the **Number of resource requests** field, enter the number of resources that you require.
7. To mark a qualification as preferred, in the **Specified qualifications** tree view, right-click the qualification and select **Set as preferred**.
8. In the **Comments** field, enter instructions for the resource manager.
9. In the **Project Team Details** section, click **Actions > Apply**.

   In the project team table, a check mark is displayed in the **Submit request** column of the project team entry row.

10. Click **Save**.

    The resource request is submitted to the resource manager for approval.

    Tip: You can search for available resources by clicking **Actions** > **Resource search**. For more information, see "Resource Searches" in the *Resource Management User Guide*.

Editing a project team entry

You can edit a project team entry only if a resource request has not been submitted, or the associated resource request is still in the New status. Once the resource request is no longer in the New status, changes can only be made by editing the resource request.

1. Access the project for editing.
2. Click the **Project team** tab.
3. In the table, select the project team entry.
4. Make the necessary changes. For more information, see "Edit Project dialog, Project team tab options" on page 36.
5. In the **Project Team Details** section, click **Actions** > **Apply**.
6. Click **Save**.

Deleting a project team entry

You can delete a project team entry provided that a resource request has not yet been submitted for it, or the resource request has been submitted but it is still in the initial status.

1. Access the project for editing.
2. Click the **Project team** tab.
3. In the table, select the project team entry.
4. In the **Project Team Details** section, click **Actions** > **Delete**.
5. Click **Save**.

Assigning a project team resource to a task

After a resource request has been approved, you can assign the resource to tasks. The duration and effort for the task must be within the duration and effort of the project team entry.

1. Access the project for editing.

2. Click the **Project team** tab.
3. In the table, select the project team entry.

   A list of project tasks appear in the **Assigned tasks** list.
4. In the **Assigned tasks** list, select the tasks that you want to assign to the resource.
5. To set the planned hours for a task:
   a. Right-click the task and select **Set planned hours**. The **Set Planned Hours** dialog box appears.
   b. In the **Planned hours** field, enter the number of planned hours planned for this task assignment.
   c. Click **OK**.
6. In the **Project Team Details** section, click **Actions > Assign task**.
7. Click **Save**.

4. Managing Projects

About editing projects

Only the project manager can edit the project profile; that is, change the information in the project dialog box. Project plan editors can view the project dialog box only. This topic includes information to consider before making certain changes to the project profile.

Changing the billing office of a project

If you change the billing office, all planned effort that has been manually allocated for project task assignments will be lost, except in the following circumstances:

- allocations for loading methods 3 and 4 that do not replace planned effort in past periods with actual hours are retained
- allocations for loading methods 0, 1 and 2 that replace planned effort in past periods are retained when the past data does not have to be recalculated, for example:
    - the billing office is removed and no new billing office is selected
    - the start date of the current fiscal period on the new billing office matches the start date of the current fiscal period on the previous billing office
    - the planned start date of the task assignment is in the current fiscal period or a future fiscal period of the new billing office

Changing the billable status of a project

You cannot change the setting of the **Billable project** check box when the **Split billing** check box has been selected on the **Billing information** tab of the engagement and either of the following conditions exist:

- Invoices exist for an engagement or phantom engagement that is in **Draft**, **Pending Approval**, **Pending second approval** or **Approved** status.
- All invoices are committed, but there is time or expenses for the engagement or phantom engagement that have not been fully invoiced.

Changing the requirement for task status updates

You can change whether task status updates are required for a project by changing the project type.

If you change the requirement for task status updates from **Status required** to **Status not required**, the requirements for all existing tasks and task assignments as well as new tasks and task assignments created later will automatically be changed to **Status not required**.

If you change the requirement for task status updates from **Status not required** to **Status required**, you have the following options:

- change the requirement for existing as well as new tasks and task assignments
- change the requirement for new tasks and task assignments only

Editing a project

1. Access the project.

   The project profile appears.

2. Click **Actions** > **Edit**.

   The **Edit Project** dialog box appears.

3. Make the necessary changes. For more information, see "Create/Edit Project dialog, General tab options" on page 20.

4. Click **Save**.

About deleting a project

When you delete a project, all of the project and task information is deleted. You cannot delete a project if any of the following conditions exist:

- there are time and expense entries for the project that have not been invoiced and archived
- the project contains an active subproject
- the project is included in a project portfolio
- there is a project task associated to an expense

Deleting a project

1. Access the project for editing.

   The **Edit Project** dialog box appears.

2. Click **Delete**.

3. Click **OK** to confirm.

About copying projects

You can copy project information to update an existing project or create a new project. When you copy project information, all project and task field values, including the configurable field values from the source project, are automatically copied to the target project, except for the settings in the **Access** tab.

> **Note:** If resource requests are required for the project, then you cannot copy task assignments from the source project to the new project.

When you copy project information, you can:

- Specify a project manager (for new projects only). The new project manager must be in your preferred resources list and have the security access to manage tasks in order for the project tasks to be copied to the target project
- Specify whether the planned start and finish dates for the target project are based on a specified start or end date.
- Copy project-related knowledge items.
- Copy resource assignments and/or specify a default resource.
- Copy resource billing roles
- Copy work locations and work codes for the project.
- Copy work locations and work codes for the tasks and task assignments.

About copying a project to update an existing project

You can copy project information from a source project to an existing target project provided that you have edit access to both the source and target projects and/or the projects' tasks, and the project manager of the target project is in your preferred resources list.

You can only copy the type of information that you have edit access to on the target project. For example, if you are the project manager for both the source and target projects, you can copy all project and task information. However, if you are the project manager for the source project, but only a summary task manager for the target project (and summary task managers can create tasks for the project), then you will only be able to add tasks under the summary tasks that you have access to in the target project.

Copying a project

1. Access the profile of the source project.
2. Click **Actions** > **Copy**.
3. If knowledge items exist for the source project, a dialog box appears. Do one of the following:
   - To include the knowledge items, click **OK**.
   - To exclude the knowledge items, click **Cancel**.

   The **Copy Project** dialog box appears.
4. Do one of the following:
   - To create a new project from an existing project, do not select the **Update project** check box.
   - To update an existing project with the information of the source project, select the **Update project** check box.
5. Complete the fields as required. For more information, see "Copy Project dialog box options" on page 44.
6. Click **Save**.

Copy Project dialog box options

Field	Description
Copy source field	Name of the source project which information are copied.
Update project check box	When selected, the source project information is copied to an existing project. When cleared, the source project information is used to create a new project.
Project manager list	Project manager of the target project. The field displays your name by default.

Field	Description
Target project type-ahead field	Project to which the information is copied.
Insert into summary task type-ahead field	Summary task under which tasks are copied
Name of new project field	Name for the new project.
Alternate name field	Alternate name for the project.
Company type-ahead field	Company for which the project is created.
Company ID type-ahead field	ID of the company.
Engagement list	Engagement associated with the project.
Phase list	Phase of the tasks. If phases are selected, only the tasks that are in one or more phases of the source project are copied to the project.
Base new timescale on. **Start date** check box	When selected, planned dates are based on the start date of the source project.
Base new timescale on, **End date** check box	When selected, planned dates are based on the end date of the source project.
Date field	Start or end date for the project.
Copy resource assignments into the new project check box	When selected, copies the resource assignments from the tasks in the source project to the new project.
Copy resource billing roles into the new project check box	When selected, copies the billing roles from the tasks in the source project to the new project.

Field	Description
Default resource list	Default resource to be used when the resources from the source project are not available.
Copy selected work locations and work codes from the source project check box	When selected, copies the work locations and codes from the source project to the new project.
Copy selected work locations and work codes from the source tasks and task assignments check box	When selected, copies the work locations and codes from source tasks and task assignments to the new project.

About completing the Copy Project dialog box

Copying tasks

By default, all tasks are copied from the source project. However, you can specify that only the tasks that are associated to one or more project phases in the source project are copied.

Selecting a default resource

You can select a default resource from your preferred resources list to be used when the resources from the source project are not available. For example, the default resource is used when a resource from the source project has been deleted or unassigned from a task or is unavailable to the new project manager. If resource requests are enabled on the engagement, the **Default resource** list contains resources from the projected resources for the engagement.

Specifying the target project timescale

You can specify whether the target project planned dates are based on a start date or end date. If you specify that the project timescale be based on a start date, then the planned start dates for the target project tasks are based on the relative period of time between the planned start date of the source project tasks and the planned start date of the source project.

For example, if the planned start date for a source project task was 10 days after the planned start date of the source project, then the start date for the target project task will be 10 days after the start date that you specify for the target project.

Similarly, if you specify that the project timescale be based on an end date, the planned finish dates for the target project tasks will be based on the relative period of time between the planned finish date of the source project tasks and the planned finish date of the source project.

Copying resource assignments

You can copy resource assignments from the tasks in the source project to the tasks in the target project. If resource leveling is enabled for your organization, the copied task assignments are validated for any resource leveling restrictions when you save the target project. If resource requests are enabled at the engagement level and the option to override task restrictions is not selected, then task assignments are not created.

Only the invalid task assignments in the source project that include planned hours are copied to the target project and assigned to the default resource. The planned hours for the copied task assignment will be the total hours of all of the invalid task assignments for the same task.

Copying billing roles

You can copy the billing roles from the tasks in the source project to the tasks in the target project. Only the billing roles that are valid and available are copied to the target project.

Copying project work locations and work codes

You can specify whether the selected work locations and codes, including the defaults, are copied from the source project or from the engagement of the target project. In either case, only the work locations and codes that are specified in the engagement of the target project are valid for the target project. If you specify to copy the work locations and codes from the project and none of them are valid, then the work locations and codes from the engagement of the target project are used.

> **Note:** When the work locations and codes are copied, the settings for expense overrides and whether non-project locations can be used are also copied.

Copying work codes and locations for tasks

You can specify whether the selected work locations and codes for tasks and task assignments, including the defaults, are copied from the source project. If the default work location and work code from the tasks and task assignments of the source project are not valid for the target project, then the default values from the target project are used.

If the selected work locations and codes for tasks and task assignments are not copied from the source project, then the work locations and codes from the target project are used for new tasks and task assignments.

Note: When the work locations and codes are copied, the settings for expense overrides and whether nonproject locations can be used are also copied.

Reassigning a project

Project managers can reassign a project to any resource that has access rights to edit the project plan. When you reassign a project, the resource becomes project manager of the project and has full edit rights, and you become a project plan editor.

1. Access the project for editing.

   The **Edit Project** dialog box appears.

2. Click the **Access** tab.
3. In the **Edit project plan** list, right-click the resource to whom you want to reassign the project and select **Reassign**.
4. Click **OK** to confirm.
5. Click **Save**.

Taking ownership of a project

Project plan editors can take ownership of a project if the project manager has enabled the option on the project. When a project plan editor takes ownership of a project, the project plan editor becomes the project manager and the project manager becomes a project plan editor. Project managers can take back ownership of a project when necessary.

1. Access the project.
2. Click **Actions > Transfer project to me**.

About saving project baselines

After you have set up your project, you can save a baseline for the entire project, subproject, summary task or individual task. This topic describes saving project baselines. For task baselines, see "About saving task baselines" on page 69.

When you save a baseline for a project, the planned information for the project is rolled up first to ensure that accurate information is available at the task, summary task and project levels.

The baseline information for the project, summary tasks, tasks and task assignments, including the date and time that the baseline was created and the resource who created it, is stored in the database. The following information is displayed in the **Status information** section of the project profile:

- Baseline start – the earliest planned start date of all project tasks
- Baseline finish – the latest planned finish date of all project tasks
- Baseline hours – total planned hours for the project tasks

If the option to roll up planned information from subprojects to parent tasks has been enabled for the parent project, then during summary tasks will be updated to also include the rolled up information from subtasks and subprojects and the baseline information will be captured in the general section of the summary task profile.

> **Note:** The baseline functionality is not available for projects that are linked to Microsoft Project. Also, if a parent project of the project being baselined is linked to Microsoft Project, then baseline information will not roll up to the parent project.

You can save a baseline at any time. When you save a new baseline, the current and previous baseline information is stored in the database. All baseline information can be accessed by creating custom reports in Report Designer.

The project manager can also give resources the option to save a baseline for a task without affecting higher-level tasks. Note however, that saving a baseline without affecting higher-level tasks can result in the project and task baselines being out of balance.

> **Note:** Some example project and task baseline scenarios are available. For more information, see "Scenarios for saving baselines" on page 241.

Saving a project baseline

1. Access the project.
2. Click **Actions** > **Baseline**.
3. To view the baseline information:
   a. Click .

b. Expand the **Status information** section.

About rolling up projects

When you roll up a project manually, the system rolls up the following information from the task assignments to the tasks, and then from the tasks to the project:

- planned, actual, and forecast start dates – the earliest of each of these dates from the task assignments becomes the planned, actual, and forecast start dates for the project
- planned, actual, and forecast finish dates – the latest of each of these dates from the task assignments becomes the planned, actual, and forecast finish dates for the project
- planned, actual, and forecast hours – the totals of these hours from the task assignments become the planned, actual, and forecast hours for the project
- remaining hours – the remaining hours (forecast hours) for the task assignments roll up to the tasks and then the project

To ensure the project information is as accurate as possible, it is recommended that you roll up a project after all of the project tasks have been created.

Rollup rules for draft tasks

The information from draft tasks is not rolled up.

Rollup rules for open tasks

The planned start, finish and hours from the task assignments of open tasks do not roll up. Only the actual and forecast dates and hours roll up to the open task and then to the project.

Rollup rules for summary tasks

The planned, actual and forecast information from the task assignments of both the summary task and its subtasks roll up to the summary task and then up to the project.

Rollup rules for subprojects

The planned, actual and forecast information from the task assignments roll up to the tasks which roll up to the parent task of the subproject and then to the parent project.

If the parent project has been configured to NOT roll up planned information from subprojects to parent tasks, then only the actual and forecast information from the tasks assignments of the tasks of the subproject is rolled up to the subproject task and then up to the parent project.

Automatic roll up of projects

Projects for which fiscal periods have been selected, and projects that belong to portfolios are automatically rolled up by system updates. Projects are rolled up automatically in the following situations:

- When there is a change to the project that makes a rollup necessary, for example, changes to planned, actual, and forecast information.
- The project has task assignments with loading methods that replace past data with actual data. These projects are rolled up at the beginning of the fiscal period that was selected for the project.

Rolling up a project

1. Access the project.
2. Click **Actions** > **Rollup**.
3. If a set of fiscal periods has been selected for the project, a message appears. Do one of the following:
   - To roll up the project information and update the information in the **Fiscal year breakdown** section of the project profile, click **OK**.
   - To roll up the project information only, click **Cancel**.

   The planned, actual and forecast information is rolled up and updated in the task and project profiles.

5. Managing Tasks

About tasks

After a project is created, the next step is to create tasks and assign them to resources. You can create the following type of tasks for your projects.

Tasks

You create tasks for specific project work and assign them to resources. Only the resources who are assigned to a task can enter time for it.

Summary tasks

Summary tasks are tasks that contain subtasks, which are the tasks grouped under them in the **Projects** tree view. You use summary tasks to organize the major phases and subphases in a project.

By default, time can be entered for summary tasks. During project rollup, the time amounts from the subtasks are added to the summary task amounts.

> **Tip:** To prevent time entry on a summary task or its subtasks, select the **Locked task**check box on the task.

Open tasks

Open tasks are tasks that all resources assigned to the project can log time against. Examples are status meetings or tasks that can be performed by any resource in a resource pool. You can also use open tasks to track non-project related tasks instead of using non-project time buckets that must be configured by the system administrator. You can restrict access to an open task by role or workgroup. Open tasks cannot contain subtasks and therefore cannot be summary tasks. When a resource enters time for an open task, a task assignment is automatically created for the resource.

If resource leveling is enabled, the planned hours for open tasks is 0 (zero) and cannot be edited.

If resource leveling is not enabled, you can specify the planned hours for an open task so that when a resource logs time against the task, the planned hours are automatically defined.

Task icons

The following table list the various task icons and their descriptions.

Task Icon	Description
	A green task icon indicates that you are assigned as a resource to the task. Assigned tasks are also included in the Time Sheet tree view.
	A gray task icon indicates that you have access to view the task, but are not assigned to the task.
	A task icon with a diamond indicates the task is a project milestone.
	A task icon with a circled check mark icon indicates the task is complete.

Accessing a task

You can only access the tasks to which you are assigned, and tasks within a project for which you are the project manager, project plan editor or summary task manager.

1. Click **General** > **Projects**.

   The **Projects** tree view appears.

   Tip: To locate a task, you can enter the full or partial task name in the **Filter** field and then click **Filter**. The tree view displays the projects that contain tasks that match the filter text.

2. Expand the **Projects** tree view to display the tasks.

3. Select the task.

   The task profile appears.

About creating tasks

After creating a project, you create a task for each activity that you want to track.

You can create tasks from many different starting points. The starting point determines the amount and type of task-related data that is automatically completed for the task. For example, if you create a task from a project, then the project-related information will automatically be completed for the task. However, if you create a task from the toolbar, then you must select the project information yourself. You can choose from any one of the following starting points:

- From the **New** menu in the navigation bar.
- From the **Projects** tree view, by right-clicking a project and selecting **Create task**.

- From a project profile using the **Actions** menu.
- From the project planning worksheet (PPW). For more information, see "Creating a task in PPW" on page 177.
- From the project worksheet. For more information, see "About creating tasks in the project worksheet" on page 99.
- From a request profile, using the **Actions** menu.

Task editing view, General section options

Option	Description
Project list	Project for the task.
Task name field	Name for the task.
Planned start date field	Date that the task should start. The default date is the date that the task is created.
Planned finish date field	Date that the task should be completed. The default date is the day after the date that the task is created.
Planned hours field	Estimated number of hours that are required to complete the task. The planned hours for the task must equal the total of the planned hours for the task assignments.
Project phase field	Project phase that the task applies to. For more information, see "About project phases" on page 18.
Billing role type-ahead field	Default billing role for resources that are assigned to the task. You can override the default when making specific staff assignments. The billing roles come from the engagement. If no billing roles are specified for the engagement, or the default was cleared for the task, the task assignment is created without a billing role.

Option	Description
Function list	Default job function for resources that are assigned to the task. You can override the default for task assignments.
Request type-ahead field	Number of the request that is associated with the task.
Locked task check box	When selected, prevents resources from entering time for the task assignments for the task. However, you can change the setting for individual task assignments.
Include in resource demand check box	When selected, new task assignments created for this task are included in resource demand analysis by default. Selected by default on new tasks. The setting for this field is also used as filter criteria for task assignments in the resource management worksheet. You can override the default for task assignments.
Open task check box	When selected, makes the task an open task and the **Assignment planned hours** field appears. For more information, see "Open tasks" on page 53.
Billable task check box	When selected, makes the task billable.
Billed to fixed-fee portion of the engagement check box	When selected, bills the task to a fixed-fee portion of the engagement. The time entered for this task does not display on the invoice.
Fixed fee list	Deliverable to which the task is associated, if the **Billed to fixed-fee portion of the engagement** option is selected. Specifying a deliverable allows costs and revenues to be tracked against fixed fees.

Option	Description
Utilization eligible check box	When enabled, the task time is included in the utilization for assigned resources. For billable projects, the option is automatically selected. For non-billable projects, the option is automatically cleared. The project manager can change the utilization eligible setting of any task.
Milestone check box	When selected, identifies the task as a milestone on the Gantt chart.
Capital check box	When selected, designates the task as a capital cost.
Completed check box	When selected, sets the task to completed status. Typically used for tasks that are not assigned to resources, such as milestone tasks. When a task is set to complete, the status for the task assignments is automatically set to complete. The task is automatically set as completed when all of its task assignments are completed.
Add to calendar check box	When selected, the planned hours for the task are included in the personal calendars of the assigned resources and the resource scheduling calendar.
Engagement products field	Products that can be associated with the task and invoiced based on the status of the task.
Engagement product ready to invoice check box	When selected, the product that is associated with the task becomes available for invoicing.
Comments field	Additional information about the task. Comments can be viewed by all resources assigned to the task.
Time entry restrictions section	

Option	Description
Restrict time entries to within the planned dates for option	Prevents resources from entering time for dates that are outside of the planned start and planned finish dates of the selected option (task, task assignment).
Restrict time entries to within the planned effort for option	Prevents resources from entering time when the total time entered for the selected option exceeds the planned effort.

Creating a task

You can create a task for planning purposes by completing only the following fields in the **General** section:

- **Task name**
- **Project**
- **Planned start**
- **Planned finish**
- **Planned hours**

After you have saved the task, you can complete the remaining fields and sections as required. For a list and description of all task fields, see "Task editing view, General section options" on page 55.

1. Click **New** > **Task**.

   The task editing view appears.

2. In the **Task name** field, type the task name.
3. In the **Project** field, select the project for which the task is being created.
4. In the **Planned start** field, enter the date that you expect the task to be started.
5. In the **Planned finish** field, enter the date you expect the task to be finished.
6. In the **Planned hours** field, enter the estimated number of hours required to complete the task.
7. Do one of the following:

- To save the task, click **Actions** > **Save**. The task is created.
- To complete the remaining task sections, see "Completing the General section of the task editing view" on page 59.

Completing the General section of the task editing view

For more information about the task fields, see "Task editing view, General section options" on page 55.

1. Access the task.
2. Click **Actions** > **Edit**.

   The edit task view appears.
3. Complete the fields as required.
4. To make the task an open task:
   a. Select the **Open task** check box. The **Assignment planned hours** field displays. If resource leveling is enabled, the value is 0 and cannot be edited.
   b. If resource leveling is not enabled, you can specify planned hours for the open task.
5. To bill the task to a fixed fee portion of the engagement:
   a. Select the **Billed to fixed fee portion of the Engagement** option.
   b. In the **Fixed fee** field, specify the deliverable to which the task is associated.
6. Click **Actions** > **Save**.
7. To complete the remaining sections, see the following topics:
   - "Changing the work location and work code settings for a task" on page 78
   - "Assigning a resource to a task assignment" on page 60
   - "Associating a task to a product" on page 59

Associating a task to a product

You can associate a task to one or more products. The first product you select is marked as the primary product and is used for reporting purposes.

1. Access the task.

2. Click **Actions** > **Edit**.

   The edit task view appears.

3. Expand the **Products** section.

4. Expand the tree view and select the check boxes of the products associated with the task.

   Tip: To change the primary product, click the name of the new primary product instead of the check box.

5. Click **Save**.

Assigning a resource to a task assignment

You can assign resources to tasks from the task editing view by creating a task assignment. When you create a task assignment, most of the fields have the same values as in the task, but they can be changed. The resources that you can assign to a task come from your preferred resources list.

1. Access the task.

2. Click **Actions** > **Edit**.

   The task editing view appears.

3. Expand the **Assignments** section.

4. Complete the fields as required. For more information, see "Task editing view, Assignments section options" on page 61.

5. To specify a resource, in the **Resource** list, select the name of the resource that you want to assign to the task.

6. To add a resource to the list (and optionally to your preferred resources), click ..., which opens the **Select Resources** dialog box.

7. To specify the planned start and planned finish dates, do one of the following:

   - Enter the dates in the **Planned start** and **Planned finish** fields.

   - To have the system allocate effort for this task assignment, and calculate the planned start and finish dates, see the "About allocating planned hours for a task assignment automatically" section on page 66.

8. In the **Assignments** section, click **Actions** > **Save**.

The resource is added to the task assignment table.

9. On the task editing view, click **Actions** > **Save**.

Task editing view, Assignments section options

Option	Description
Resource list	Resource assigned to the task.
Planned start date field	Date that the task should start. The default date is the date that the task is created.
Planned finish date field	Date that the task should be completed. The default date is the day after the planned start date.
Planned hours field	Estimated number of hours that are required to complete the task. The planned hours for the task must equal the total of the planned hours for the task assignments.
Allocate effort based on resource's current committed workload check box	When selected, the effort is allocated and the planned start and finish dates are calculated automatically.
Billing role type-ahead field	Default billing role for resources that are assigned to the task. You can override the default when making specific staff assignments. The billing roles come from the engagement. If no billing roles are specified for the engagement, or the default was cleared for the task, the task assignment is created without a billing role.
Billing rate field	Billing rate for the resource.
Billing role cost rate and **Resource cost rate** fields	Billing role-based or resource-based cost rate that is applicable to the task assignment.
Function list	Default job function for resources that are assigned to the task. You can override the default for task assignments.

Option	Description
Locked task check box	When selected, prevents resources from entering time for the task assignments for the task. However, you can change the setting for individual task assignments.
Include in resource demand check box	When selected, new task assignments created for this task are included in resource demand analysis by default. Selected by default on new tasks. The setting for this field is also used as filter criteria for task assignments in the resource management worksheet. You can override the default for task assignments.
Status not required check box	When selected, resources are not required to update the status of their task assignments.
Work location group list **Work location** list	Work location group and work location where the work will be performed.
Work code category list **Work code** list	Work code category and work code of the task.
Allow work location override check box	When selected, resources can choose a different work location when they enter time for the task.
Allow work code override check box	When selected, resources can choose a different work code when they enter time for the task.
Soft-booked check box	When selected, the resource is tentatively booked for planning purposes. Soft-booked time is shown as flexible on the resource schedule calendar. When cleared, the resource is committed to the project.
Assignment comments field	Additional information about the task assignment.

About selecting resources for tasks

The following options to help you select resources are available from the **Actions** menu on the **Assignment** section of the task editing view:

- **Check available hours** to check if each assigned resource has enough available hours to cover the planned hours for the task. For more information, see "Checking the available hours of a resource" on page 63.
- **Resource search** to search for an available resource. For more information, see "Resource Searches" in the *Resource Management User Guide*.
- **Resource availability** to view the calendar of a resource. For more information, see the "Resource Scheduling Calendar" in the *Resource Management User Guide*.

Checking the available hours of a resource

To avoid overbooking resources, you can check their available hours directly from the task editing view.

1. Access the task.
2. Click **Actions > Edit**.

   The edit task view appears.
3. Expand the **Assignments** section and verify the **Planned hours** values for each of the resources.
4. In **Assignments** section, click **Actions > Check available hours**.

   The **Check Available Hours** dialog box appears. For more information, see "About checking the available hours for resources" on page 63.

   When the planned hours for the task exceed the available hours for a resource, the values are displayed in red. However, you can still assign the task to the resource.

About checking the available hours for resources

The **Check Available Hours** dialog box displays the following information for each resource listed in the Assignment section of the task editing view.

Resource name and task duration

The duration of the task is displayed next to the resource name. If the task status has not been updated, then the **Planned start** and **Planned finish** dates are used for the task duration. If the task status has been updated, then the **Actual start** and **Forecast finish** dates are used.

Planned hours for this task

The planned hours for the current task.

Planned hours for all other tasks

For each task other than the current task, the total planned hours for the task are divided by the number of working days in the task duration to calculate a daily amount. The total of the daily amounts for the tasks is then multiplied by the number of working days for the current task. If the task status has been updated, then **Remaining hours** are used instead of **Planned hours**.

Resource calendar entries

The total hours from all calendar entries, excluding the task assignment entries.

Available hours

Available hours = Total working hours – (Planned hours for all other tasks + Resource calendar entries)

Total working hours = Number of working days in the task duration * daily capacity for the resource

If the available hours is less than the planned hours for the current task and resource, then all of the values for the resource display in red. If the available hours is 0 or less, then 0 is displayed.

Example of Check Available Hours calculations

This example consists of a current task for a resource, who has also been assigned task A and task B during the same time period, and an explanation of how each of the values in the **Check Available Hours** dialog box is calculated.

Current task information

Planned start: Monday, January 1

Planned finish: Monday, January 8

Planned hours: 15

Non-working days: Monday, January 1 (legal holiday), Saturday, January 6, and Sunday, January 7

Working days in the task duration = 8 – 2 weekend days – 1 legal holiday = 5 days

Daily capacity (specified in user setup) = 8

Total working hours: 5 * 8 = 40

Planned hours for this task = 15

The planned hours for the task in this example is 15, which comes from the task assignment.

Planned hours for all other tasks = 14

The planned hours for this task is 14, calculated as follows:

Task A, status has not been updated

Planned start: January 2

Planned finish: January 11

Working days in task A duration = 8 days

Planned hours = 16

Planned hours per day: 16 / 8 = 2

Planned hours for the current task duration (January 2 to 8) = 2 * 5 = 10

Task B, status has been updated

Actual start: January 5

Forecast finish: January 10

Remaining hours = 8

Working days in task B duration = 4 days

Planned hours per day: 8 / 4 = 2

Planned hours for the current task duration (January 5 and January 8): 2 * 2 = 4

Total planned hours for task A and task B: 10 + 4 = 14

Resource calendar entries = 12

The resource has three calendar entries, each for 4 hours.

4 * 3 = 12

Available hours = 14

The available hours is 14.

Available hours = Total working hours – (Planned hours for other tasks + Resource calendar entries)

40 – (14 + 12) = 14

The values in the **Check Available Hours** dialog box would display in red because the available hours (14) is less than the planned hours (15) for the current task.

About viewing billing rates and cost rates in task assignments

If you have view access rights to billing rates, the **Billing rate** column and either **Resource-based cost rate** or **Billing role-based cost** columns display in the task assignment table, and the corresponding fields display in the **Assignments** section. The rates come from the billing office and cannot be edited.

You can show or hide the billing rate and cost columns that display in the task assignment table. Right-click anywhere on the task assignment table and select the appropriate option (**Hide/show billing rates**, **Hide/show cost rates)**.

About allocating planned hours for a task assignment automatically

If your organization uses resource leveling, you can have the system allocate effort (planned hours) for a task assignment based on the availability of the resource. The system calculates the resource's availability based on the following formula:

daily capacity * (percent available / 100) – committed resource demand hours

Where:

- daily capacity is the number of hours specified in user setup
- percent available is the percent available for planned work for the workgroup that the resource belongs to
- committed resource demand hours are the hours from demand items that resource has already been committed to

You also specify that the planned start and/or planned finish dates should be calculated automatically:

- Planned start date only – planned hours are allocated starting from the planned finish date and then to each working day before the finish date until all of the planned hours are

allocated. The earliest date for which planned hours are allocated becomes the planned start date.

- Planned finish date only – planned hours are allocated starting from the planned start date and then to each working day after the planned start date until all of the planned hours are allocated.
- Both planned start and planned finish – the first date that the resource has hours available and which is on or after the current date or the earliest planned start date (whichever is later) becomes the planned start date.

  Planned hours are allocated starting from the planned start date and then to each working day after it until all of the planned hours are allocated. The latest working day for which planned hours have been allocated becomes the planned finish date.

In all cases, if the calculated planned start date is earlier than the original planned start date or the calculated planned finish date is later than the original planned finish date for the task, then the original planned dates for the task are changed accordingly.

Note: If project-level resource requests are enabled, then the hours can be allocated only within the planned start and finish dates in the approved resource request.

Allocating effort for a task assignment automatically

1. Access the task.
2. Click **Actions** > **Edit**.

   The edit task view appears.
3. Expand the **Assignments** section.
4. In the **Resource** list, select the resource.
5. Select the **Allocate effort based on Resource's current committed workload** check box.
6. To specify the earliest date that the task assignment can start:
   a. Select the **Calculate start date** check box. The **Planned start** field changes to **No earlier than**.
   b. Enter the earliest acceptable start date.
7. To specify the latest date that the task assignment can end:

a. Select the **Calculate finish date** check box. The **Planned finish** field changes to **No later than**.

b. In the **No later than** field, enter the latest acceptable finish date.

8. Click **Allocate effort**.

   The dates in the **Planned start** field and **Planned finish** fields are updated based on the allocation calculation.

Submitting resource requests for tasks

If resource requests have been enabled for tasks, you cannot assign a resource to a task directly. You must first submit a resource request, which must be approved by a resource manager.

1. Access the task.
2. Click **Actions** > **Edit**.

   The edit task view appears.
3. Expand the **Assignments** section.
4. In the **Planned hours** field, enter the estimated number of hours required to complete the task.
5. In the **Planned start** field, enter the planned start date for the task assignment.
6. In the **Planned finish** field, enter the planned finish date.
7. In the **Billing Role** type-ahead field, enter a billing role for the task assignment.
8. To request a specific job function, in the **Function** list, select the function.

   The qualifications for the function appear in the **Qualifications** field.
9. To request a specific resource, in the **Requested resource** type-ahead field, enter the name of the resource.
10. In the **Number of resource requests** field, enter the number of resources that you require.
11. If no function and no resource is specified, in the **Qualifications** field, you can select specific skills and competencies for the resource request.

12. To mark a qualification as preferred, right-click the qualification and then select **Set as preferred**.
13. In the **Assignment comments** field, enter instructions for the resource manager.
14. In the **Assignments** section, click **Actions** > **Save**.

    The resource request is added to the assignment table and is marked as soft-booked.
15. At the top of the task editing view, click **Actions** > **Save**.

    The request is submitted to the resource manager for approval.

Deleting resources from task assignments

You can delete resources from task assignments provided that none of the following conditions exist:

- the resource has entered time or expenses for the task assignment
- the parent task is associated with a subproject
- there are outstanding resource requests that have not been canceled

If any of the above conditions exist for a resource, the delete option will not be available.

1. Access the task editing view.
2. Expand the **Assignments** section.
3. Select the resource in the assignments table.
4. In the **Assignments** section, click **Actions** > **Delete**.
5. Click **OK** to confirm.
6. In the task editing view, click **Actions** > **Save**.

About saving task baselines

You can save baselines for summary tasks, subtasks and tasks. When you save a baseline for a task, the planned information is first rolled up to the project level. If the option to roll up planned information from subprojects to parent tasks has been enabled for the parent project, then summary tasks will be updated to include the rolled up information from subtasks and subprojects. The system does not check whether resources have access to the subprojects before performing the rollup.

After the rollup, the baseline information for the task and its task assignments and the subprojects and projects above it in the WBS is saved. If the task is a summary task, then the baseline information for all tasks below the summary task and the project above it is also saved. If the task is a subtask, then the baseline information for all tasks and task assignments below the subtask, and the summary task and project above it is saved.

When you save a task baseline, the system uses the previous (most recent) baseline values for the other project tasks and task assignments when they are required to calculate summary task and project baselines.

Example of saving task baselines

In the following table, the **Initial baseline** column shows the baseline planned hours for a project after an initial baseline. The **Updated** column shows that the planned hours for subtask 1.1 and 1.2 were changed to 7 hours each. The **Baseline subtask 1.1** column shows the baseline planned hours after a baseline was saved for subtask 1.1, which the system calculated by using:

- the updated planned hours for subtask 1.1 and the previous baseline planned hours for subtask 1.2, to calculate the baseline planned hours for task 1
- the previous baseline planned hours for subtask 2.1 to calculate the baseline planned hours for task 2
- the previous baseline planned hours for task 2 and the updated planned hours for task 1 to calculate the baseline planned hours for project 1

Project item	Initial baseline planned hours	Updated planned hours	Baseline subtask 1.1 planned hours
Project 1 (rolled up from tasks 1 and 2)	21		22
Task 1 (rolled up from subtasks 1.1 and 1.2)	11		12
Subtask 1.1	6	7	7
Subtask 1.2	5	7	5

Project item	Initial baseline planned hours	Updated planned hours	Baseline subtask 1.1 planned hours
Task 2 (rolled up from subtask 2.1)	10		10
Subtask 2.1	10		10

After a baseline is saved, the following information is displayed in the task profile and task assignment profile:

- **Baseline start** – the earliest planned start date of the tasks
- **Baseline finish** – the latest planned finish date of the tasks
- **Baseline hours** – total planned hours for the tasks

  Note: For some example project and task baseline scenarios, see "Scenarios for saving baselines" on page 241.

You can save a task baseline at any time. When you save a new task baseline, the previous baseline information is stored in the database. All stored baseline information can be accessed by creating custom reports using Report Designer.

Saving a task baseline

1. Access the task.
2. Click **Actions** > **Baseline**.

   The **Baseline start**, **Baseline finish**, and **Baseline hours** are updated based on the current planned start date, finish date and hours of the task or subtasks.
3. Refresh the details view to display the baseline information for the task and task assignments.

About saving a task baseline without affecting higher level tasks

Normally when a task baseline is saved, the system rolls up the baseline for all affected tasks below the selected task to the selected task itself, and then up to the appropriate project level above the selected task in the WBS. For more information, see "About saving task baselines" on page 69.

However, the project manager can enable the option to save a task baseline without affecting higher level tasks. If this option has been enabled for a project, when resources save a task baseline, they have the option to save the task baseline as usual, or up to the selected task level only.

Warning: Saving a baseline without affecting higher-level tasks can result in the project and task baselines being out of balance.

If the option to roll up planned information from subprojects to parent task is enabled, it takes precedence over the option to save a baseline without affecting higher level tasks. In this case, if you baseline a subtask of a subproject, the baseline will be rolled up to the parent task even if you select the option to baseline without affecting higher level tasks.

For some example project and task baseline scenarios, see "Scenarios for saving baselines" on page 241.

Saving a task baseline without affecting higher level tasks

1. Access the task.
2. Click **Actions** > **Baseline**.

   A dialog box appears.
3. Select one of the following options:
   - To save the baseline as usual, select **Baseline all tasks above and below the selected task**.
   - To save the baseline without affecting higher level tasks, select **Baseline only the selected task and tasks below it**.
4. Click **OK**.
5. Refresh the details view to display the baseline information for the task and task assignments.

Restricting access to an open task

You can restrict access to open tasks to specific workgroups and roles. However, the resources who have been assigned to an open task can enter time for the task regardless of any access restrictions.

1. Access the task.

2. Click **Actions** > **Edit**.

   The edit task view appears.

3. Expand the **Restrict access for open tasks** section.

4. To enable access restrictions, select the **Changepoint users allowed to enter time against this task** check box.

5. Select the check boxes for the workgroups and roles that can enter time for the task.

6. To automatically include the workgroups that are below the selected workgroups in the hierarchy, select **Include children**.

7. Click **Actions** > **Save**.

   Note: The access restrictions are automatically removed if the **Open task** check box is cleared on the task editing view.

About task dependencies (linked tasks)

You can create the following types of task dependencies between tasks in the same project or in different projects:

- finish-to-start – successor task cannot start until on or after the predecessor task finish date
- start-to-start – successor task cannot start until on or after the predecessor task start date
- finish-to-finish – successor task cannot finish until on or after the predecessor task finish date
- start-to-finish – successor task cannot finish until on or after the predecessor task start date

  Note: Changepoint handles start-to-finish dependencies slightly differently than Microsoft Project. In Changepoint, the predecessor finish date is the working day before the successor start date, whereas in Microsoft Project, the predecessor finish date is the same date as the successor start date.

You can link tasks from the same or different projects in the task profile. You can link tasks in the project worksheet or PPW, but both tasks must be in the same project.

You cannot change the start date of the successor task directly if the start date is determined by the predecessor task. Similarly you cannot change the finish date of a successor task directly if the finish date is determined by the predecessor task.

Task dependency options

Field	Description
Dependency type field	Dependency type. Options are: • Finish-to-start (default) • Start-to-start • Finish-to-finish • Start-to-finish
Lag time field	Number of days between planned start date or finish date of the predecessor task and the planned start date or finish date of the successor task, according to the dependency type. Default value is 0 days.
Move successor task date check box	When enabled, does the following: • allows the successor task dates to be moved when the predecessor task is moved • when the predecessor task is moved, removes any gap between the linked tasks according to the constraints of the dependency type Selected by default.
Successor can start anytime after the predecessor check box	When enabled, if a predecessor task is moved, the successor task dates are moved only when required to ensure that the successor starts after the predecessor. Cleared by default.
Send notification check box	When enabled, sends an email notification to the project manager when the planned dates are moved due to task dependencies. Selected by default.

Linking tasks from the task profile

In the **Create Task Dependency** dialog box, the **Successor tasks** tab displays a table of the tasks that are already linked to the current task. When the **View selected tasks** option is selected, a project tree view displays under the options that shows the hierarchy of linked tasks. On the **Successor tasks** tab, you configure dependencies in which the current task is a predecessor task. On the **Predecessor tasks** tab you configure dependencies in which the current task is a successor task.

1. Access the task.
2. Click **Actions** > **Create** > **Task dependency**.

   The **Create Task Dependency** dialog box appears.
3. In the **Successor tasks** tab, select **Modify selected tasks**.

   A project tree view displays all of the projects and related tasks to which you have edit access rights.
4. Expand the tree view to locate the successor task. Tasks that are already successor tasks of the current task are displayed in bold font.
5. Double-click the successor task.

   The task is added to the table.
6. Specify the options as required. For more information, see "Task dependency options" on page 74.
7. To save the link, click in the table, but outside of the current row.
8. Click **OK** to confirm.
9. Click **OK**.
10. To specify a predecessor task:

    a. Click the **Predecessor tasks** tab.

    b. Create the link as described above.
11. Click **Close**.

Unlinking tasks from the task profile

1. Access the task.
2. Click **Actions** > **Create** > **Task dependency**.

   The **Create Task Dependency** dialog box appears.
3. Do one of the following:

   - Right-click the successor task in the table and select **Delete**.

- Click the **Predecessor** tab and then right-click the predecessor task in the table and click **Delete**.

The task is unlinked and removed from the table.

4. You can unlink tasks from tree view at the bottom of the dialog:
   a. Select the **Modify selected tasks** option.
   b. Search for the task or expand the tree view to locate the linked task. The names of linked tasks are in bold text.
   c. Right-click the linked task and select **Remove from successor task** or **Remove from predecessor task**. The task is unlinked and removed from the table.
5. Click **Close**.

Accessing the task editing view

1. Click **General** > **Projects**.

   The **Projects** tree view appears.
2. Expand the project that the task belongs to.
3. Do one of the following:
   - Double-click the task name.
   - Right-click the task name and select **Edit**.
   - Select the task to open the task profile and then click the **Actions** menu and select **Edit**.

   The task editing view appears.

About editing the Billable status of a task

If you change the billable status of a task, the **Effective date** check box appears.

If you specify an effective date, then the time records from the effective date and later use the new billable status. All invoices created before the effective date use the previous billable status.

If you do not specify an effective date, all time records that have not been invoiced use the new billable status.

If an effective date was previously entered for the billable status, and you do not specify an effective date, then all of the time records use the new billable status.

For example, a new task is marked as billable, and time is entered for May 1 to 5. If the billable option is later cleared and an effective date of May 3 is specified, then time for May 1 and 2 would be billable, but time for May 3, 4 and 5 would be non-billable. However, if the billable option is cleared and an effective date is not specified, time for May 1 to 5 would be non-billable.

You cannot change the **Billable task** option if any of the following conditions exist:

- the engagement has not been configured to allow project managers to override the billable status
- the split billing option has been enabled on the engagement and invoices exist under the engagement or phantom engagement which is in **Archive** status
- the split billing option has been enabled on the engagement, and all invoices have been committed but there is time under the engagement or phantom engagement that has not been fully invoiced

About editing configurable fields on tasks

When you create a task, the values of the configurable fields for the task are automatically applied to task assignments, even if you create the task assignments at the same time as you are creating the task. However, if you edit the values for a configurable field and you want the new value to be applied to new task assignments, you must save the task first before creating the new task assignments.

Changing the billing role for a task

When you change a billing role, you must also specify an effective date for the change. You must ensure that the appropriate billing role is in effect when time records for the task assignment are invoiced. Changes made to the billing role are tracked in the task assignment history.

Note: You cannot change the effective date for a billing role once you have saved it, and subsequent changes to billing roles must have an effective date that is later than the current effective date.

1. Access the task.
2. Click **Actions** > **Edit**.

The edit task view appears.

3. Expand the **Assignments** section.
4. Select the row for the resource whose billing role is being changed.
5. In the **Assignments** section, click **Actions > Change billing role**.

   The **Change Billing Role** dialog box appears.
6. In the **Billing role** list, select the new billing role.
7. In the **Effective date** field, enter the effective date of the new billing role.
8. Click **Save**.
9. Click **OK** to confirm.
10. In the **Assignments** section, click **Actions > Apply**.
11. At the top of the task editing view, click **Actions > Save**.

Changing the work location and work code settings for a task

The default work locations and work codes come from the project, but you can change them for tasks. You can also allow resources to choose a different work location or code when they enter time for a task.

1. Access the task.
2. Click **Actions > Edit**.

   The edit task view appears.
3. Expand the **Work locations/work codes** section.
4. In the **Work location group** list, select the general location where the work will be performed.
5. In the **Work location** list, select the specific work location where the work will be performed.
6. From the **Work code category** list, select the work code category.
7. From the **Work code** list, select the work code.

8. To allow resources to choose a different work location when they enter time for the task, select the **Allow work location override** check box.
9. To allow resources to choose a different work code when they enter time for the task, select the **Allow work code override** check box.
10. Click **Actions** > **Save**.

Deleting a task

You cannot delete a task if either of the following conditions exist:

- billable time has been entered for the task and that time has not been invoiced
- an expense has been associated to the task

Also, if the **Add to calendar** option is enabled on the task when it is deleted, the planned hours for the task are removed from the personal calendar of the assigned resources and from the resource scheduling calendar.

1. Access the task.
2. Click **Actions** > **Edit**.

   The edit task view appears.
3. Click **Actions** > **Delete**.
4. Click **OK** to confirm.

About reopening a completed task

Project managers, and the resources that are assigned to a completed task, can reopen the task provided that the project is still active. If the task has locked task assignments, you must unlock them first.

When you reopen a task, all of its task assignments are reopened with the following settings:

- percentage complete is set to 99
- remaining hours is set to 1.00
- actual finish date is cleared

When you reopen a subtask, the summary task is also reopened. Reopening a subtask automatically opens all related tasks up to the highest level.

Reopening a completed task (for project managers)

This procedure applies to project managers. For the procedure for resources, see "Updating the Status of a Task" in the *Time and Expense Management User Guide*.

1. Access the task.
2. Click **Actions** > **Edit**.

   The edit task view appears.
3. Expand the **Assignments** section.
4. If there are locked task assignments that you want to reopen, you must unlock them.
   a. Select the task assignment.
   b. Clear the **Locked task** check box.
   c. In the **Assignments** section, click **Actions** > **Save**.
   d. Repeat for each locked task assignment.
5. In the **General** section, clear the **Completed** check box.
6. Click **Actions** > **Save**.

   A message appears, asking if you want to reset the forecast dates.
7. Do one of the following:
   - To reset the forecast start and finish dates to the planned start and finish dates for all reopened task assignments, click **OK**.
   - To leave the dates unchanged, click **Cancel**.

Sorting tasks

You must use the project planning worksheet (PPW) or project worksheet to change the order of tasks.

6. Project Worksheet

Project worksheet basics

The project worksheet provides a complete view of the tasks, task assignments and subprojects associated with a project in a spreadsheet format. The fields that are in the task editing view are displayed as columns in the project worksheet. You can do everything in the project worksheet that you can do in the task editing view, with a few exceptions. The exceptions are described in the corresponding topics.

When you access the project worksheet for the first time, the system default view displays, which lists the project tasks in WBS order with the following columns:

- **Edit** (indicates when the task is locked for editing)
- **Task name**
- **Planned start**
- **Planned finish**
- **Planned hours**
- **Billing role**
- **Fiscal period**, which displays up to 24 fiscal period or up to 31 daily periods

The **Edit** and **Task name** columns are *frozen*, that is, they remain displayed when you scroll to the right to view the other columns. Up to 24 fiscal periods or up to 31 daily periods are displayed in chronological order, starting with the fiscal period or daily period that includes the current date.

You can temporarily rearrange the columns by dragging them into a different order. However, to save changes to the column order, you must create a project worksheet view. In the project worksheet view you can change the order of the columns, add additional columns, and change the columns that are frozen. For more information, see "Creating a project worksheet view" on page 87.

You can adjust the width of the columns by dragging the line between the column headings. The column widths that you set for each project worksheet view are saved automatically.

Accessing the project worksheet

1. Click **General** > **Projects**.

The **Projects** tree view appears.

2. In the tree view, do one of the following:

   - Right-click the project and select **Project worksheet**.
   - Click the project to open the project profile, and then click **Actions** > **Project worksheet**.

   The project worksheet appears.

Expanding and collapsing tasks in the project worksheet

You can show and hide the task assignments and subtasks under a task by expanding and collapsing tasks, subtasks or the entire project as follows:

- To expand a single task or subtask, click the plus sign (+) next to the task or subtask name.
- To collapse a single task or subtask, click the minus sign (–) next to the task or subtask name.
- To expand or collapse all subtasks under a task or subtask, click the task or subtask row and then click or .
- To expand or collapse all tasks and subtasks in a project, click the project row and then click or .

  Note: If the project is large, it may take a while for all tasks to be expanded.

Switching between fiscal and daily periods in the project worksheet

When fiscal periods have been selected for a project, you can display either fiscal or daily periods on the project worksheet.

1. To switch from fiscal periods to daily periods:

   a. To start the daily periods from the first date of a specific fiscal period, click the column header for the fiscal period. Otherwise the daily periods start from the first date of the first fiscal period.

   b. Click .

2. To switch from daily periods to fiscal periods

a. To start the fiscal periods from the fiscal period that includes a specific daily period, click the column header for the daily period. Otherwise the fiscal periods start from the fiscal period that includes the first daily period.

b. Click .

Displaying time periods that start from a specific date in the project worksheet

Do one of the following:

- Click in the date field 03/01/2013 , enter a date, and then press **Enter**.
- Click and then select a date.

The range of fiscal periods, starting with the fiscal period that includes the specified date or the range of daily periods, starting with the daily period for the date, is displayed. If you select a date for which no fiscal or daily periods have been configured, then no periods are displayed at all.

Displaying the previous or next specified number of periods in the project worksheet

1. Access the project worksheet.
2. In the number of periods field 12 , do one of the following:
   - for fiscal periods, type the number between 1 and 24 (*x*) for the number of fiscal periods that you want the starting fiscal period to change by
   - for daily periods, type the number between 1 and 31 (*x*) for the number of daily periods that you want the starting fiscal period to change by
3. To display the range of periods that starts with the *x* number of periods before the current starting period, click .
4. To display the range of periods that starts with the *x* number of periods after the current starting period, click .

Running reports in the project worksheet

You can run reports that have been configured to appear in the **Actions** menu of the project and/or task profiles.

1. Access the project in the project worksheet.
2. To run a project report, click **Reports** > **Project** > **[report name]**.
3. To run a project report for a subproject:
   a. Click the subproject row.
   b. Click **Reports** > **Project** > **[report name]**.
4. To run a task report:
   a. Click the task that you want to base the report on.
   b. Click **Reports** > **Task** > **[report name]**.
5. If a report filter page appears, complete the fields, and then click **Run**.

Performing searches in the project worksheet

You can do searches to locate tasks and task assignments. The search starts from the currently selected row and goes down to the bottom of the project worksheet. You can search all columns or a single column.

1. Access the project worksheet.
2. In the **Search** field, enter the first few characters of the information that you want to search for.
3. Click the row that you want to start the search from.
4. To limit the search to a column, click the column heading.

   Tip: You can identify the scope of the search by pointing to the search icon. A tooltip indicates whether the search is for all columns or a specific column.
5. Click .

   The first row (below the selected row) that includes information that starts with the search text is highlighted.

6. To continue the search, click again.

   Note: The search stops at the bottom of the project worksheet.

About errors in the project worksheet

Errors in the values entered for tasks are indicated in the following ways:

- Red cell – indicates an error. You cannot save the task until the error is corrected. Point to the cell to display a tool tip with the reason for the error.
- Yellow cell – indicates a warning that there may be a potential problem with the value, but you can still save the task. Point to the cell to display a tool tip with the reason for the error.
- Messages about errors in hidden columns – You must first edit the worksheet view to show the hidden column, and then fix the error before you can save the task.

About printing the project worksheet

You can print the project worksheet by clicking . This print option prints a default print area that is determined by the page size and margins, and cannot be adjusted. The printout includes each row from the project worksheet, but will only include as many columns that will fit in the default margins for the printout page.

To print the entire project worksheet, try the following options:

- In the **Print** dialog box, change the paper orientation to landscape to print more columns. For more information, see the Microsoft Windows or **Print** dialog box online help.
- Remove some of the columns from the project worksheet view. For more information, see "Creating a project worksheet view" on page 87.
- Export the project worksheet data to Microsoft Excel and then print from Excel. For more information about exporting to Excel, see the "About exporting the project worksheet data to Microsoft Excel" section on page 86.

Printing the project worksheet

1. Access the project worksheet.
2. Click .

   The **Print** dialog box appears.

3. Click **OK**.

   The project worksheet is printed.

About exporting the project worksheet data to Microsoft Excel

You can export the data in the project worksheet to a Microsoft Excel file. All of the data in the project worksheet is exported exactly as it is displayed, including unsaved changes and columns that you would need to scroll to view, but excluding the **Edit** column. Also, the project items in the **Task name** column are not indented.

If a row is collapsed, then only the row is exported and not the tasks, subtasks or task assignments under it. If any changes that affect the WBS have been made to the project by other resources, the project worksheet will be refreshed before it is exported. The Excel spreadsheet includes a **Type** column, which indicates the type of project item in the row as follows:

- **p** – project
- **t** – task
- **ta** – task assignment

The Excel file is named according to the format: `Export-[date and time].xls`.

Exporting the project worksheet data to Microsoft Excel

1. Access the project worksheet.
2. Click .

   The **File Download** dialog box appears.

3. Do one of the following:
   - To view the Microsoft Excel file with the exported project data, click **Open**. Excel launches and displays the spreadsheet.
   - To save the Microsoft Excel file, click **Save** and then specify where you want to save the file.

About working on linked MSP projects in the project worksheet

For linked MSP projects, all of the columns that must be updated in Microsoft Project are disabled in the project worksheet. This includes planned start, planned finish, planned hours

(including fiscal and daily period allocations), creating and deleting tasks or assignments, linking tasks, re-ordering tasks, etc.

You can edit the Changepoint-specific columns that do not affect the project plan or structure, for example: configurable fields, **Add to calendar**, **Locked**, etc. These edits will be updated in the linked MSP project.

> **Note:** The task assignment options to allow work location and work code overrides can only be changed in MSP, and not in the project worksheet.

About creating project worksheet views

You can create, copy and save views of the project worksheet and specify a view as your default view. In these views you can show or hide columns, change the order that the columns are displayed, and add columns to, and remove them from, the frozen pane. You can also share these views with other resources.

> **Note:** You cannot move the **Task name** column from the frozen pane or the **Fiscal period** column to the frozen pane.

About related columns

The following pairs of columns are related and either must be updated at the same time, or the value in one affects the value in the other. Therefore it is best to display both columns in the worksheet if you plan to work with them:

- **Billing role** and **Billing role expiry date**. If you change the billing role, you must specify the date *after which* the new billing role becomes effective.
- **Billable task** and **Effective date**
- **Billed to fixed-fee portion of the engagement** and **Fixed fee**
- **Work code category** and **Work code**
- **Work location group** and **Work location**
- **Locked** and **Include in resource demand**
- **Open task** and **Assignment planned hours**

Creating a project worksheet view

1. Access the project worksheet.

2. Click .

   The **Manage Views** dialog box appears.

3. From the **View** list, select **New view**.
4. In the **Name** field, enter a name for the view.
5. To allow other resources to use this view, select the **Share the view** check box.
6. To set this view as your default view, select the **Set as default** check box.
7. To display a column in the view, in the **Show/hide columns** list, select the column check box.
8. To remove a column from the view, clear the column check box.
9. To check or clear all of the columns at once, click the check box in the top row of the **Show/hide columns** list. The check box switches between options to select all and clear all columns.
10. To add a column to the frozen columns, select the column in the **Show/hide columns** list and then drag it to the **Frozen columns** list. Columns in the **Frozen columns** list are automatically selected for display.
11. To add all columns to the **Frozen columns** list, click the left double arrow button.

    All columns except **Fiscal period** are moved to the **Frozen columns** list.

12. To remove all columns from the **Frozen columns** list, click the right double arrow button.
13. The columns display left to right on the project worksheet in the order that they are listed in the **Frozen columns** and **Show/hide columns** lists. To change the order of the columns, select a column name and drag it to the desired position in the list.
14. When you are finished, do one of the following:
    - To save the view and edit another view, click **Apply**.
    - To save and display the view in the worksheet, click **Save**.

Copying a project worksheet view

You can create a project worksheet view by copying any existing worksheet view, including your own worksheet views, shared worksheet views and the system default view. You can

then edit the project worksheet view as required.

1. Access the project worksheet.
2. Click .

   The **Manage Views** dialog box appears.
3. From the **View** list, select the worksheet view that you want to copy.

   The worksheet view settings are displayed. If the worksheet view is a shared view or the default system view, the settings are not editable unless you have the access rights to manage views.
4. From the **View** list, select **New view**.

   The information in the **View** and **Name** field changes and the remaining settings from the project worksheet view become editable.
5. In the **Name** field, enter a name for the view.
6. Edit the remaining fields as required. For more information, see "Creating a project worksheet view" on page 87.
7. When you are finished, do one of the following:
   - To save the view and edit another view, click **Apply**.
   - To save and display the view, click **Save**.

Editing a project worksheet view

You can change most of the settings in a view, including the view name. However, you cannot move the **Task name** column from the frozen pane or the **Fiscal period** column to the frozen pane.

1. Access the project worksheet.
2. Click .

   The **Manage Views** dialog box appears.
3. From the **View** list, select the view that you want to edit.
4. To change the name of the view, type the new name in the **Name** field.

5. Make the necessary changes. For more information, see "Creating a project worksheet view" on page 87.
6. When you are finished, do one of the following:
   - To save the view and edit another view, click **Apply**.
   - To save and display the view, click **Save**.

Deleting a project worksheet view

1. Access the project worksheet.
2. Click .

   The **Manage Views** dialog box appears.
3. From the **View** list, select the view that you want to delete.
4. Click **Delete**.
5. Click **Yes** to confirm.
6. Click **OK** to acknowledge.

About filtering the information displayed in the project worksheet

You can create filters in the project worksheet so that only the tasks and task assignments that match the criteria that you specify are displayed on the project worksheet. In a filter, you add criteria based on the data in the worksheet columns. There are also logical AND and OR operators and parentheses that you can use to create more complex filter criteria.

When you apply a filter, only the information that is displayed on the project worksheet is affected. For example, if all of the tasks in your project worksheet are collapsed so that no task assignments are visible and you apply a filter that affects task assignments, then nothing will display.

> **Note:** Once you apply a filter, it is not reapplied automatically when you make changes to the worksheet. This filter behavior allows you to filter on summary tasks and then display everything below them. For example, you could use a filter to display only the summary task in a given project phase, and then expand the subtasks and task assignments under the summary task.

Manage Filters (PW) dialog box options

Option	Description
Information column	Provides information about warnings and errors: • Yellow cell – indicates a warning for the row • Red cell – indicates there is an error in the row Point to the cell to display the warning or error message.
Blank columns	Four drop-down lists for selecting operators (AND, OR) or parentheses to create complex filter criteria.
Filters list	Specifies a filter to edit, or **[New filter]** to create a new filter.
Name field	Specifies a new filter name or edits an existing filter name.
Set as default check box	When enabled, applies the currently selected filter automatically to all of the projects that you view in the project worksheet.
Show summary task check box	When enabled, displays the summary task when one or more of its subtasks are displayed when the filter is applied.
New criteria button	Adds a new criteria row to the table, above the row that you have selected.
Delete criteria button	Deletes the selected criteria row. Note that you cannot delete the last row.
Type column	Drop-down list from which you select the type of project item for the criteria row. The options are: • **Task** – columns for tasks only • **Task assignment** – columns for task assignments only • **Task and assignment** – columns that are common to both tasks and their task assignments
Filter on column	Specifies the worksheet column that the filter criteria applies to.
Condition column	Specifies the condition for the criteria row.
Value column	Specifies the value for the condition.

About calculated columns

There are some calculated columns that you can use in the filter criteria. These columns include some basic calculations to provide additional filter criteria. The calculated columns are provided for use in filters only and are not available for display on the project worksheet.

Calculated Column	Description
Actual variance	Calculates the variance of task assignments from planned hours as follows: planned hours minus actual hours
Billing rate minus cost rate	Calculates the margins for task assignments as follows: billing rate minus cost rate Note however, that if the billing rates are in different currencies, the currencies are not converted.
Forecast variance	Calculates the variance of task assignments from forecast hours as follows: planned hours minus actual hours minus remaining hours
Number of days late	For task assignments that are not completed, calculates the number of days late as follows: • if forecast finish date is in the past: current date minus planned finish • if forecast finish is in the future: forecast finish minus planned finish
Status is not current	Identifies task assignments for which the status is due to be updated. You can use this column in a filter to gauge how current the project information is.

Filter examples

This section includes some examples of filters:

- Task assignments with remaining hours over 40 hours.

Type	Filter on	Condition	Value
Task assignment	Remaining hours	Greater than	40.00
Task assignment			

- Task assignments with planned start dates in October.

Type			Filter on	Condition	Value		
Task assignment			Planned Start	Between	10/01/2009 AND 10/31/2009		
Task assignment							

- Task assignments with remaining hours over 40, and planned start dates in October

Type			Filter on	Condition	Value		
Task assignment			Remaining hours	Greater than	40.00	AND	
Task assignment			Planned Start	Between	10/01/2009 AND 10/31/2009		
Task assignment							

- Task assignments where:
  - the actual variance (calculated column that calculates planned hours minus actual hours) is less than 0 or the number of days late is greater than 0 (tasks that have slipped)
  - and the function is either Developer or DBA
  - and the workgroup is Enterprise Development.

Type			Filter on	Condition	Value		
Task assignment	(		Actual variance	Less than	0.00	OR	
Task assignment			Number of days late	Greater than	0.00	)	AND
Task assignment	(		Function	Equal to	Developer	OR	
Task assignment			Function	Equal to	DBA	)	AND
Task assignment			Workgroup	Equal to	Enterprise Development		
Task assignment							

Creating a project worksheet filter

1. Access the project worksheet.
2. Click .

   The **Manage Filters** dialog box appears. For more information, see "Manage Filters (PW) dialog box options" on page 91.

3. In the **Filter** list, select **[New filter]**.
4. In the **Name** field, enter a name for the filter.
5. To apply the filter automatically to all projects that you view in the project worksheet, select the **Set as default** check box.
6. To display summary tasks when the filter is applied, select the **Show summary task** check box.
7. In the **Type** column, select the type of project item for the criteria row.

   Note: If you select **Task and assignments**, then the filter criteria must be met by both the task and its task assignment.
8. In the **Filter on** column, select the column that the criteria row applies to.
9. In the **Condition** column, select the condition for the information in the column.
10. In the **Value** column, select the values that the condition must meet.
11. To add a criteria row, click **New criteria**.

    Note: When you add a criteria row to the worksheet filter, a new blank row is automatically added by the system. Do not attempt to delete it.
12. To add an AND or OR operator, or an opening or closing parentheses, click a blank column in the row and then select the item from the list.
13. When you are finished, do one of the following:
    - To save the filter and edit another filter, click **Apply**.
    - To save and display the filter in the worksheet, click **Save**.

Editing a project worksheet filter

You can edit any of the options in a filter, including the filter name.

1. Access the project worksheet.
2. Click .
3. The **Manage Filters** dialog box appears.
4. In the **Filter** list, select the filter.

5. Make the necessary changes. For more information, see "Manage Filters (PW) dialog box options" on page 91.
6. When you are finished, do one of the following:
   - To save the filter and edit another filter, click **Apply**.
   - To save and display the filter in the worksheet, click **Save**.

Deleting a project worksheet filter

1. Access the project worksheet.
2. Click .
3. The **Manage Filters** dialog box appears.
4. In the **Filter** list, select the filter.
5. Click **Delete**.
6. Click **Yes** to confirm.
7. Click **OK** to acknowledge.

Applying a project worksheet filter

When you apply a project worksheet filter, only the tasks and task assignments that match the filter criteria are displayed. If there are no matches, then only the main project row is displayed.

1. Access the project worksheet.
2. From the **Filter** list in the toolbar, select a filter.

   The filter is applied to the information that is currently displayed.

Clearing a project worksheet filter from the view

From the **Filter** list in the toolbar, select the blank row at the top of the list. The filter is cleared from the view.

About managing tasks in the project worksheet

You can perform all task-related procedures using the project worksheet, except for the following procedures, which you must perform using the task editing view:

- associating products with tasks
- specifying security access for open tasks
- viewing the task assignment billing role history
- setting up and working with baselines

Also, when task-level resource requests are enabled for the project, you must create task assignments and edit planned information of task assignments in the task editing view or on the resource request.

About open tasks in the project worksheet

For open tasks, the planned start, planned finish and planned hours from task assignments are not rolled up to the task level. Also, the planned hours for open tasks are displayed distributed evenly across fiscal periods, but no values (zeroes) are displayed across daily periods.

About summary tasks in the project worksheet

When daily periods are displayed in the project worksheet, the planned hour totals are displayed for subtasks and projects, but not for summary tasks.

About locking tasks for editing in the project worksheet

You must lock tasks when creating, editing, moving and deleting tasks. Locks are required to prevent other resources from making changes to the same tasks at the same time and because these changes can affect settings on other tasks, as well as the work breakdown structure of the overall project.

Therefore, it is recommended that you lock the entire task hierarchy within the WBS that you will be working in so that you can avoid conflicts with changes made by other resources. Otherwise, the worksheet may have to be refreshed to display changes made by other resources before you can lock additional tasks or perform actions that affect other tasks. In some cases, tasks are automatically locked, in particular when your changes affect the WBS.

Project plan editors and summary task managers can only lock the tasks that are currently not locked by other resources. Project managers can release the locks that other resources have on tasks and take over editing control of the tasks. Keep in mind that when you release the locks on a task, all unsaved changes that the other resource has made to the task will be lost.

If you unlock a task without saving it, the task will revert to the values that were last saved for it.

Locking a task for editing in the project worksheet

When you lock a task, a check mark displays in the **Edit** column, and all task assignments under the task are also automatically locked. However, check marks are not displayed for locked task assignments. You cannot lock individual task assignments.

Tip: To see the names of resources who have locked the tasks, add the **Locked by** column to your worksheet view.

1. Access the project worksheet.
2. Select one or more tasks that you want to lock for editing.
3. Click .

   Check marks display in the **Edit** column for the tasks that are locked.

Unlocking a task in the project worksheet

Locked tasks are unlocked automatically when you navigate away from the project worksheet and when you refresh the project worksheet by clicking .

To unlock tasks manually, select them and then click . The check marks in the **Edit** column are cleared for the tasks that are unlocked.

Selecting multiple tasks or task assignments in the project worksheet

You can select a range of tasks or multiple nonconsecutive tasks while working in the project worksheet. You can do the same with task assignments.

1. Access the project worksheet.
2. To select a range of tasks or task assignments:
   a. Select the first task in the range by clicking in the task row.
   b. While holding the **Shift** key, click the last task in the range. The range of tasks is highlighted.
3. To select nonconsecutive tasks or task assignments:
   a. Select the first task.
   b. While holding the **Ctrl** key, click the other tasks. The selected tasks are highlighted.

About moving tasks in the project worksheet

You can change the order of tasks within the WBS structure on the project worksheet by dragging tasks to new positions. Tasks are automatically locked when you move them, and all tasks that are affected by the move are automatically locked as well, provided that you have access to lock the tasks. If you do not have access to lock one or more of the tasks that will be affected by the move, you will not be able to move the task.

As you drag a task, the task name displays by the pointer and the row that you are pointing to is highlighted. When you drop the task on a highlighted task row, the task is placed in the row above the highlighted task row, and at the same WBS level as the highlighted task. If you drop the task onto a row that it cannot be moved to, for example, a task assignment or subproject or a summary task that you do not have access to, then the task will return to its original position.

You can select multiple tasks and drag all of them at once. Note that all tasks will be inserted at the same WBS level as the task that they are dragged to, regardless of the original WBS level of the individual tasks.

If you move a summary task, all of its subtasks are moved with it and retain their WBS levels, but the summary task will be at the same WBS level as the task that you drop it on. If you move an individual subtask, it is inserted at the same WBS level as the highlighted task that you drag it to.

Moving multiple tasks in the project worksheet

1. Access the project worksheet.
2. Select the tasks that you want to move.
3. While pressing the **Ctrl** key, click the task icon to the left of one of the selected task names.

   The names of all of the selected tasks are displayed in a tooltip.
4. Drag the tasks to the row above which you want them to be moved.

Moving a single task in the project worksheet

1. Access the project worksheet.
2. Click the task icon to the left of the task name. The task name is displayed in a tooltip.
3. Drag the task to the row above which you want it to be moved.

Tip: You can also click in the information column to select a task.

About creating summary tasks and subtasks in the project worksheet

You create subtasks and summary tasks on the project worksheet by outdenting and indenting tasks. When you indent a task, it becomes a subtask of the task directly above it that is at the same level as it in the worksheet.

When you outdent a task, it becomes a summary task of the tasks directly below it that are at the same level as it in the worksheet. If you outdent a task that is directly below a summary task, the summary task becomes a regular task. Neither open tasks nor dependent tasks can be summary tasks.

Note: When you indent or outdent a summary task, its subtasks move with it.

Indenting and outdenting tasks in the project worksheet

You can indent or outdent one or more tasks at a time.

1. Access the project worksheet.
2. Select one or more tasks.
3. To indent the tasks, click .
4. To outdent the tasks, click .

About creating tasks in the project worksheet

You can create tasks in the project worksheet by either adding a new task and then specifying the task details, or by copying and pasting an existing task.

When you add a new task, it is inserted into a new row that is above, but at the same level as, an existing task. If there are no existing tasks, or you want to add a new task at the top task level, you can add a task by clicking the project row, in which case the new task is inserted in to a new row at the bottom of the project worksheet.

You cannot add tasks to a subproject row, which is a summary-level, information-only row that cannot be edited or added to. You must manage subprojects separately by launching the project worksheet from the subprojects in the projects tree view.

Tip: To minimize the effect on other resources who could be editing other parts of the project, it is good practice to insert tasks where they are least likely to affect the WBS.

Examples include at the bottom of the task hierarchy or project worksheet or within a summary task.

About summary task managers creating tasks

Summary task managers must select an insertion point that is below the summary task because they do not have edit access to the summary task itself. If the insertion point is a task, the new task will be inserted above the task. If the insertion point is a task assignment of the summary task, the new task will be inserted below the last task under the summary task. If summary task managers have rights to create tasks but not edit them, then they must use task assignments as the insertion point.

About validation, rollup, and critical path calculations in the project worksheet

By default, validation of data that you enter into the project worksheet, rollup of the task assignment and task data, and critical path calculations are performed only when you request them or when you save the project worksheet, which reduces processing time and therefore improves the performance of the project worksheet.

However, you can change the setting to validate and rollup the data, and calculate critical path every time that you edit and then move from a task or task assignment row. You can set critical path to be calculated upon change only if validation and rollup is set to be performed upon change. These settings apply to all projects that you access in the project worksheet, regardless of which project you change the setting from.

Note: You must enable critical path for the project to view it in the project worksheet. For more information, see "About viewing critical path information in the project worksheet" on page 131.

To request validation and roll up

Click .

To request critical path calculations

Click . When you request critical path calculations, any outstanding validations and rollup are also performed.

To change the validation and rollup, and critical path calculation settings

1. To access the settings, click in the top right corner of the project worksheet.

2. To change the **Validate and roll up** setting:

   - To perform validation and rollup every time that you edit a row and then click outside of the row, select **Upon change**.

   - To perform validation and rollup only when you request it, select **Upon request**.

3. To change the **Calculate critical path** setting:

   - To calculate critical path every time that you edit a row and then click outside of the row, select **Upon change**.

   - To calculate critical path only when you request it, select **Upon request**.

Creating a task in the project worksheet

1. Access the project worksheet.

2. Lock the tasks that you will be working with.

3. Select an insertion point by doing one of the following:

   - To add a task at the same level as an existing task, select the task

   - To add a task at the top task level, select the project row

4. Insert the task by doing one of the following:

   - Click

   - Press the **Insert** key

   The new task is added to the project worksheet.

5. In the **Task name** column, type the name.

6. Complete the remaining fields as required. For more information about the task fields, see "Task editing view, General section options" on page 55.

7. You can move and indent or outdent the task, if required.

8. Click .

About copying tasks in the project worksheet

You can create new tasks in the project worksheet by copying and pasting existing tasks. The following rules apply:

- copying a task will copy the task and all of its task assignments, even if you select only some of the task assignments
- you can copy multiple tasks or task assignments, but not both at once
- copying a summary task will copy all of its subtasks and task assignments
- you can neither copy subprojects nor copy tasks or task assignments to them
- if the start date of the copied task is in the past:
  - the start date of the pasted task will be changed to the current date, but the duration will remain the same
  - if the copied task is a summary task, all of its tasks and task assignments will start on the current date

Note: If a task assignment for the same resource already exists on the target task, then the task assignment will not be pasted.

Copying a task in the project worksheet

1. Access the project worksheet.
2. Lock the tasks that you will be working with.
3. Select the task that you want to copy and then click .
4. Select the task above which you want to paste the copied task, then click .
5. In the **Task name** column, enter the new name for the task.
6. Complete the remaining fields as required. For more information about the task fields, see "Task editing view, General section options" on page 55.
7. You can move and indent or outdent the task, if required.
8. Click .

About linking tasks in the project worksheet

In the project worksheet, you can link tasks within the same project to create dependencies between them.

> **Note:** You can link tasks in different projects from the task profile. For information about linking tasks in different projects, see the "Linking tasks from the task profile" section on page 74.

To link tasks, you select two or more tasks to be linked and then click . The dependencies between the tasks are created as follows:

- If you select a range of tasks, then each task immediately above a task in the range is its predecessor, and each task immediately below a task in the range is its successor.
- If you select multiple non-consecutive tasks, then the first task that you select is a predecessor and each task you select after is a successor of the task that you select immediately before it.
- The planned start dates of the successor tasks are moved to start one day after the finish date of the predecessor tasks.

Linking tasks in the project worksheet

If you link tasks and then before saving the worksheet you unlink them or unlock the predecessor task, the link is removed but the dates for the successor task (if moved due to the dependency) do not revert back automatically. To roll back the changes to the successor task dates, you can unlock the successor task.

1. Access the project worksheet.
2. Lock the tasks that you will be working with.
3. Press and hold the **Ctrl** key and then select the tasks that you want to link.
4. Click .

   Link graphics are displayed in the information column for the linked tasks.

5. Click .

Note: If you get an error when linking tasks in the project worksheet, you must first unlink the tasks and then unlock the successor task to clear the error from the worksheet.

Identifying predecessor and successor tasks in the project worksheet

Linked tasks are marked in the project worksheet by a link graphic in the information column.

To identify the predecessor and successor tasks, add the **Predecessors** and **Successors** columns to your worksheet view. These columns display the WBS number of the predecessor and successor tasks. If one or more predecessor or successor tasks is from a different project, then an asterisk is displayed in the column. You can then use the **Manage Link Settings** dialog box to identify the project and task.

About editing settings for linked tasks in the project worksheet

The default settings for dependencies in linked tasks are as follows:

- **Lag time** – 0
- **Lag time in working days** – selected
- **Move successor task date** – selected
- **Successor task can start anytime after the finish date of the predecessor task** – cleared
- **Send notification** – selected

However, you can edit the settings and/or delete task dependencies between tasks in the same project or in different projects if you have edit access to the successor tasks.

You cannot edit or delete dependencies if the project in the worksheet is a linked MSP project. If the successor task is from a linked MSP project, then you can edit the dependency, except for the **Move successor task date** option.

Editing settings for linked tasks in the project worksheet

1. Access the project worksheet.
2. Lock the tasks that you will be working with.
3. Do one of the following:
    - To view all of the dependencies for the project, select the project row.

- To view some of the dependencies, select the linked tasks.

4. Click .

   The **Manage Link Settings** dialog box appears. There is a row for each predecessor-successor task dependency that you selected.

5. Select the task dependency that you want to edit. For more information, see "Task dependency options" on page 74.

6. Make the necessary changes.

7. Repeat for each task dependency, as required.

8. Click **Save**.

Unlinking tasks in the project worksheet

You can unlink tasks that are in the same project by selecting the predecessor and successor tasks and then clicking .

You can unlink multiple tasks and tasks in different projects in the **Manage Link Settings** dialog box.

1. Access the project worksheet.

2. Lock the tasks that you will be working with.

3. Do one of the following:

   - To view all of the dependencies for the project, select the project row.

   - To view some of the dependencies, select the tasks whose dependencies you want to edit.

4. Click .

   The **Manage Task Links** dialog box appears. There is a row for each predecessor-successor task dependency that you selected.

5. Select the task dependency that you want to remove and then click **Delete**.

6. Click **Save**.

About creating task assignments in the project worksheet

You create task assignments in the project worksheet by either adding a new task assignment and then specifying the details, or by copying and pasting an existing task assignment.

You can add a task assignment to a task or an existing task assignment:

- If you add a task assignment to a task, the task assignment is inserted into a new row below the task and any existing task assignments.
- If you add a task assignment to an existing task assignment, then the task assignment is inserted into a new row above the existing task assignment.

If resource requests are not enabled, your preferred resources are available. You can add resources and personal groups to your preferred resources list directly from the project worksheet by clicking .

Creating a task assignment in the project worksheet

1. Access the project worksheet.
2. Select a task or task assignment as the insertion point.
3. Click .

   The new task assignment is added to the project worksheet.

   Tip: If the insertion point is a task assignment, you can also press the **Insert** key to insert the task assignment.
4. To assign a resource or personal group:
   a. Click in the **Task name** column, type the first few letters of the resource's first name or group's name and then press **Enter** or click the arrow.
   b. Select the resource or group from the list. If you select a resource, the resource name is added to task assignment. If you select a group, then a task assignment for each resource in the group is created.
5. Complete the remaining fields as required. For more information, see "Task editing view, Assignments section options" on page 61.
6. Click .

About using resource searches for task assignments in the project worksheet

When assigning a task in the project worksheet, you can search for resources based on workgroups, qualifications, functions and availability. You can then assign one or more resources to the task directly from the resource search results. If you specify the planned hours, planned start, planned finish, and function fields for the task assignment, the corresponding fields are automatically populated on the **Search for Available Resources** dialog box as follows:

- planned hours – **Available for Hours** >= **[**number of hours**]**, **Availability** section
- planned start – **Period Start**, **Availability** section
- planned finish – **Period End**, **Availability** section
- function – **Function** section

Using resource searches for task assignments in the project worksheet

1. Create the task assignment, with or without specifying the resource. For more information, see "About creating task assignments in the project worksheet" on page 106.
2. Click .

   The **Search for Available Resources** dialog box appears.
3. Perform the resource search. For more information, see "Resource Searches" in the *Resource Management User Guide*.

   The resources that match your search criteria are displayed in the **Resource search results** list.
4. Select one or more resources by selecting the check box beside the resource name.
5. Click **Actions** > **Create** > **Task assignment**.

   If you selected a single resource, the resource is added to the task assignment.

   If you selected more than one resource, the first selected resource in the **Resource search results** list is assigned to the current task assignment (with the total planned hours amount) and a new task assignment is automatically created for each remaining resource in the list (with 0 planned hours each). You can then edit the planned hours for each task assignment as necessary.

About copying task assignments in the project worksheet

You can add new task assignments to tasks by copying and pasting existing task assignments. You can copy multiple task assignments at once. The planned start and finish dates come from the target task. If the start date of the source task assignment is in the past, the start date of the target task assignment will be changed to the current date, but the end date will be taken from the source task. If the target task finish date is also in the past, it will be set to the current date.

The planned hours are copied and the effort is redistributed into fiscal periods, unless the source task assignment has a manual loading method, in which case the planned hours are not copied. The **Completed** flag and the start and finish dates are never copied.

You cannot paste a task assignment when the following conditions exist:

- a task assignment for the same resource already exists on the target task
- the task assignment is not valid for the target task; for example, a resource request is required, or the resource is not in the project team or projected resources list (where applicable)
- task-level resource requests are enabled for the project

  Note: If you paste multiple task assignments, the valid task assignments will be pasted to the target task even if one or more task assignments cannot be pasted.

Copying a task assignment in the project worksheet

1. Access the project worksheet.
2. Lock the tasks that you will be working with.
3. Select the task assignments that you want to copy and then click .
4. Select the task or task assignment that you want to add the task assignments to, and then click .
5. Complete the remaining fields as required. For more information, see "Assigning a resource to a task assignment" on page 60.
6. You can move and indent or outdent the task, if required.
7. Click .

About resource requests and task assignments in the project worksheet and PPW

If your organization uses resource requests, there are restrictions on how you can edit task assignments in the project worksheet and PPW, depending on whether resource requests are enabled at the engagement level, project level, or task level.

> **Note:** In all cases, you can create task assignments for resources that are configured to be exempt from resource requests.

If resource requests are enabled at the engagement level, then you can create or copy a task assignment for a resource on the worksheet only if there is a resource request for the resource in the **Projected resources** tab of the engagement.

If resource requests are enabled at the **Project** level, then the following restrictions apply to the worksheets:

- you can only assign a resource to a task assignment if there is a resource request for the resource that covers the planned start, planned finish and planned hours for the task assignment.
- you can copy and paste a task assignment, but you can save it only if there is a resource request for the resource that covers the planned start, planned finish and planned hours for the task assignment

If resource requests are enabled at the task level, then the following restrictions apply to the worksheets:

- you cannot create or copy and paste task assignments
- you can only reopen resource requests from the task editing view or resource request dialog box
- the following columns are not editable on the worksheets:
  - Resource
  - Planned start
  - Planned finish
  - Planned hours
  - Fiscal periods
  - Daily periods

- Loading method
- Open task

Adding resources to your preferred resources from the project worksheet

You can add resources and personal groups to your preferred resources list directly from the project worksheet by clicking . For more information, see "Adding a resource to your preferred resources" in the *User Basics User Guide*.

About editing tasks in the project worksheet

In the project worksheet, you can edit tasks, including draft tasks that were created in PPW. Before you can edit a task, you must lock it and you must ensure that the field columns that you want to edit are displayed in the project worksheet. If the task has task assignments, the values that you change on the task are also changed on its task assignments, except for:

- billing role – must be changed on the task assignment because of the effective date
- function – if a resource has already been assigned to the task assignment, the function will not be changed

However, you can edit the task assignments later, if required.

If you edit a parent task, the values that are inherited by subtasks (such as the **Completed** flag) are updated on the worksheet. However, the values that are updated on the worksheet are not saved to the database until you click .

Editing draft tasks in the project worksheet

In the project worksheet you can edit the draft tasks that are created in PPW.

> **Tip:** To identify draft tasks, add the **Draft** column to the project worksheet view. To filter draft tasks from the project worksheet, create a filter based on the **Draft** column.

Unlike in PPW, when you edit a draft task in the project worksheet, it must validated and saved before the worksheet can be saved. Once a task is edited, validated and saved in the project worksheet, it becomes a regular task. Note: the new ‘duration’ field will not be available in the PW. The PW will continue to display the old ‘duration’ field that is used only for effort and date calculations and is not stored. Behind the scenes, the ‘duration’ will be set to the working days value of the task assignment.

Warning: If the project contains tasks for which planned hours have been manually allocated to nonworking days, the planned hours will be reallocated to working days when you save the project worksheet.

Related columns in the project worksheet

The following pairs of columns are related and either must be updated at the same time, or the value in one affects the value in the other. Therefore it is best to display both columns in the worksheet if you plan to work with them:

- **Billing role** and **Billing role expiry date**. If you change the billing role, you must specify the date *after which* the new billing role becomes effective.
- **Billable task** and **Effective date**
- **Billed to fixed-fee portion of the engagement** and **Fixed fee**
- **Work code category** and **Work code**
- **Work location group** and **Work location**
- **Locked** and **Include in resource demand**
- **Open task** and **Assignment planned hours**

Editing a task in the project worksheet

1. Access the project worksheet.
2. Lock the tasks that you want to edit.
3. Click the cell that you want to edit.
4. Make the necessary changes.
5. Click .

About deleting a task in the project worksheet

When you delete a task, all of its task assignments are also deleted. When you delete a summary task, all summary tasks, tasks and task assignments below it are also deleted.

You cannot delete a task if any of the following conditions exist:

- expenses or billable time that has not been invoiced are entered for the task

- the planned finish date for the task is in the past and fiscal periods have been selected for the project, which means changes to data in past fiscal periods is not allowed
- any of the task assignments under this task or any of its subtasks has a subproject associated to it

Deleting a task in the project worksheet

1. Access the project worksheet.
2. Select the task that you want to delete.
3. Do one of the following:
   - Click .
   - Press the **Delete** key.
4. Click **OK** to confirm.

   The task is removed from the project worksheet.
5. Click .

   The task is deleted.

About deleting task assignments in the project worksheet

You can delete tasks assignments from a task without deleting the task. You cannot delete a task assignment if any of the following conditions exist:

- expenses or time have been entered for the task
- the planned finish date for the task is in the past and fiscal periods have been selected for the project, which means changes to data in past fiscal periods is not allowed
- the task assignment has a subproject associated to it

Deleting a task assignment in the project worksheet

1. Access the project worksheet.
2. Select the task assignment that you want to delete.
3. Do one of the following:

- Click .
- Press the **Delete** key.

4. Click **OK** to confirm.

   The task assignment is removed from display on the project worksheet.

5. Click .

   The task assignment is deleted.

Editing a check box in the project worksheet

1. Access the project worksheet.
2. Lock the tasks that you want to edit.
3. Click the cell with the check box.

   The cell becomes editable.

4. To select or clear the check box, you can either click the check box or press the spacebar.

Specifying multiple values in a list in the project worksheet

1. Access the project worksheet.
2. Click the cell.

   The cell becomes editable.

3. Do one of the following:
   - To display the complete list of values, press **Enter**. The list is displayed.
   - To refine your search criteria, type the first characters of a value and press **Enter**. The list of values that begin with the characters that you typed is displayed.
4. To select a range of consecutive values:
   a. Click the starting value for the range.
   b. While holding the **Shift** key, click the value for the end of the range. The range of values is highlighted.
   c. Click anywhere outside the list.

5. To select multiple, nonconsecutive values:

   a. Click the first value that you want to select.

   b. While holding the **Ctrl** key, click the additional values that you want to select. Each value that you select is highlighted.

   c. Click anywhere outside the list.

   Tip: To deselect a value, click it again. If there are too many selected values to display in a cell, you can point to the cell to display a tool tip that displays the complete list.

6. To select additional values, repeat steps 2 to 4 as required, but press and hold the **Ctrl** key while selecting the first value. The values that you have previously selected are displayed at the top of the list and are highlighted.

7. Click .

Editing multiple values in a list in the project worksheet

You can add additional values to, and remove values from, multiple values that have been selected from a list.

1. Access the project worksheet.

2. Click the cell whose value you want to specify.

3. Do one of the following:

   - To display the complete list of values, press **Enter**. The list of values is displayed with the previously selected values highlighted at the top of the list.

   - To filter the list of values, type the first characters of a value and then press **Enter**. The list of values that begin with those characters is displayed. All values that were previously specified are highlighted at the top of the list, followed by the values that start with the letter or number that you specified.

4. To add a value, press and hold the **Ctrl** key and click the value that you want to add.

5. To remove a value, press and hold the **Ctrl** key and click the value that you want to remove.

6. To remove all values, select the empty value at the top of the list.

7. Click anywhere outside the list.

8. Click .

Clearing values selected from a list in the project worksheet

To clear a value in the project worksheet that has been selected from a list, select the blank row at the top of the list. If the list has too many records to display at once, you must first specify search criteria to display a smaller list of records and then select the blank row.

1. Access the project worksheet.
2. Click the cell.

   The cell becomes editable.
3. Click the arrow.
4. If the list of values displays, select the blank row at the top of the list.
5. If a message displays, advising you to refine your search criteria:
   a. Click the cell to make it editable.
   b. Type the first few letters of one of the existing values, and then click the arrow. A list of the values that match your search criteria displays.
   c. Select the blank row at the top of the list.
6. Click anywhere outside the list.

   The value is removed.
7. Click .

Specifying dates in the project worksheet

You specify dates in the project worksheet by using the date field or the project worksheet calendar icon.

Specifying dates by using the date field in the project worksheet

The date format is determined by the setting in the Internet Explorer, **Tools** > **Internet Options** > **Languages** setting, and therefore may be different than the dates shown in this procedure, which is English (United States). In all cases, the characters that separate the date, and the first two digits of the year can be omitted.

1. Access the project worksheet.
2. Click in the date field 03/01/2013 .
3. Type the new date using one of the following formats:
   - MM/dd/yy
   - MM/dd/yyyy
   - mmddyy
   - mmddyyyy
4. Press **Enter** or **Tab**.

   The date is changed.
5. Click .

Specifying dates by using the calendar in the project worksheet

1. Access the project worksheet.
2. Click .

   The calendar displays the month with the date from the date field highlighted, or the current month and date if there is no date in the date field.
3. To change the date to another date in the same month, select the date.

   The date is changed.
4. To change to the next or previous month:
   a. To display the previous month, click the left arrow beside the <Month, Year>.
   b. To display the following month, click the right arrow beside the <Month, Year>.
   c. Repeat step a or b until the month you want is displayed.
   d. Select the date. The date is changed.
5. To navigate quickly to another month and/or year:
   a. Click the <Month, Year>. A table of the month names is displayed for the current year.

b. To change to another year, click the arrows beside the year.

c. Click the month that includes the date you want. A calendar of the month appears.

d. Select the date. The date is changed.

6. Click .

Copying a value to multiple tasks and task assignments in the project worksheet

You can copy a value from one task or task assignment to multiple tasks and task assignments. For example, you can copy the planned start date from one task to all of the task and task assignments that you want to have the same start date. The task with the value that you want to copy must be in a higher row; that is, closer to the top of the worksheet, than the tasks that you want to copy the value to.

Note: You cannot assign resources or copy task assignments using this procedure.

1. Access the project worksheet.
2. Lock the tasks that you want to edit, including the task whose value is being copied.
3. Select the cell that has the task or task assignment value that you want to copy to other tasks and/or task assignments.
4. Within the same column, select the cells in the tasks and/or task assignments that you want to copy the value to.
5. Press **Ctrl+Alt+U**.

   The value is copied to the selected tasks and task assignments. If the value is not valid for a row, it will not be copied.

About allocating planned hours in PPW and the project worksheet

The methods that you can use to allocate planned hours depend on whether or not fiscal periods have been selected for the project, and the loading methods that are specified for tasks.

If you select fiscal periods for the project:

- you can allocate planned hours to fiscal periods and edit planned start, planned finish and planned hours, provided that they are in current or future fiscal periods. You require the appropriate security feature to edit information in past fiscal periods.

- the default loading method for tasks is **1 - Auto distribute - update past and future**.

  Note: If you do not want planned hours in past fiscal periods to be updated with actual hours, then you must change the loading method for each task to loading method 3 or 4. For more information, see "About selecting loading methods" on page 191

If you do not select fiscal periods for the project, then only the following loading methods are available:

- **3 - Manually distribute – no update**
- **4 - Auto-distribute – no update to past** (default)

Differences between PPW and project worksheet

Using PPW, you can do the following, which is not possible in project worksheet.

Manually allocate planned hours to nonworking days

In PPW only, you can allocate planned hours to nonworking days if the loading method is a manually distribute method.

Note: If you use the project worksheet or resource management worksheet (RMW) to edit a demand item that has effort on nonworking days, you may have to either redistribute the effort manually or change to an auto-distribute loading method (to automatically redistribute the effort) before you can save the demand item.

Change a planned start date in the past when using a loading method that replaces planned hours in past periods

You can change a planned start date that is the past when the loading method is one that replaces planned hours in past periods with actual hours, provided that you have access rights to edit data in past fiscal periods.

Note: If you change a planned start date this way, keep in mind that existing actual hours can cause the date to revert back to the original date upon saving. Also, if there are no actual hours at the time that you change the date, actual hours on a future date can change the date automatically.

About selecting loading methods

The default loading method for tasks is:

- if fiscal periods are selected for the project – 1 - Auto-distribute – update past and future

- if fiscal periods are not selected for the project – 4 - Auto-distribute – no update to past

The loading method applies to each task assignment for the task. In PPW, you can change the loading method for task assignments. In project worksheet, you can change the loading method for tasks as well as individual task assignments.

To allocate planned hours, you can select the loading method to specify how planned hours are distributed across fiscal periods, and how (or whether) actual hours are applied to past fiscal periods when the project is rolled up.

When you select a manually distribute loading method, you can manually allocate the planned hours in the current and future fiscal periods. However, you cannot edit the total planned hours for the task assignment.

When you select one of the auto-distribute loading methods, you can update planned start, planned finish and planned hours for the task assignment, but the system automatically allocates the hours to the fiscal periods.

> **Note:** When open tasks are rolled up, the planned hours for the task are evenly distributed to each fiscal period between the planned start and planned finish dates, and planned hours are not rolled up from task assignments. Therefore the total planned hours for open tasks might not balance with the total task assignment hours.

The loading method affects how planned and actual information is rolled up for each task assignment.

0 - Manually distribute – update past only

- Planned hours in past periods are replaced by actual hours
- Planned start and planned finish in past periods are replaced if time records are earlier than the planned start or later than the planned finish. For more information, see "About replacing planned start and finish dates with actuals" on page 120.
- Current and future planned hours are not changed
- Total planned hours are set to: past period hours + current and future planned hours
- Resources can manually update current and future periods

1 - Auto-distribute – update past and future

- Planned hours in past periods are replaced by actual hours

- Planned start and planned finish in past periods are replaced if time records are earlier than the planned start or later than the planned finish. For more information, see "About replacing planned start and finish dates with actuals" on page 120.
- Total planned hours minus planned hours from past periods, are distributed evenly to current and future periods

2 - Auto-distribute – update past only

- Planned hours in past periods are replaced by actual hours
- Planned start and planned finish in past periods are replaced if time records are earlier than the planned start or later than the planned finish. For more information, see "About replacing planned start and finish dates with actuals" on page 120.
- Current and future periods are not changed (unless the resource changes the planned start, planned finish or planned hours)
- Total planned hours are set to: past period planned hours + current and future planned hours

3 - Manually distribute – no update

- Planned hours in past periods are not replaced by actual hours
- Resources can manually update current and future periods
- Resources with the required access rights can manually update past periods

4 - Auto-distribute – no update to past

- Planned hours in past periods are not replaced by actual hours, but can change when planned start, planned finish or total planned hours are changed
- Total planned hours are evenly distributed across the working days between the planned start and finish dates, and the planned hours for fiscal periods (including past fiscal periods) are updated accordingly

About replacing planned start and finish dates with actuals

If the loading method for a task assignment is one that includes “update past”, then if a time record is entered before the planned start date in a past period, the planned start date is changed to the date of the time record. Similarly, the planned finish date in a past period is changed to the date of a time record that is later than the planned finish date.

When the planned start date for a task assignment is changed in this way, then all effort that is allocated to daily periods for the task assignment is deleted.

However, the planned start and finish dates for task-level or project-level resource requests that have resource restrictions enabled will not be replaced with dates of time records if the new dates are outside of the dates for the original resource request item.

Loading method examples

The following table shows the results after a project rollup, of the different loading methods on a task assignment with the following conditions:

- Planned start: September 1
- Planned finish: October 31
- Planned hours: 50
- Fiscal periods selected for the project, and the fiscal periods are months (September, October)
- 20 actual hours were entered during the September fiscal period
- The current fiscal period is October

Note: All of the tables in the loading method examples show the results after the project has been rolled up. However on the project worksheet, you may see method 2 providing the same results as method 1 if you update the planned hours and loading method for a task that has planned hours in a past period.

Loading Method	Total Planned Hours	Fiscal Period September	Fiscal Period October
Original task assignment	50	25	25
0 - Manually distribute – update past only	45	20	25
1 - Auto-distribute – update past and future	50	20	30
2 - Auto-distribute – update past only	45	20	25

Loading Method	Total Planned Hours	Fiscal Period September	Fiscal Period October
3 - Manually distribute – no update	50	25	25
4 - Auto-distribute – no update to past	50	25	25

The following table shows the results of the loading methods on the same original task assignment, but with 60 actual hours entered during the September fiscal period.

Loading Method	Total Planned Hours	Fiscal Period September	Fiscal Period October
Original task assignment	50	25	25
0 - Manually distribute – update past only	85	60	25
1 - Auto-distribute – update past and future	60	60	0
2 - Auto-distribute – update past only	85	60	25
3 - Manually distribute – no update	50	25	25
4 - Auto-distribute – no update to past	50	25	25

The following table shows the results of the loading methods on the same original task assignment, but with 40 actual hours entered in the September fiscal period and the planned hours changed to 60. You can only change planned hours on task assignments that have auto-distribute methods, therefore this example applies to the auto-distribute methods only.

Loading Method	Total Planned Hours	Fiscal Period September	Fiscal Period October
Original task assignment	50	25	25
1 - Auto-distribute – update past and future	60	40	20
2 - Auto-distribute – update past only	70	40	30
4 - Auto-distribute – no update to past	60	30	30

Selecting a loading method for a task or task assignment in the project worksheet

You can select a loading method for a task only if it has task assignments. Loading methods are prefixed with a number to make selections easier. For more information, see "About selecting loading methods" on page 191.

1. Access the project worksheet.
2. Lock the tasks that you will be working with.
3. Click the **Loading method** cell.

   The current loading method is selected.
4. If you know the number of the loading method that you want to select:
   a. Type the number and press **Enter**.
   b. Click outside of the cell.
5. To view a list of the loading methods:
   a. Delete the current entry by pressing the **Delete** key.
   b. Press the green arrow. The list of loading methods appears.
   c. Select the loading method.
   d. Click outside of the cell.
6. Click .

About automatically allocating planned hours in the project worksheet

When the loading method for a task assignment is auto-distribute, you can edit the planned start, planned finish and total planned hours for each task assignment, provided that the information is not in the past, and fiscal periods have been selected for the project. The planned hours are allocated automatically to the working days for the duration of the task assignment. If you are working with fiscal periods, each fiscal period displays the total planned hours that correspond to the working days (daily periods) within the fiscal period.

If resource leveling is enabled for the workgroup, then planned hours for the current task assignment are allocated so that the total of the committed and current planned hours are even for the duration of the task assignment, without overbooking the resource.

However, if the current task assignment is soft-booked, and soft-booked is not considered as committed time in your organization, then the planned hours are allocated evenly across the working days for the duration of the task assignment. Because the soft-booked hours are not considered committed, the allocation of these hours cannot result in the resource being overbooked.

About manually allocating planned hours in the project worksheet

You can allocate planned hours manually to fiscal or daily periods for task assignments provided that:

- the task assignments have a manually distribute loading method
- the **Fiscal period** and **Loading methods** columns are displayed in the project worksheet

When you allocate planned hours to a task assignment, the planned information for the task assignment is rolled up accordingly. Also, if you allocate planned hours to daily periods that are before the planned start date or later than the planned finish date, the planned dates for the task assignment will be adjusted accordingly. In all cases, changes are not actually saved until you save the project worksheet.

> **Warning:** If you allocate hours to daily periods that fall within a certain fiscal period and then you or another resource switches to the fiscal period view and changes the hours for the same fiscal period, the daily period hours will be deleted.

Manually allocating planned hours in the project worksheet

1. Access the project worksheet.

2. If the appropriate time periods are not displayed, click .

3. Lock the tasks that you will be working with.

4. Click in a fiscal or daily period cell and then enter the planned hours.

5. Click .

Allocating recurring planned hours in the project worksheet

You can allocate recurring planned hours for one or more task assignments in the project worksheet within a date range. There are weekly and monthly options. For example, you can allocate planned hours for a meeting that occurs every day during the length of a project, or for a town hall meeting that occurs at the end of every quarter.

Note: The recurring planned hours replace the existing planned hours within the specified date range. Existing planned hours after the recurring planned hours end date are removed.

If the first date that the recurring planned hours are allocated is earlier than the start date of the task assignment, then the start date of the task assignment is changed to the first date of the recurring planned hours. Similarly if the last date that the recurring planned hours are allocated is later than the task assignment end date, the task assignment end date is changed.

You can allocate recurring planned hours for tasks that have either an manual or automatic loading method. However, an automatic loading method will be switched to a manual loading method after recurring planned hours are allocated.

1. In the project worksheet, ensure that daily periods are displayed.

2. Lock the tasks that you want to work with.

3. Select the task assignments that the recurring planned hours will be allocated to.

4. Click .

   The **Recurring Allocations** dialog box appears.

5. Enter the date range, and the number of hours for the recurring allocation.

6. In the **Recurrence Pattern** section, select the weekly or monthly options.

7. Click **Save**.

Editing recurring planned hours in the project worksheet

After you allocate recurring planned hours in the project worksheet, the only way that you can edit the recurring demand settings all at once is by first clearing out the planned hours (planned effort) for the task assignment, and then reallocating the recurring planned hours. You can always edit the individual entries manually.

1. In the project worksheet, ensure that daily periods are displayed.
2. Lock the task assignments that you want to work with.
3. Change the loading method to an automatic distribute method.
4. In the **Planned hours** column, enter **0**.
5. Click outside of the row.
6. Click .

   The **Recurring Allocations** dialog box appears.
7. Enter the date range, and the number of hours for the recurring allocation.
8. In the **Recurrence Pattern** section, select either the weekly or monthly options.
9. Click **Save**.

About displaying resource availability in the project worksheet

You can display the availability of a resource for the duration of a task assignment.

You enter the resource, planned start, planned finish and the system displays the total hours that the resource has available for the duration of the task, as well as the hours available for each individual fiscal period or daily period, from the current date forward. You can then allocate planned hours for the task assignment based precisely on the time that the resource has available.

If you also specify the planned hours for the task assignment, then the system includes the planned hours when providing the resource's availability.

Keep the following in mind when using this functionality:

- Resource availability is provided only from the current date forward, but planned hours are allocated across the duration of the task assignment, even if the planned start is in the past.

Therefore, changing planned start dates in the past can change the allocation of planned hours, which in turn changes the resource availability.

- Overallocations can distort the resource availability. For example, the duration of a task assignment is two weeks, and a resource is overallocated for the first week, but is completely available for the second. Because the total resource availability will be reduced by the number of overallocated hours, it will appear that the resource has less availability than they do.

The resource's availability is calculated as follows:

Daily capacity * Percent available for planned work – Committed hours

Where:

- **Daily capacity** is the number of hours per working day for the resource.
- **Percent available for planned work** is from the resource's workgroup.
- **Committed hours** includes all demand for all items in the current project and other projects, and in all other demand items that are configured as committed.

Displaying resource availability in the project worksheet

1. Access the project worksheet.
2. Create or select the task assignment and specify the following information:
   - resource
   - planned start
   - planned finish
   - planned hours (optional)
3. Click .

   The total availability for the task assignment is displayed in blue in the planned hours column, and the availability per fiscal period or daily periods is displayed in the respective columns.
4. If you make changes to the worksheet, click again to refresh the information.

Allocating planned hours to match resource availability

If you have displayed the resource availability in daily periods and you want to allocate the planned hours according to the resource availability, you must use the calculate function.

1. Set up the project worksheet view for the calculate function. For more information see "About date and effort calculations in the project worksheet" on page 136.
2. Display the resource availability for the task. For more information, see "About displaying resource availability in the project worksheet" on page 126.
3. Set the **Work percentage** to 100.
4. Enter the planned hours.
5. Select the **Level** check box.
6. Click .

Replacing planned information with forecast and actual information

You can replace planned information for task assignments with forecast information or actual information (when actual information is available). The planned information is replaced as follows:

- Planned start is replaced with the forecast start date
- Planned finish is replaced with the forecast finish date
- Planned effort is replaced with the total of forecast effort + actual effort that was entered prior to the current date

The planned information cannot be replaced if the loading method is a manually distribute loading method. Also, if the task assignment is for a successor task, then the planned start cannot be replaced.

1. Lock the tasks that you want to work with.
2. Select the task assignments, and then click .

   The planned information is replaced with forecast and actual information.

Editing the forecast information for task assignments in the project worksheet

Project manager, project plan editors, and summary task editors can edit the following forecast information for the task assignments that they have access to:

- forecast start and forecast finish
- remaining effort
- percent complete

For tasks that require status updates, the remaining effort and percent complete are calculated according to the standard rules.

1. Add the following fields to the project worksheet view:
   - Forecast start
   - Forecast finish
   - Remaining effort
   - Percent complete
   - Status not required (Add this field so that you can identify the tasks that do not require status updates and therefore cannot be updated.)
2. Lock the tasks that you want to work with.
3. To update the remaining effort and percent complete based on actual effort, select the task assignments, and then click .
4. Edit the forecast information as required.
5. To mark a task assignment as complete, do one of the following:
   - Change the percent complete to 100.
   - Change the remaining effort to 0.
6. To reopen a closed task assignment, do one of the following:
   - Change the percent complete to a value less than 100.
   - Change the remaining effort to a value greater than 0.
7. To view the results of your changes, click outside of the current row.

8. To save your changes, click .

About updating remaining effort and percent complete based on actual effort

You can update the remaining effort or percent complete for selected task assignments in the project worksheet based on the actual effort that was entered by resources.

Task assignments that require status updates

Remaining effort is calculated as follows:

remaining effort = planned effort – actual effort

If actual effort is greater than planned effort, then the remaining effort cannot be calculated, and a message appears.

Percent complete is calculated as follows:

percent complete = actual effort / planned effort * 100

Task assignments that do not require status updates

Remaining effort is calculated as follows:

remaining effort = planned effort – actual effort

If actual effort is greater than planned effort, then the remaining effort is set to 1.

Percent complete is calculated as follows:

percent complete = actual effort / (actual effort + remaining effort) * 100

Updating remaining effort and percent complete based on actual effort

1. Lock the tasks that you want to work with.
2. Select the task assignments, and then click .

   The remaining effort and percent complete are updated.

Viewing task status information in the project worksheet

To view whether the status of a task assignment is up to date

Add the **Status up to date** field to the project worksheet view.

To view the last date that the status was updated.

Add the **Last status** field to the project worksheet view.

About viewing critical path information in the project worksheet

You can track the critical path for a project, and view the following information in the project worksheet:

- critical tasks
- slack for the tasks that are not on the critical path, which is the number of days that the planned finish for the task can be delayed before the task becomes critical

When you make changes to tasks that affect the critical path, the critical path and slack values are recalculated for the current project only. Changes to a predecessor task in the current project will automatically update a successor task in another project. However, the critical path and slack for the other project is recalculated only when the other project is rolled up.

Note: In order for a predecessor task to be considered critical, the **Move successor task date** option must be selected in the task dependency options.

Critical path information in linked MSP projects

For linked MSP projects, the slack in Changepoint is calculated similarly to total slack in Microsoft Project.

However, there are differences in how critical path and slack are calculated:

- critical path – in Changepoint, inter-project dependencies are taken into account, whereas in Microsoft Project, the critical path calculation is based on the current project only. Therefore, the critical tasks can be different between the two applications.
- slack – in Changepoint, when the planned finish date is on a nonworking day, the working day immediately before the nonworking day is used to calculate slack. Microsoft Project treats the nonworking day as a working day.

Viewing critical path information in the project worksheet

Before you can view the critical path information, you must enable it for the project.

To enable critical path information for a project

1. Access the project for editing.

2. Select the **Calculate critical path** check box.
3. Click **Save**.

To view critical path information in the project worksheet

You can view the critical tasks, and the slack information for tasks that are not on the critical path.

1. Access the project in the project worksheet.
2. Add the following columns to the project worksheet view:
   - **Critical**
   - **Slack**
3. To update the critical path information after you make changes, click .
4. To save the changes, click .

Examples of allocating planned hours in the project worksheet

The planned start for all of these examples is August 24 (8/24). The daily capacity for the resource is 8, and the percent available for planned work for the resource's workgroup is 75%.

For each new task assignment, there is a pre-existing task assignment (for a different task) for the same resource.

Planned hours entered and leveling selected

Resource enters the following information:

- planned start: 8/24
- planned hours: 12
- Level option selected

Planned finish is 8/27 and work percentage is calculated at 50%. Because leveling was selected, the total effort for both tasks for each day is equal to 6 hours (resource daily capacity * workgroup percentage).

	8/24	8/25	8/26	8/27	8/28	Planned Hours
Existing task	3	3	2	4	0	12
New task	3	3	4	2	0	12

Planned hours and work percentage entered

Resource enters the following information and then clicks :

- planned start: 8/24
- planned hours: 12
- work percentage: 50

Planned finish of 8/27 is calculated. Planned hours are allocated evenly up to the maximum of 50%, regardless of whether the total assigned hours for the resource exceed the resource's available hours of 6 hours.

	8/24	8/25	8/26	8/27	8/28	Planned Hours
Existing task	3	3	2	4	0	12
New task	3	3	3	3		12

Planned hours, work percentage entered and leveling selected

Resource enters the following information and then clicks :

- planned start: 8/24
- planned hours: 12
- work percentage: 50
- Level option selected

Planned finish of 8/28 is calculated. Planned hours are allocated up to a maximum of 50% of available working hours per working day, but not if the total assigned hours exceed the resource's available hours of 6 hours.

	8/24	8/25	8/26	8/27	8/28	Planned Hours
Existing task	3	3	2	4	0	12
New task	3	3	3	2	1	12

Planned hours and duration entered

Resource enters the following information and then clicks :

- planned start: 8/24
- planned hours: 12
- duration: 2

Planned finish of 8/25 is calculated. Planned hours are distributed to each day evenly for the duration, regardless of whether the total assigned hours exceed the resource's available hours (6 hours).

	8/24	8/25	8/26	8/27	8/28	Planned Hours
Existing task	3	3	2	4	0	12
New task	6	6				12

Planned hours, work percentage and duration entered with leveling

Resource enters the following information and then clicks :

- planned start: 8/24
- planned hours: 12
- work percentage: 50

- duration: 4
- Level option selected

Because the planned hours cannot be allocated according to the work percentage and duration that was specified, a warning message is displayed, and the system divides the combined sum of the planned hours and committed work by the duration of the current task and then allocates the planned hours so that the total hours for each day is more or less even, even if the total hours for a day exceeds the specified work percentage or the available hours. If the available hours for the resource is exceeded, a second warning message is displayed.

	8/24	8/25	8/26	8/27	8/28	Planned Hours
Existing task	3	3	2	4	0	12
New task	3	3	4	2		12

Planned hours entered with leveling, with and without work percentage

This example illustrates the difference of using leveling with and without specifying a work percentage.

Resource enters the following information and then clicks :

- planned start: 8/24
- planned hours: 15
- Level option selected

If the resource does not specify a work percentage, then the system allocates the planned hours so that the total hours for each day is more or less equal for the duration of the task. The system also calculates a work percentage of 50% (planned hours / (available hours per day * duration)).

	8/24	8/25	8/26	8/27	8/28	Planned Hours
Existing task	3	3	2	4	0	12
New task	2.38	2.38	3.35	1.35	5.54	15

If the resource enters the same information, plus a work percentage of 100, then the system allocates the planned hours up to the amount of the work percentage, but not exceeding the resource's available hours.

	8/24	8/25	8/26	8/27	8/28	Planned Hours
Existing task	3	3	2	4	0	12
New task	3	3	4	2	3	15

About date and effort calculations in the project worksheet

After you apply the project worksheet view with the required columns to your project, you add task assignments and enter various combinations of the information in some of the columns and have the system calculate the rest and allocate the planned hours.

For example, you can specify two values out of: duration, planned start and planned finish, and the system calculates the remaining value as follows:

- duration – number of working days between the planned start and planned finish dates
- planned start – starts at the planned finish, and then counts back the number of days in the duration
- planned finish – starts at the planned start, and then counts forward the number of working days in the duration

Similarly you can specify either work percentage or planned hours, and the system can calculate the remaining value and duration as follows:

- work percentage – effort / (available hours per day * duration)

- effort – available hours per day * duration * work percentage
- duration – effort / available hours per day / work percentage

For more detailed examples, see "Examples of project worksheet calculations" on page 139.

You can select single or multiple rows to be calculated. When you select multiple rows, the order of calculation is based on dependencies first and then WBS. Predecessor tasks are calculated first, then their successor tasks, and then the remainder of tasks in WBS order. Therefore, tasks at the bottom of the WBS may have their dates moved because the planned hours were allocated to the other tasks in the time period.

About using the Level option in project worksheet calculations

When selected, the **Level** option applies resource leveling, which means that all other committed work for the resource is taken into consideration, including:

- demand items from other projects
- all other demand items that are configured as committed demand
- task assignments that have been updated but not yet saved in the current project worksheet

When selected and a work percentage is specified, allocates the planned hours up to the work percentage for each day, taking into consideration all committed work for the resource.

If a **Duration** or **No later than planned finish** date is also specified, and the planned hours cannot be allocated within the work percentage or time period constraints, then the system will allocate the planned hours within the time constraints. The system divides the combined sum of the planned hours and committed work by the duration of the current task and then allocates the planned hours so that the total hours for each day is even.

> **Note:** The **Level** option is available in the project worksheet even when resource leveling is not enabled for the user's workgroup. Also, this option includes all planned hours for the current task assignment, regardless of whether or not they are configured as committed.

Performing date and effort calculations in the project worksheet

The values in the columns that are used during calculations are updated only when you click . If you perform calculations and then save and exit the project worksheet, the next time you view the worksheet, the values will be the same as they were previously, regardless of whether any of the information has changed in the meantime.

1. Access the project worksheet.
2. Create a project worksheet view for calculations. For more information, see "Project worksheet view for calculations, required columns" on page 138.
3. Apply the view to the project worksheet.
4. Create a task assignment and select a resource.
5. Specify the known values.
6. For the values that you want the system to calculate, you must clear the cells by clicking the cells and deleting the existing values, including zeros.

   Note: At this point, you can disregard errors for required fields.
7. Click .
8. If the cell in the first column turns yellow, point to it to display the warning message. Make the corrections and try again.

Project worksheet view for calculations, required columns

The project worksheet view for calculations must include the following columns in the following order.

Column name	Description
Planned start	Planned start date for the task assignment. Must be specified if **No earlier than planned start** check box is selected.
No earlier than planned start	Check box. When selected, specifies that the planned start date cannot be moved earlier.
Duration	Number of working days between planned start and planned finish.
Planned finish	Planned finish date for the task assignment. Must be specified if **No later than planned finish** check box is selected.
No later than planned finish	Check box. When selected, specifies that the planned finish date cannot be moved later.

Column name	Description
Work percentage	Used only for project worksheet calculations. When specified by a resource, it is the maximum percentage of daily capacity that the assigned resource can be allocated to the task. When calculated by the system, it is the percentage of the resource's gross available time (daily capacity * number of working days, without taking into consideration any other demand on the resource) that they have been allocated to the task.
Planned hours	Estimated effort in hours that is required to complete the task.
Level	Check box. Used only for project worksheet calculations. When selected, applies resource leveling to the calculation. For more information, see "About using the Level option in project worksheet calculations" on page 137.
Fiscal periods	Fiscal or daily periods for viewing and allocating planned hours.

Examples of project worksheet calculations

These examples apply to an organization that has a five-day work week from Monday to Friday, and Saturday and Sunday are nonworking days. The daily capacity for the resource is 8, and the percent available for planned work for the resource's workgroup is 75%.

Information for examples

The following table provides some examples of project worksheet calculations:

- **bold** text indicates information entered by the resource
- [square brackets] indicates information that is calculated by the system
- planned start date for all examples is September 14 (9/14)

	Planned Start	No earlier than planned start	Duration	Planned Finish	No later than planned finish	Work Percentage	Planned Hours	Level
Example 1	**9/14**		**10**	[9/25]		**50**	[30]	
Example 2	**9/14**		**10**	[9/25]		[50]	**30**	
Example 3	**9/14**		[10]	[9/25]		**50**	**30**	
Example 4	**9/14**		[13]	[9/30]		**50**	**30**	**Y**
Example 5	**9/14**		[9]	[9/24]		[55.56]	**30**	**Y**

For each of the examples, do the following:

1. Enter the values in bold text as provided in the table.
2. Clear (delete) the values that are to be calculated.
3. Click .

The first example is explained in detail. The results for the remaining examples are explained in the following sections.

Example 1: Calculate planned finish and planned hours

The system calculates the planned finish based on the planned start and duration:

9/14 + 10 days = 9/25

The system calculates the planned hours based on the duration and work percentage:

10 days * (6 hours per day * 50% = 3 hours per day) = 30 hours

Edit	*Task Name	*Planned Start	No earlier than planned start	Duration	*Planned Finish	No later than planned finish	Work Percentage	*Planned Hours	Level
	Calculation Project	09/14/2009			09/25/2009			50.00	
✓	Existing Task	09/14/2009			09/18/2009			20.00	
	Resource A	09/14/2009			09/18/2009		100.00	20.00	
✓	New Task	09/14/2009			09/25/2009			30.00	
	Resource A	09/14/2009		10	09/25/2009		50.00	30.00	

The planned hours are allocated at 3 hours per day for 10 days.

*Task Name	09/14/2009	09/15/2009	09/16/2009	09/17/2009	09/18/2009	09/19/2009	09/20/2009	09/21/2009	09/22/2009	09/23/2009	09/24/2009	09/25/2009
Calculation Project	7.00	3.00	5.00	1.00	9.00	0.00	0.00	3.00	3.00	3.00	3.00	3.00
Existing Task	4.00	0.00	2.00	8.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Resource A	4.00	0.00	2.00	8.00	6.00			0.00	0.00	0.00	0.00	0.00
New Task	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	3.00	3.00	3.00	3.00
Resource A	3.00	3.00	3.00	3.00	3.00			3.00	3.00	3.00	3.00	3.00

Example 2: Calculate planned finish and work percentage

The planned finish date is calculated based on the planned start and duration:

9/14 + 10 days = 9/25

The work percentage is then calculated based on the planned hours and duration:

work percentage = effort / (available hours per day * duration)

30 / (6 * 10) = 50%

The planned hours are allocated at 3 hours per day for 10 days.

Example 3: Calculate duration and planned finish

The duration is calculated based on the planned hours and work percentage:

planned hours / (available hours per day * percent available for planned work) / work percentage

30 / (8 * 75%) / 50% = 10

The planned finish is calculated based on the planned start and duration.

Example 4: Calculate duration and planned finish with resource leveling

The duration and planned finish is calculated based on the resource's available hours for each day (taking into account all other committed demand), and is restricted to the work percentage specified.

available hours per day * work percentage

6 * 50% = 3 hours per day maximum

The planned hours are allocated to a maximum of 3 hours per day, taking into account the resource's available hours.

*Task Name	09/14/2009	09/15/2009	09/16/2009	09/17/2009	09/18/2009	09/19/2009	09/20/2009	09/21/2009	09/22/2009	09/23/2009	09/24/2009	09/25/2009
Calculation Project	6.00	3.00	5.00	8.00	6.00	0.00	0.00	3.00	3.00	3.00	3.00	3.00
Existing Task	4.00	0.00	2.00	8.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Resource A	4.00	0.00	2.00	8.00	6.00			0.00	0.00	0.00	0.00	0.00
New Task	2.00	3.00	3.00	0.00	0.00	0.00	0.00	3.00	3.00	3.00	3.00	3.00
Resource A	2.00	3.00	3.00	0.00	0.00			3.00	3.00	3.00	3.00	3.00

*Task Name	09/26/2009	09/27/2009	09/28/2009	09/29/2009	09/30/2009	10/01/2009	10/02/2009
Calculation Project	0.00	0.00	3.00	3.00	1.00	0.00	0.00
Existing Task	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Resource A			0.00	0.00	0.00	0.00	0.00
New Task	0.00	0.00	3.00	3.00	1.00	0.00	0.00
Resource A			3.00	3.00	1.00	0.00	0.00

Example 5: Calculate duration, planned finish and work percentage with leveling

If the work percentage is not specified, then the system calculates the duration and planned finish based on the shortest possible duration that the planned hours can be allocated with the overall committed hours and as evenly as possible.

*Task Name	09/14/2009	09/15/2009	09/16/2009	09/17/2009	09/18/2009	09/19/2009	09/20/2009	09/21/2009	09/22/2009	09/23/2009	09/24/2009	09/25/2009
Calculation Project	5.36	5.06	5.18	8.00	6.00	0.00	0.00	5.06	5.06	5.06	5.22	0.00
Existing Task	4.00	0.00	2.00	8.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Resource A	4.00	0.00	2.00	8.00	6.00			0.00	0.00	0.00	0.00	0.00
New Task	1.36	5.06	3.18	0.00	0.00	0.00	0.00	5.06	5.06	5.06	5.22	0.00
Resource A	1.36	5.06	3.18	0.00	0.00			5.06	5.06	5.06	5.22	0.00

About the project worksheet Gantt chart

When the Gantt chart is first displayed, the time frame starts at the current date. The project items in the worksheet are represented in the chart as follows:

- project – gray bar
- tasks – blue bars
- task assignments – green bars
- summary tasks – black bars

When you point to a bar in the Gantt chart, a tool tip appears that includes the task or task assignment name, planned (or forecast) start and finish dates, and effort.

In addition, you can display the following information in the Gantt chart by right-clicking and selecting the following options:

- critical tasks – red task bars
- progress – black bars within the task and task assignment bars
- one of the following:
    - forecast effort – orange bars on the task and task assignment bars
    - baseline – gray bars on the task and task assignment bars

Note: The project worksheet Gantt chart can be printed to a physical printer only. Printing electronic output, for example to Adobe PDF, PDF Creator, and Microsoft XPS Document Writer is not supported.

To scroll outside of the time frame that is currently displayed

There is a second set of arrows in the horizontal scroll bar of the Gantt chart that you can use to scroll outside of the time frame that is currently displayed.

To scroll to dates prior to the earliest date displayed, click the arrow on the far left.

To scroll to dates after the latest date displayed, click the arrow on the far right.

To scroll vertically on the Gantt chart

If the number of rows cannot be displayed in the worksheet, a vertical scroll bar is available on the far right side of the Gantt chart. You must scroll to the right to access this scroll bar.

Accessing the project worksheet Gantt chart

Before you access the Gantt chart, it is best to expand the section of the project that you want to work with. Expanding one or more rows when the Gantt chart is displayed can take a long time, especially for larger projects.

1. Access the project worksheet.
2. Expand the tasks that you want to work with.
3. Lock the tasks.
4. Click .

Changing the timescale in the project worksheet Gantt chart

By default, the timescale in the Gantt chart shows months and weeks (the first day of each week). You can zoom in to show less information in greater detail, or zoom out to show more information in less detail. Every time that you click to zoom in or out, the level of detail changes.

When you click to zoom in (or out) three times consecutively, the timescale changes. For example as you zoom in, the timescale changes from showing months and weeks to showing months and every three days, then months and every day. Conversely as you zoom out, the

timescale changes from months and weeks to quarters and months, and then to years and quarters.

To change the timescale in the Gantt chart

To zoom in, click .

To zoom out, click .

To start the time frame at a specific date, specify the date in the Gantt chart date field 01/01/2014 .

To start the time frame at the planned start date of a project item, click the project item row and then click .

About managing tasks using the project worksheet Gantt chart

You access the Gantt chart from the project worksheet. You can move tasks, change task durations, and create or delete task dependencies within the same project in the Gantt chart.

Before you can manage tasks, you must lock the tasks that you want to work with.

Changing the duration of a task in the project worksheet Gantt chart

You can change the planned finish date of a task as well as shorten or lengthen its duration by moving the finish end of the task bar.

1. Point to the right (finish) end of the task bar, and when the double-sided arrow appears, drag the end to the desired date.
2. Click .

Moving a task in the project worksheet Gantt chart

You can move tasks by dragging them forward or backward in the row. The start and end dates of the task change, but the duration remains the same. Linked tasks move together as a group to maintain their dependencies.

1. Click the task and then drag it to the desired date.
2. Click .

About task dependencies in the project worksheet Gantt chart

You can create dependencies between tasks that are displayed in the Gantt chart.

There is a line that links the predecessor and successor task when both tasks are displayed in the Gantt chart. However, when only one of the linked tasks is displayed in the Gantt chart, then only the arrowhead is displayed at the end of the task. Predecessor tasks have arrowheads at the finish end, and successor tasks have arrowheads at the start end.

> **Note:** Dependencies between tasks from different projects cannot be created or displayed in the Gantt chart.

You can edit the settings for linked tasks such as the lag time, or whether the dependent task must start on a working day. For more information, see "Editing settings for linked tasks in the project worksheet" on page 104.

Linking tasks in the project worksheet Gantt chart

1. Click the predecessor task, and then drag it down towards the successor task.

   A tooltip indicates the potential successor tasks as you point to them.

2. Release the predecessor task on the successor task.

   The dependency is created, and the successor task is moved to start on the first working day after the finish date of the predecessor task.

3. Click .

Unlinking tasks in the project worksheet Gantt chart

1. Right-click the dependency line, and then select **Delete dependency**.
2. Click .

Showing the progress of tasks and task assignments in the project worksheet Gantt chart

In the Gantt chart, you can view the progress of tasks and task assignments that have had status updates. On task assignments, the progress is displayed as a black bar that represents the percent complete of the task assignment.

On tasks, the progress bar represents the percent complete of the task, which is calculated using the following formula:

```
actual effort / (actual effort + remaining effort) * 100
```

Progress bars are not available for summary tasks and milestone tasks.

To show progress in the Gantt chart

Right-click in the Gantt chart, and then select **Show progress**.

Showing the critical path in the project worksheet Gantt chart

You can show the critical path in the Gantt chart provided that the critical path option has been enabled for the project. The critical tasks are displayed as red bars instead of the usual blue.

> **Tip:** To verify whether the critical path option has been enabled for the project, you can add the **Calculate critical path** column to the project worksheet view.

To show the critical path in the Gantt chart

Right-click in the Gantt chart, and then select **Show critical path**.

Showing forecast or baseline information in the project worksheet Gantt chart

You can show either the forecast information or the baseline information, but not both at the same time.

To show forecast information in the Gantt chart

Right-click in the Gantt chart, and then select **Show forecast**. The forecast start date, finish date, and effort appear as orange bars against the task and task assignment bars in the Gantt chart.

To show the baseline information

Right-click in the Gantt chart, and then select **Show baseline**. The baseline appears as gray bars against the task and task assignment bars.

Print Setup dialog box options for the project worksheet Gantt chart

When the Gantt chart is displayed, a different set of printing options are available when you click .

> **Note:** The project worksheet Gantt chart can be printed to a physical printer only. Printing electronic output, for example to Adobe PDF, PDF Creator, and Microsoft XPS Document Writer is not supported.

Option	Description
Grid check box	When selected, prints the information in the grid.
Gantt chart check box	When selected, prints the Gantt chart.
Area displayed in worksheet option	When selected, prints only the portion of the worksheet that is currently displayed onscreen. Any information that you have to scroll to view is not printed.
Time range option	When selected, prints only the information that is within the specified start and end date. Available only when the **Gantt chart** check box is selected.
Start date field	Start date of the time range. Available only when the **Gantt chart** check box is selected.
End date field	End date of the time range. Available only when the **Gantt chart** check box is selected.
Entire project option	When selected, the entire project is printed.
wide list	The number of pages to print the worksheet on horizontally: • **Single page** – prints the width of the worksheet on a single page • **Multiple pages** – prints the width of the worksheet on as many pages as are required.
tall list	The number of pages to print the worksheet on vertically: • **Single page** – fits all rows of the worksheet to print on a single page • **Multiple pages** – prints the worksheet on as many pages as are required.

7. Project Planning Worksheet (PPW)

PPW basics

The project planning worksheet (PPW) is a spreadsheet-like application that will replace the project worksheet. You use PPW to do the following:

- create tasks and edit all task fields
- assign resources to tasks
- create task assignments and edit all task assignment fields
- allocate planned effort to daily or fiscal periods

By default, the tasks that you create in PPW are draft, and must be activated before they appear in the projects tree view and the timesheet.

You can edit both draft and active tasks in PPW and the project worksheet. However, draft tasks that are edited in the project worksheet must pass all validation that is required to save the project worksheet.

> **Tip:** To identify the draft tasks in the project worksheet, add the **Draft** field to the project worksheet view. If you prefer not to view the draft tasks in the project worksheet, create a filter to exclude the draft tasks.

The Gantt chart appears by default, but you can hide it or display only the Gantt chart and not the table rows.

PPW settings

You can set default settings for PPW. For more information, see the following topics:

- "Automatically activating draft tasks in PPW" on page 200
- "Specifying a default dependency type and lag time" on page 179
- "Setting up a warning when effort distribution on task assignments is overridden" on page 185
- "Specifying the default settings for replacing past effort in PPW" on page 198

PPW best practices

For the best results when using PPW, the following best practices are strongly recommended.

Add only the required resources to your preferred resources list

It is not good practice to add all of the resources in your organization to your preferred resources. Add only the resources that you assign to tasks regularly. A long list of preferred resources increases the loading time of PPW because the nonworking days data for each resource is preloaded.

Limit the length of task durations

Limit the length of task durations, ideally to a year or less. It is not good practice to have an open task with a duration that spans many years. The nonworking day information is preloaded for each task based on the date range within the worksheet, which means that tasks that have long durations require years of data to be preloaded.

Limit the number of tasks, and resources assigned to a task

Keep the number of tasks within a project, and the number of assignments for each task to a reasonable level. Having a single open task that hundreds or thousands of resources enter time for can cause serious performance issues in PPW. If you require tasks for year-long activities such as training and development, non-billable work, or meetings, consider doing the following instead:

- creating a new project for each fiscal year
- creating separate projects for different parts of the organization
- restricting access to open tasks by workgroups or functions

Keep projects at a manageable size

Keep project size from 400 – 1200 task or task assignment rows, and do not have more than 100 rows under any given level.

Create at least three levels of hierarchy in projects

Projects with a flat list of tasks are difficult to manage and take longer to be displayed in PPW because all of the tasks must be displayed each time you access the worksheet. In contrast,

when the tasks in a project are organized in a hierarchy, you can expand and collapse sections to focus on the data that you need to modify.

Grant "view project" access to summary task managers

Grant **View project** access to summary task managers so that they can view the entire project in PPW. Otherwise summary task managers can only view the tasks under their summary tasks, and if they make changes, the values will be rolled up to include only the amounts from their summary tasks and not the project totals.

Avoid saving the worksheet frequently

Doing work in batches and then saving will result in better performance and less waiting.

Use Firefox or Chrome browsers

The Firefox and Chrome browsers are recommended, especially to perform actions such as copying and pasting many tasks at once. Firefox and Chrome are more efficient at processing data than other browsers.

Do not access different versions of Changepoint at the same time

If you have access to different versions of Changepoint for example, in test and production environments, do not access them at the same time because you might encounter issues due to the caching of files. Ensure that you clear your browser cache before signing into a different environment.

Ensure all time records are actual time before marking tasks or task assignments as completed.

The point at which time records are considered actual time by your organization is controlled by a setting in Changepoint Administration. The setting options are:

- when the time is entered in the time sheet
- when the time records are submitted in the time sheet
- when the time records have been approved

The actual finish date is determined based on the actual time for the tasks or task assignments *at that time that the task or task assignment is marked as completed.* If time records are considered actual time only after time is submitted or approved, and a task or task assignment

is marked as completed before the time records have been submitted or approved, there might be an actual finish date, but no true actual hours.

Accessing PPW

If you are the project manager, project plan editor, or summary task manager with the required access rights, the project and all of its tasks are locked automatically when you access PPW, unless one or more project tasks are locked by other resources. The project manager can remove the locks from other resources, but those resources will lose any unsaved changes.

Summary task managers can view the subtasks under their summary tasks, the task hierarchy above their tasks, and the hierarchy of tasks that are linked to their tasks. However, they can only edit tasks under the summary tasks to which they are assigned.

A message beside the project name indicates whether you or another user has the project locked. If the project is locked, you will receive a notification when it becomes unlocked.

Resources with view access to the project can view a read-only version of PPW.

1. Click **General** > **Projects**.

   The **Projects** tree view appears.

2. In the tree view, do one of the following:

   - Right-click the project and select **Project planning worksheet**.
   - Click the project to open the project profile, and then click **Actions** > **Project planning worksheet**.

   The project planning worksheet appears.

3. To unlock the project so that other resources can edit tasks, click .

About the project summary totals in PPW

The following project summary totals are displayed in the worksheet above the tool bar:

- planned start
- planned finish
- planned effort
- actual effort

- remaining effort

All of the values except for actual effort are updated as you make changes in the worksheet. The actual effort is updated only after you validate the changes or save the worksheet.

Note: The values for draft tasks are included in the project summary totals in PPW only. Therefore these project summary totals may be different than the values that are displayed in the project profile, which exclude draft task values.

Tip: To obtain the most accurate results for the remaining effort amount, you must enable status updates for all project tasks and ensure that resources update the status of their tasks regularly.

PPW keyboard shortcuts

Action	Key combination
Add a task row	**Insert** key
Copy selected tasks	Ctrl+C
Go to next cell	Tab
Go back to previous cell	Shift+Tab
Go to row or item above	Up Arrow key
Go to row or item below	Down Arrow key
Edit a text field • Go to the beginning of the text (when the text is highlighted) –Left Arrow • Go to the end of the text (when the text is highlighted) – Right Arrow • Go right within the text – Right Arrow • Go left within the text – Left Arrow • Go right to the next word – Ctrl+Right Arrow • Go left to the next word – Ctrl+Left Arrow	
Expand tasks	Alt+Shift+Plus sign (+)
Collapse tasks	Alt+Shift+Minus sign (-)

Action	Key combination
Indent selected tasks	Alt+Shift+Right Arrow
Outdent selected tasks	Alt+Shift+Left Arrow
Paste selected tasks	Ctrl+V
Search – open the search field Search – move up (or down) through the matching rows	Ctrl+F, F3 F3 (Shift+F3)
Select or clear a check box	Spacebar

Expanding and collapsing tasks in PPW

You can show and hide the subtasks under a task by expanding and collapsing tasks, subtasks, or the entire project as follows:

- To expand a single task or subtask, click the right arrow next to the task or subtask name.
- To collapse a single task or subtask, click the down arrow next to the task or subtask name.
- To expand or collapse all subtasks under a task, click the task row, and then click or .
- To expand or collapse all tasks in a project, do one of the following:
  - ensure no tasks are selected and then click or
  - select all tasks, and then click or

Note: If the project is large, it may take a while for all tasks to be expanded.

Indenting and outdenting tasks in PPW

You can indent or outdent one or more tasks at a time.

1. Access PPW.
2. Select one or more tasks.
3. To indent the tasks, click .

4. To outdent the tasks, click .

Searching in PPW

You can search for items in PPW. The search applies to all information that is included in the current worksheet view.

1. Click the search icon .
2. Enter the search text into the search field and then press **Enter**. The number of rows that include matching results is displayed in the search field and the first matching row is highlighted.
3. To navigate through the rows that include matching results, click the up and down arrows in the search field.
4. To close the search field, click the **x** on the right end of the search field.

Moving a task in PPW

You can move one or more tasks to a different row in PPW. When you move a task, all of its subtasks are moved, and the row IDs are adjusted accordingly, including in the **Predecessor** column of dependent tasks.

1. Select the tasks that you want to move.
2. Point to the first blank column on the left.
3. When the cursor changes to a four-headed arrow, drag it to the desired row. A line appears above the row where the tasks will be inserted.

About printing in PPW

You can print PPW by clicking . The printout includes each row, but only includes the columns and portion of the Gantt chart that are displayed in the current view.

Running a report from PPW

You can run reports from PPW. Both Cognos and Report Designer reports that are configured to be launched from either the project or task profile page will be available.

When a report is run from PPW, the following differences apply:

- links to entity records are not available

- draft tasks do not appear in reports unless the report is based on the unsecured Cognos data model

To run a project report

Click , and then select the project or task report.

To run a task report

1. Select a task row, and then click .
2. Select a task report from the list that appears.

Exporting PPW to Microsoft Excel

1. Access PPW.
2. Click .

   The worksheet data is displayed in an Excel spreadsheet.

   Tip: Include the **WBS** field in the view if you want to sort the rows by WBS order.

Copying values in rows in PPW

You can copy a value from a column in a source row to one or more target rows that are below the source row. You can copy a value from any of the columns in the current PPW view, except for the **Resources** column.

1. In PPW, select the source row that contains the value that you want to copy.
2. Select one or more target rows that are below the source row.
3. Click , and then select the column that contains the value that you want to copy.

   The value is copied to each of the target rows.

Saving baselines in PPW

To save a project baseline

Click and then select **Save project baseline**.

The baseline information is saved to the project profile.

To save a task baseline

1. Select the task row.
2. Click and then select **Save task baseline**. One of the following occurs:
   - The baseline information is saved to the task profile.
   - The **Save Baseline Options** dialog box appears if the option to save task baselines without affecting higher level tasks has been enabled on the project.
3. In the **Save Baseline Options** dialog box, select one of the following options:
   - To save the baseline as usual, select **Baseline all tasks above and below the selected task**.
   - To save the baseline without affecting higher level tasks, select **Baseline only the selected task and tasks below it**.
4. Click **OK**.

Showing actual effort or availability in PPW

You can show either actual effort or availability for task assignments in blue text beside the planned hours in the **Planned hours** and daily or fiscal period columns.

1. Create or switch to a task assignment view that includes the **Planned hours** and **Effort distribution** columns.
2. Click and then select the applicable option.

   The actual hours or availability for the task assignment appears in blue text to the left of the planned hours values.
3. To remove the actual hours or availability, click and then select **None**.

About PPW views

PPW views control the data that is displayed in PPW. There is a default view for tasks, which contain a subset of the task fields. You can edit the default task view as well as create your own task and task assignment views.

Task views

You use task views to do the following:

- create tasks
- edit task fields
- create task assignments that use the default loading method

In general, task assignments that are created in the task view automatically inherit the values of the task fields that are displayed in the task view when the task assignment is created.

In some cases, you might not be able to edit the planned start, planned finish, or planned effort in a task view (for example, if any assignments have a manual loading method). In these cases, you must switch to a task assignment view.

Task assignment views

You use task assignment views to do more detailed assignment work such as:

- manually distribute effort to daily or fiscal periods
- use different loading methods for assignments for the same task
- assign different planned start and planned finish dates to assignments for the same task
- add additional resources to a task once one or more of the points above apply to it

  Note: Only task assignments are displayed in a task assignment view. Therefore there must be at least one existing task assignment for a task before you can assign additional resources to the task.

You add a new task assignment or copy a task assignment based on an existing task assignment. New task assignments have current dates and inherit the default loading method only. Copied task assignments are the same as the original task assignments but do not have the assigned resources.

Note: To change the resource for a task assignment, you must copy the task assignment, assign the new resource to it, and then delete the original task assignment.

About creating PPW views

You can create your own task views or task assignment views, where you do the following:

- include either task or task assignment fields
- specify the standard and configurable fields that are displayed as columns in PPW
- add columns to, and remove columns from, the frozen pane

- change the order of the columns
- specify a view as your default view
- share your views with other resources
- specify a sort order for the rows

  Note: Only the values of fields that are in a view that has been displayed in the current PPW session are inherited or copied when you create or copy a task or task assignment, or replace assigned resources.

About related columns

The following pairs of columns are related and either must be updated at the same time, or the value in one affects the value in the other. Therefore it is best to display both columns in the worksheet if you plan to work with them:

- **Billing role** and **Billing role expiry date**. If you change the billing role, you must specify the date *after which* the new billing role becomes effective.
- **Billable task** and **Effective date**
- **Billed to fixed-fee portion of the engagement** and **Fixed fee**
- **Work code category** and **Work code**
- **Work location group** and **Work location**
- **Locked** and **Include in resource demand**
- **Open task** and **Assignment planned hours**

Creating a PPW view

1. Access PPW.
2. Click . The **Manage Views** dialog box appears.
3. Do one of the following:
   - To create a new view, click **New**.
   - To copy an existing view:
     - In the **Views** list, select the view that you want to copy.
     - Click **Copy**.

4. Complete the fields as required. For more information, see:
   - "Manage Views (PPW) dialog box options" below
   - "Available columns for PPW task views" on page 161
   - "Available columns for PPW task assignment views" on page 166
5. To add columns to the view, in the **Available columns** list, select one or more columns and then drag them to the **Frozen columns** or **Columns** list.

   Note: Do not add the **Effort distribution** column to the frozen columns due to its size.
6. To remove a column from the view, drag it to the **Available Columns** section.
7. To move all of the columns in a section at once, click **Select all**, and then drag the columns to the desired list.
8. To change the order of the columns, select a column name and then drag it to the desired position in the list. The columns display left to right in PPW in the order that they are listed in the **Frozen columns** and **Columns** lists.
9. When you are finished, click **Save**.

Manage Views (PPW) dialog box options

Option	Description
Views list	Current view.
Name field	Name for the view.
Type of view field	Option to select whether the view displays tasks or task assignments.
Shared check box	When selected, allows other resources to use the view. Available only if you have the access rights to share views.
Default check box	When selected, makes the current view the default view for the current resource and removes the default status from the view that was previously specified as the default, if applicable.
Selected Columns section	

Option	Description
Frozen columns list	List of columns that remain in place even when you scroll horizontally. The order of the columns from top to bottom in the list is the order that the columns display in PPW from left to right.
Columns list	List of columns that are displayed in PPW. The order of the columns from top to bottom in the list is the order that the columns are displayed in PPW from left to right.
Available Columns section	
All columns list	List of available entity fields to be displayed as columns.
Step 2: Specify sort order of rows section	
Sort by column data list	Determines the sort order for the rows. For more information, see "Sorting the rows in PPW " on page 170.

Available columns for PPW task views

Column name	Description
Actual finish date field	Date of the latest time record or the date that the task is marked as completed.
Actual hours field	Total number of hours of work that have been entered for the task.
Actual start date field	Earliest date that hours have been entered for work done for a task.
Add to calendar check box	When selected, the planned hours for the task are included in the personal calendars of the assigned resources and the resource scheduling calendar.
Allow work code override check box	When selected, resources can choose a different work code when they enter time for the task.

Column name	Description
Allow work location override check box	When selected, resources can choose a different work location when they enter time for the task.
Assignment planned hours field	For open tasks only. Planned hours for new task assignments that are created when a resource enters time for the open task. This field is not available when resource restrictions or resource leveling is enabled.
Baseline finish date field	Latest planned finish date of all task assignments and subtasks, as at the last time a baseline was created for the project or task.
Baseline hours field	Total planned hours for project tasks.
Baseline start date field	Earliest planned start date of all task assignments and subtasks, as at the last time that a baseline was created for the project or task.
Billable task check box	When selected, indicates that the task is billable.
Billed to fixed-fee portion of the engagement check box	When selected, bills the task to a fixed-fee portion of the engagement. The time entered for this task does not display on the invoice.**Note:** Changing the setting affects all uninvoiced time.
Billing role field	Default billing role for resources that are assigned to the task. The billing roles come from the engagement.
Capital check box	When selected, designates the task as a capital cost.
Comments field	Additional information about the task.
Completed check box	When selected, sets the task to completed status. Typically used for tasks that are not assigned to resources, such as milestone tasks. When a task is set to complete, the status for the task assignments is automatically set to complete. The task is automatically set as completed when all of its task assignments are completed.

Column name	Description
Critical check box	Read-only. When selected, indicates that task is on the critical path for the project.
Draft check box	Read-only. When selected, indicates the task is draft.
Duration field	Number of working days between planned start and planned finish dates of the assignment. If no assignments exist or multiple assignments exist, the working days come from the staffing workgroup of the engagement.
Effective date field	The date of the new billable status for the task if the billable status of the task has been changed. The new status is applied to all uninvoiced time records dated on or after the specified date. **Tip:** To clear all existing history of changes to the billable status and apply the new status to all uninvoiced time records, you can leave the field blank.
Effort Distribution columns	Displays daily or fiscal period columns for allocating planned effort manually.
Engagement product ready to invoice check box	When selected, the engagement products that are associated with the task become available for invoicing.
Engagement products field	Products that are associated with the engagement and for which the **Allow selection on tasks** option has been selected. When an engagement product is associated with a task, it can be invoiced based on the status of the task.
First blank column	Used for moving tasks.
Fixed fee list	Deliverable to which the task is associated, if the **Billed to fixed-fee portion of the engagement** option is selected. Specifying a deliverable allows costs and revenues to be tracked against fixed fees.

Column name	Description
Forecast finish date field	Estimated date that the task will be completed.
Forecast start date field	Estimated date that work will begin for a task.
Function list	Default job function for resources that are assigned to the task. You can override the default for task assignments.
ID	Row identifier for use in task dependencies.
Include in resource demand check box	When selected, new task assignments created for this task are included in resource demand analysis by default. Selected by default on new tasks. The setting for this field is also used as filter criteria for task assignments in the resource management worksheet. You can override the default for task assignments.
Locked by field	Read-only. Resource who has locked the task.
Locked task check box	When selected, prevents resources from entering time for the task assignments for the task. However, you can change the setting for individual task assignments.
Milestone check box	When selected, indicates that the task is a milestone. Milestones are displayed as diamond-shaped icons in the Gantt chart.
MSP WBS number field	For MSP projects only. The Microsoft Project work breakdown structure number for the task.
Open task check box	When selected, makes the task an open task and the **Assignment planned hours** field appears. For more information, see "Open tasks" on page 53.
Open task restriction check box	Read-only. When selected, access to the current open task has been restricted.
Phase	Specifies the project phase that the task belongs to.

Column name	Description
Planned finish	Date that work for the task is scheduled to finish.
Planned hours	Estimated effort that is required to complete the task. If you use the **Resources** list on a task view to assign more than one resource, the effort is initially split evenly among the resources.
Planned start	Date that work for the task is scheduled to start.
Predecessors	Task ID of the task on which the current task has a dependency.
Product list	Product associated with the task for reporting purposes. That is, you can create reports based on the e products that are associated with the tasks. If you associate more than one product with a task, thee product that is closest to the top of the list alphabetically is designated as the primary e product. If required, you can change the primary product in the task editing view.
Remaining hours field	Number of planned hours remaining to complete the task, based on resource status updates.
Request type-ahead field	Number of the request that is associated with the task.
Resources list	Resources who are assigned to the task.
Status not required check box	When selected, resources are not required to update the status of their task assignments. When selected, resources are not required to update the status of their task assignments. The project rollup calculates the remaining hours as planned hours minus actual hours. If the actual hours are greater than the planned hours, remaining hours will be set to 1. The option can be overridden on the task assignments.
Task name field	Name of the task.
Utilization eligible check box	When enabled, the task time is included in the utilization for assigned resources.

Column name	Description
WBS field	Work breakdown structure for the task.
Work code category list **Work code** list	Work code category and work code of the task. Can be used for taxation and reporting purposes. Can be used for reports and calculating taxes.
Work location group list **Work location** list	Work location group and work location where the work will be performed. Can be used for reports and calculating taxes.

Available columns for PPW task assignment views

Option	Description
Actual finish date field	Date of the latest time record or the date that the task is marked as completed.
Actual hours field	Total number of hours of work that have been entered for the task.
Actual start date field	Earliest date that hours have been entered for work done for a task.
Allow work code override check box	When selected, resources can choose a different work code when they enter time for the task.
Allow work location override check box	When selected, resources can choose a different work location when they enter time for the task.
Assignment comments field	Additional information about the task assignment.
Baseline finish date field	The finish date of the last baseline that was saved for the task assignment.
Baseline hours field	The planned hours of the last baseline that was saved for the task assignment.

Option	Description
Baseline start date field	The start date of the last baseline that was saved for the task assignment.
Billing rate field	Read-only. Billing rate for the assignment and which is in effect as at the planned start date for the assignment. For more information, see "About billing rates for engagements" in the *Engagement Management User Guide*.
Billing role expiry date	If the billing role is changed, the date *after which* the new billing role becomes effective.
Billing role field	Billing role for the task assignment. The available billing roles come from the engagement.
Completed check box	Read-only. When selected, the task has been set to completed status. Typically used for tasks that are not assigned to resources, such as milestone tasks. When a task is set to complete, the status for the task assignments is automatically set to complete. The task is automatically set as completed when all of its task assignments are completed.
Cost rate field	Read-only. The billing role-based or resource-based cost rate that applies to the task assignment and which is in effect as at the planned start date of the task assignment.
Draft check box	Read-only. When selected, indicates the task is draft.
Duration field	Number of working days between planned start and planned finish dates.
Effort Distribution columns	Displays daily or fiscal period columns for allocating planned effort manually.
Forecast finish date field	Estimated date that the task will be completed.
Forecast start date field	Estimated date that work will begin for a task.

Option	Description
Function list	Job function for the task assignment. The default function comes from the task, but you can override the function on task assignments.
Include in resource demand check box	When selected, the task assignment is included in resource demand. You can override the setting for task assignments. The setting for this field is also used as filter criteria for task assignments in the resource management worksheet.
Last status date field	Most recent date that the status was updated for the task assignment.
Loading method field	Loading method for the task assignment.
Locked by field	Read-only. Resource who has locked the task.
Locked task check box	When selected, prevents the resource from entering time for the task assignment. The setting is inherited from the task but can be changed on task assignments.
Percent complete field	Percentage of the planned effort for the task that has been completed.
Planned finish date field	Estimated date that the assignment will be completed. The default date is the day after the planned start date. For manual loading methods, the planned finish date must be on or later than the last date that contains effort.
Planned hours field	Estimated number of hours required to complete the assignment. If the loading method is manual, then the planned hours cannot be edited. If the loading method is one that updates past periods, then the planned hours must be equal to or greater than the total number of actual hours in past periods.

Option	Description
Planned start date field	Date that the work should begin. The default date is the date that the task assignment is created. If the loading method is manual, then the date must be on or before the earliest date that contains effort.
Remaining hours field	Number of hours remaining to complete the task.
Requested Resource field	Read-only. Resource that was requested on the associated resource request.
Resource comment field	Resource's comment from the task status update.
Resource list	Resource who is assigned to the task.
Resource Request number field	Number of the resource request.
Soft-booked check box	When selected, the resource is tentatively booked for planning purposes. Soft-booked time is shown as flexible on the resource schedule calendar. When cleared, the resource is committed to the project.
Status not required check box	When selected, resources are not required to update the status of their task assignments. The project rollup calculates the remaining hours for assignments that do not require updates as planned hours minus actual hours. If the actual hours are greater than the planned hours, the remaining hours is set to 1.
Status up to date check box	Read-only. When selected, indicates the task status is current.
Task name field	Read-only. Name of the task.
WBS order field	Read-only. Number for the task that corresponds to the order of the work breakdown structure. It can be used for sorting purposes in views and when exporting data to Excel.

Option	Description
Work code category list **Work code** list	Work code category and work code of the task. Used in reports and for calculating taxes.
Work location group list **Work location** list	Work location group and work location where the work will be performed. Used in reports and for calculating taxes.

About sorting rows in PPW

By default, rows in PPW are in WBS order, but you can define a different sort order for rows based on the data in one or more columns. Keep in mind that changing from the default sort order affects how items are displayed and limits the functionality in the worksheet as follows:

- items are listed in a flat list
- Gantt chart is not available
- some column data might be repeated
- you cannot do the following:
  - add or remove rows or reorder rows
  - indent or outdent rows
  - copy and paste rows
  - select or deselect tasks for activation

Sorting the rows in PPW

You can specify a sort order for the rows based on the data in one or more columns. For example, you can sort task assignments by resource, then by planned start date.

1. Click . The **Manage Views** dialog box appears.
2. In the **Step 2: Specify sort order for rows** section, drag the column that you want to sort by first to the top of the **Sort by column data** list.
3. To specify the sort order, do one of the following:
   - To sort in ascending order, click the up arrow next to the column name.
   - To sort in descending order, click the down arrow next to the column name.

4. To sort by additional columns:

   a. Drag the column that you want to sort by second to just below the first column.

   b. Specify the sort order by clicking the up arrow (ascending) or down arrow (descending).

   Note: When both the up and down arrows appear next to the column name, sorting is not applied.

5. To remove sorting from a column, click the arrows until both the up and down arrows appear.

6. Click **Save**.

Editing a PPW view

You can edit all of the settings for a view except for the view type.

1. Access PPW.

2. Click .

   The **Manage Views** dialog box appears.

3. From the **View** list, select the view that you want to edit.

4. To delete the view, click **Delete**, and then confirm the deletion.

5. To change the name of the view, type the new name in the **Name** field.

6. Make the necessary changes. For more information, see "Creating a PPW view" on page 159.

7. When you are finished, click **Save**.

About switching PPW views and filters

For information about the split view, see "About using the split view in PPW" on page 172.

You can temporarily switch the PPW view by clicking the down arrow next to the view icon , and then selecting a different view. Similarly you can temporarily switch the PPW filter by clicking the down arrow next to the filter icon , and then selecting a different filter. The selected views and filters will be displayed until you exit from PPW.

Note: If you select a *task assignment filter* when a *task view* is displayed, the filter is applied to, and the view is switched to, the *last task assignment view* that you accessed. Similarly if you select a task filter when a task assignment view is displayed, the filter is applied to, and the view is switched to, the last task view that you had accessed.

To display a view or filter each time you access PPW, you must edit the view or filter and mark it as default.

About using the split view in PPW

You can work with both tasks and their task assignments by using a split view. The split view displays a task view and Gantt chart in the top half of PPW and a task assignment view and Gantt chart in the bottom half. When you first access the split view in PPW, your default task and task assignment views are displayed. If you change the views in the split view, the same views are displayed in the split view until you close PPW.

The split view automatically displays the task assignments for the tasks that are in the task view. When no tasks are selected, then all task assignments are displayed. When you select tasks or apply filters to tasks or task assignments, the list of task assignments changes accordingly.

You can do everything in each half of the split view that you can do in a single view, except switch to the other type of view. Click anywhere within the task or task assignment view to make it active and then use all the PPW functionality as usual.

When you switch back to a single view, the active view is displayed in the single view.

Note: Only the task assignments that are displayed when you switch views are included in the single task assignment view.

Using the split view in PPW

1. Click . The split view appears and the task view is active.
2. To change the height of the view, select and drag the horizontal split bar.
3. To make the other view active, click anywhere in the other view.
4. To switch back to a single view:
   a. Select the view that you want to be displayed in the single view.
   b. Click .

Tip: You can also switch back to a single view by dragging the split bar all the way to the top or bottom of the worksheet area.

5. To align the display of the Gantt charts to match the Gantt chart in the active view, click .

   The following items are changed:

   - position of the split bar
   - starting date
   - timescale (zoom level)

About filtering data in PPW

There are two layers of filtering that are available in PPW. The primary level of filtering is the PPW filter, which determines the data to be displayed in the worksheet. You can also do ad hoc filtering, which is based on the column data that is displayed in the worksheet, with or without using a PPW filter.

Note: When you apply a PPW filter or column filter to a task view, the filter results include the hierarchy of the work breakdown structure (WBS) of the filtered tasks, provided that a sort order for one or more columns has not been specified in the view settings. If a sort order has been defined, the tasks are displayed in a flat list.

For more information, see:

- "About PPW filters" on page 173
- "About filtering rows based on column data in PPW" on page 176

About PPW filters

You filter the data in PPW by creating a filter and then applying it to PPW so that only the tasks or task assignments that match the filter criteria are displayed. For example, you can create a filter that displays only the tasks that were created after a specific date, or only the task assignments that have fewer than 8 planned hours.

You base the filter criteria on the data in the task or task assignment fields (columns). There are logical AND and OR operators and parentheses that you can use to create more complex filter criteria.

You can apply a filter only if it is for the same entity type as the current view. The names of the current view and filter are displayed at the bottom left corner of PPW.

Note: Filter criteria is applied to the values for configurable fields only after the configurable field has been saved, whereas filter criteria is applied to standard field values as soon as the value is entered in PPW.

Creating a PPW filter

You can create a new filter, or copy and then edit an existing filter.

1. Access PPW.
2. Click . The **Manage Filters** dialog box appears.
3. Do one of the following:
   - To create a new filter, click **New**.
   - To copy an existing filter:
     - In the **Filter** list, select the filter that you want to copy.
     - Click **Copy**.
4. Complete the fields as required. For more information, see "Manage Filters (PPW) dialog box options" on page 175.
5. To specify filter criteria:
   a. In the **Filter on** column, select the column that the criteria row applies to.
   b. In the **Condition** column, select the condition for the information in the column.
   c. In the **Value** column, select the values that the condition must meet.
6. To add an AND or OR operator, or parentheses, click a blank column in the row and then select the item from the list.
7. To add (or delete) a criteria row, right-click in the table, and then select **Insert** (or **Delete**).
8. Click **Save**.

Manage Filters (PPW) dialog box options

Option	Description
Filter list	Current filter.
Name field	Name of the filter.
Type of filter options	Option to select whether the filter displays task or task assignments.
Default check box	When selected, the current filter is automatically applied each time that you access PPW.
Shared check box	When selected, other resources can use the filter.
Blank columns	Lists of operators (AND, OR) and parentheses for complex filter criteria.
Filter on column	Column or field that the filter criteria applies to.
Condition column	Condition for the criteria row.
Value column	Value for the condition.

Editing a PPW filter

You can edit the settings for a filter except for the type of filter.

1. Access PPW.
2. Click . The **Manage Filters** dialog box appears.
3. In the **Filter** list, select the filter.
4. Make the necessary changes. For more information, see "Creating a PPW filter" on page 174.
5. To delete the filter, click **Delete**, and then click **OK** to confirm the deletion.
6. When you are finished, click **Save**.

About filtering rows based on column data in PPW

You can temporarily filter the information that is displayed by specifying filter criteria for the data in one or more of the columns. The filter criteria is based on the data in the column. Depending on the type of data in the column, you can specify one or more specific data values, a range of data values, or the rows that have no value in the column.

The values that are available as filter criteria are based on the values in the rows that are currently in the view. For example, if only active tasks are in the view, there will not be an option to filter on draft tasks.

You can edit column filters by adding or removing the data values.

Note: Unlike PPW filters, column filters are temporary and remain in effect only until you either refresh or close PPW.

Filtering rows based on column data in PPW

Column filters are temporary and remain in effect only while you have PPW open.

1. Click the filter icon beside the column name. The filter criteria appear.
2. Select the filter criteria:
   - For check boxes, select the check boxes for the values that you want to include in the view. To display the rows that do not have a value in the column, select the check box for **(Blanks)**.
   - For a range of values, specify the from and to values. To specify a single value, enter the same value in both fields.
3. Click **OK**. The following occurs:
   - Only the rows that include values that match the filter criteria are displayed
   - the color of the filter icon beside the column name changes from gray to blue
   - a blue filter icon appears in the bottom left corner of the worksheet view
4. To remove a column filter, click the filter icon beside the column name, and then click **Clear filter: [filter name]**.

Creating a task in PPW

You can create tasks in PPW by either adding a new task and then specifying the task details, or by copying an existing task.

When you add a new task, it is inserted into a new row that is under but at the same WBS level as the selected task. If no task is selected, the new task is inserted at the bottom row of the worksheet but at the top WBS level.

> **Tip:** To minimize the effect on other resources who could be editing other parts of the project, it is good practice to insert tasks where they are least likely to affect the WBS, for example, at the bottom of the task hierarchy or worksheet, or within a summary task.

Summary task managers must select an insertion point that is below the summary task because they do not have edit access to the summary task itself.

1. Access PPW.
2. If necessary, lock the project for task editing by clicking .

   The project is locked and additional icons appear on the worksheet.
3. Ensure that a task view is displayed.
4. To create a top-level task, click . The new task row appears on the bottom row.
5. To insert a task into a specific row, click the task row under which you want the new task to be, and then click (or press the **Insert** key). The new task row appears after the subordinate tasks of the task that you clicked.
6. For information about assigning resources, see "Assigning resources to a task in PPW" on page 182.
7. Complete the fields as required.

   For more information, see "Available columns for PPW task views" on page 161.
8. You can create a summary task by indenting tasks under a task, or outdenting a task over other tasks:
   - To indent a task, select the task and then click (or press Alt+Shift+Right Arrow).
   - To outdent a task, select the task and then click (or press Alt+Shift+Left Arrow).

9. Click **Save**.

   The draft task is created.

10. To activate tasks, see "Activating a task in PPW" on page 199

    Tip: To work with task assignment details such as allocating different planned effort to daily or fiscal periods manually to assigned resources, switch to a task assignment view.

About rollup in PPW

In PPW, the project data is rolled up automatically as you work so that you can view the effects of your changes to the project totals. Note however, that the totals include only the tasks or task assignments that are currently displayed in PPW and are not saved until you save PPW.

For general information about how project data is rolled up, see "About rolling up projects" on page 50.

Note: Only a portion of the project is displayed when a filter has been applied, or if the resource is a summary task manager who does not have view access to the project. Also, summary task totals are not displayed when a sort order is defined in a PPW view.

About linking tasks in PPW

You can create dependencies between tasks in the worksheet and the Gantt chart. For more information about using the Gantt chart, see "Linking tasks in the Gantt chart in PPW" on page 204

Note: Inter-project dependencies between tasks are not supported in PPW.

You link tasks in the worksheet by specifying the dependency information in the **Predecessors** column of the successor task, using the following format:

[task ID][dependency type][+/–lag time]

Where:

- [task ID] is the number from the ID column
- [dependency type] is the two-letter abbreviation (case-insensitive) for the type:
  - FS – finish-to-start (default type)

Note: Because finish-to-start is the default dependency type, the “FS” is not required, and will be removed if you enter it.

- SS – start-to-start
- FF – finish-to-finish
- SF – start-to-finish

- [+/– lag time] – plus sign for lag time, or minus sign for lead time, and the number of working days

For example, if the [task ID] is “3”, dependency type is start-to-start, and [lag time] is two days, then you would enter:

3SS+2

You can add multiple predecessor tasks by separating them with a comma, for example:

3SS+2, 5SF-3

Specifying a default dependency type and lag time

The default dependency type for linking tasks is finish-to-start, but you can specify a different dependency type as well as a lag time. If you specify a different default dependency type and lag time, when you enter the task ID in the **Predecessors** field, the dependency type and lag time are added automatically.

For example, you specify **Start-To-Start** as the dependency type and "**4**" as the lag time, and you want to create a dependency for task ID 3. You can simply enter **3** in the **Predecessors** field. When you click out of the cell, "3SS+4" appears automatically. You can specify other dependency types and lag periods as required.

1. Access PPW.
2. Click . The **Project Planning Worksheet Settings** dialog box appears.
3. In the **Lag** time field, specify the number of lag days between the tasks.
4. In the **Dependency type** list, select the dependency type.
5. Click **Save**.

Specifying time entry restriction settings in the project planning worksheet (PPW)

You can specify the time entry restrictions for both tasks and task assignments in task views and for task assignments only in task assignment views.

1. Add the following fields to the PPW view:
   - Restrict time entries to within the planned dates for the task
   - Restrict time entries to within the planned effort for the task
   - Restrict time entries to within the planned dates for the task assignment
   - Restrict time entries to within the planned effort for the task assignment
2. In PPW, edit the settings for tasks or task assignments as required.
3. Click **Save**.

Copying a task in PPW

You can copy one or more tasks and then paste them into PPW. When you copy a task, all of its subtasks are included. If you copy tasks from different WBS levels, the tasks are pasted into the row below the task that you select as the insertion point, but into the same WBS level as the task.

Values for fields that are included in your view are copied. In some cases, default values are applied to fields that are missing from your view.

1. Access PPW.
2. If required, lock the project for task editing by clicking .
3. Select one or more tasks
4. Click (or press Ctrl+C).
5. Select the row above where you want to insert the tasks, and then click (or press Ctrl+V).
6. Edit the tasks, if required.
7. Click **Save**.

About assigning resources to tasks in PPW

There are two ways to assign resources to tasks:

- using a task view
- creating task assignments using a task assignment view

  Note: It is best to use a task assignment view for doing detailed work. For more information, see "Creating a task assignment in PPW" on page 185.

You can assign one or more resources and/or personal groups to a single task or to multiple tasks all at once. You can split the planned effort equally among the resources or specify different effort amounts or percentages for each resource. Percentages of planned effort are calculated based on the total planned effort for the task.

About the preferred resources list in PPW

The preferred resources list includes the resources that are assigned to tasks in the current project in addition to the resources that you added to the list.

Assigning personal groups to tasks

When you assign a personal group to a task using the **Resources** list, all resources in the personal group are assigned to the task, and the planned effort is distributed evenly among the resources. You can edit the planned effort amounts manually if required.

Assigning multiple resources to a task

When you assign more than one resource to a task, either individually or by assigning a personal group, you can add, edit, and delete resources, and specify the effort amounts for each resource all in one dialog box. If the total of the planned effort that is allocated to resources is different from the total planned effort for a task, you must either update the task total, or adjust the allocated amounts to equal the task total.

If you select a group using the **Assign/Replace Resources** dialog box, the planned effort or percentage that you specify in the row will be assigned to each member of the group, but can be changed later.

Assigning resources to multiple tasks

If you select multiple tasks, each resource that you assign will be assigned to all of the selected tasks. If a resource is already assigned to one or more of the tasks, you can either add the new planned effort amount or leave the resource’s existing planned effort amount as is.

If you select the option to evenly distribute the planned effort, the planned effort is distributed evenly among the newly assigned resources and previously assigned resources that use loading method 4.

Assigning resources to summary tasks

When you use the **Resources** list to assign resources to summary tasks, the planned effort is automatically set to 0 because time cannot be entered for summary tasks in a task view.

However, you can assign effort to summary tasks in the **Assign/Replace Resources** dialog box or in a task assignment view. Total planned effort for a summary task includes the assignments to the summary task as well as its subtasks.

About duration calculations in PPW

The duration of a task is calculated based on the number of working days between the planned start and the planned finish dates. If no resources are assigned to the task, then the working days of the staffing workgroup of the engagement are used. If only one resource is assigned to the task, then the working days of the resource are used.

If more than one resource is assigned to a task, then the working days of the staffing workgroup of the engagement are used. The planned start date will be the earliest planned start date of the resources that are assigned to the task, and the planned finish date will be the latest planned finish date.

Note: If you make changes in a task assignment view, the duration is not recalculated for summary tasks. It will be calculated when the project is saved and a rollup occurs. However the rollup values are updated on summary tasks when you make changes in a task view.

Assigning resources to a task in PPW

1. Access PPW.
2. In the **Resources** column of the task, select one or more resources or personal groups to be assigned to the task.

   If you assigned personal groups or multiple resources, the planned effort is distributed evenly to each resource that has loading method 4.

   If all of the existing assignments have a manual loading method, new resources are assigned 0 planned effort and the existing assignments are not changed.

3. To change the distribution amounts, click .
   a. The **Assign/Replace Resources** dialog box appears.
   b. In the **Effort** column for the resource, change the effort amount as required.
   c. Click **Save**.

Assigning resources to multiple tasks in PPW

Different options are available depending on whether resources have been assigned to one or more of the selected tasks.

1. Access PPW.
2. Select the tasks that you want to assign resources to.
3. Click .

   The **Assign/Replace Resources** dialog box appears.

To assign resources when no resources are assigned to the tasks

1. Do one of the following:
   - To allocate effort based on a percentage of the total effort for the task, select the **Percentage** option.
   - To allocate effort based on the planned effort amounts that you specify, select the **Effort** option.
2. To assign a resource:
   a. In the **Resource** type-ahead field, select a resource.
   b. In the **Effort** (or **Percentage)** column, enter the planned effort (or percentage).
3. To distribute the planned effort evenly for multiple resources:
   a. Select the **Percentage** option.
   b. Select the resources.
   c. Right-click and then select **Distribute evenly**.
4. Click **Save**.

To assign resources when resources are already assigned to the tasks

1. To distribute the planned effort evenly to all new resources being assigned and the resources that were previously assigned to the tasks:

   a. Click **Distribute evenly**.

   b. In the **Resource** type-ahead fields, select the resources.

   Note: If any of the existing assignments have a manual loading method the planned effort is not changed. The planned effort is distributed among all assignments that have loading method 4.

2. To add the planned effort only to the new resources being assigned to the tasks:

   a. Click **Update effort**.

   b. To also add the planned effort to the existing resources that were previously assigned to the tasks, select the **Update existing assignments** check box.

   c. To select resources:

      - In the **Resource** type-ahead field, select the resource.
      - In the **Effort** column, enter the planned effort amount.

3. Click **Save**.

About displaying resource availability in PPW

You can show either actual effort or availability for task assignments in blue text beside the planned hours.

Keep the following in mind when using this functionality:

- Resource availability is provided only from the current date forward, but planned hours are allocated across the duration of the task assignment, even if the planned start is in the past. Therefore, changing planned start dates in the past can change the allocation of planned hours, which in turn changes the resource availability.

- Overallocations can distort the resource availability. For example, the duration of a task assignment is two weeks, and a resource is overallocated for the first week, but is completely available for the second. Because the total resource availability will be reduced by the number of overallocated hours, it will appear that the resource has less availability than they do.

The resource's availability is calculated as follows:

Daily capacity * Percent available for planned work – Committed hours

Where:

- **Daily capacity** is the number of hours per working day for the resource.
- **Percent available for planned work** is from the resource's workgroup.
- **Committed hours** includes all demand for all items in the current project and other projects, and in all other demand items that are configured as committed.
- Total availability is calculated from the later of the current date or planned start date to the planned finish date for the task assignment.

  Note: The availability will be recalculated when changes are made within PPW, but not when demand items are added or edited outside of PPW.

Setting up a warning when effort distribution on task assignments is overridden

You can set up a warning so that a message appears when you a make a change that affects the existing distribution of effort on task assignments.

For example, selecting another resource from the **Resources** list will evenly split the planned effort among resources. If effort is different for task assignments, a warning message appears. The effort amounts are compared up to 2 decimal places.

1. Access PPW.
2. Click . The **Project Planning Worksheet Settings** dialog box appears.
3. Select the **Display warnings before planned effort is overridden** check box.

About reenabling the message that the planned effort is different for one or more tasks

You can reenable the message that appears in the **Assign/Replace Resources** dialog box when the total planned effort for task assignments is different than the planned effort for one or more tasks by deleting the server cookies in **Preferences**.

Creating a task assignment in PPW

Use a task assignment view to do more detailed work with task assignments such as:

- manually distributing effort to daily or fiscal periods
- using different loading methods for assignments for the same task
- assigning different planned start and planned finish dates to different resources who are assigned to the same task
- adding additional resources to a task once one or more of the previous points are applicable
- assigning planned effort to summary tasks

Before you can create a task assignment in a task assignment view, there must already be a task assignment for the same task in the task assignment view.

Tip: In a split view, you can select a task in the task view half and then switch to the task assignment view half to create the task assignments.

1. Access PPW and select a task assignment view.
2. To add a new task assignment, select an existing task assignment for the same task and then click .
3. To copy a task assignment:
   a. Select the task assignment that you want to copy, and then click .
   b. Click .
4. Complete the fields as required. For more information, see "Available columns for PPW task assignment views" on page 166.
5. Click **Save**.

About resource requests and task assignments in the project worksheet and PPW

If your organization uses resource requests, there are restrictions on how you can edit task assignments in the project worksheet and PPW, depending on whether resource requests are enabled at the engagement level, project level, or task level.

Note: In all cases, you can create task assignments for resources that are configured to be exempt from resource requests.

If resource requests are enabled at the engagement level, then you can create or copy a task assignment for a resource on the worksheet only if there is a resource request for the resource in the **Projected resources** tab of the engagement.

If resource requests are enabled at the **Project** level, then the following restrictions apply to the worksheets:

- you can only assign a resource to a task assignment if there is a resource request for the resource that covers the planned start, planned finish and planned hours for the task assignment.
- you can copy and paste a task assignment, but you can save it only if there is a resource request for the resource that covers the planned start, planned finish and planned hours for the task assignment

If resource requests are enabled at the task level, then the following restrictions apply to the worksheets:

- you cannot create or copy and paste task assignments
- you can only reopen resource requests from the task editing view or resource request dialog box
- the following columns are not editable on the worksheets:
  - Resource
  - Planned start
  - Planned finish
  - Planned hours
  - Fiscal periods
  - Daily periods
  - Loading method
  - Open task

Editing a task assignment in PPW

1. Access PPW and select a task assignment view.
2. To assign a different resource to a task assignment:

a. Copy-paste the task assignment.

b. Assign the resource to the new task assignment.

c. Delete the old task assignment.

3. To delete a task assignment, select the task assignment and then click

4. Edit the fields as required. For more information, see "Available columns for PPW task assignment views" on page 166.

5. Click **Save**.

About marking task assignments as completed in PPW

In a task assignment view, you mark an assignment as completed by setting the percent complete to 100 or remaining effort to 0.

When time has been entered for a task assignment:

- The actual start date is set to the date of the earliest time record and the actual finish date is set to the date of the latest time record.
- If the completed task assignment is later reopened, the actual finish date is cleared, and the actual start date will remain unchanged.

If there are no actual hours for the task assignment:

- The actual finish date is automatically set to the current date, but you can change the date.
- The actual start date is set to the same date as the actual finish date and these dates both roll up to the task and summary tasks normally.
- If the completed task assignment is later reopened, both the actual start and actual finish dates are cleared.

  Note: If you change the actual finish date in a task assignment view, the revised actual start and actual finish dates will not appear in a task view until PPW has been saved and reloaded.

Best practice regarding actual time

The point at which time records are considered actual time by your organization is controlled by a setting in Changepoint Administration. The setting options are:

- when the time is entered in the time sheet

- when the time records are submitted in the time sheet
- when the time records have been approved

The actual finish date is determined based on the actual time for the tasks or task assignments *at that time that the task or task assignment is marked as completed.* If time records are considered actual time only after time is submitted or approved, and a task or task assignment is marked as completed before the time records have been submitted or approved, there might be an actual finish date, but no true actual hours.

As a best practice, ensure all time records are actual time before marking tasks or task assignments as completed.

About replacing assigned resources in PPW

In PPW you can replace a resource with one or more resources on all tasks in the project or only selected tasks. This functionality is useful for replacing a resource who is leaving the company or has been removed from a project, or for replacing generic resources with actual resources when template projects are used as a starting point.

When replacing a source resource, you select one or more target resources and specify the percentage of the effort amount that is to be reassigned to each target resource.

A new assignment is created for each target resource based on the information from the source task assignment. Daily effort distributions are multiplied by the percentage, and the total of the daily distributions becomes the total planned effort for the target resource.

- If the percentage is 100% or higher, the source resource is removed from the task, unless there is actual effort for the source resource, in which case the source resource remains assigned to the task with effort set to 0.
- If the percentage is 100% and there are multiple target resources, a slightly higher amount might be assigned to one of the target resources due to rounding.
- If a target resource is already assigned to the source task, the effort will be added to the existing effort for the target task.

  Note: For performance reasons, some processing is not done immediately in PPW, such as replacing effort in past periods with actual effort. As a result, there may be changes in effort amounts after you save changes or switch to another view.

Replacing an assigned resource in PPW

1. In a task view, do one of the following:
   - To replace a resource on all tasks in the project, click .
   - To replace a resource on one or more selected tasks, select the tasks and then click the .
2. In the **Assign/Replace Resources** dialog box, click the **Replace resource** option.
3. In the **From** field, select the source resource (resource that you want to replace).
4. Add one or more target resources in the **Resource** table.
5. Specify a percentage for each target resource.
6. Click **Save**.

About allocating planned hours in PPW and the project worksheet

The methods that you can use to allocate planned hours depend on whether or not fiscal periods have been selected for the project, and the loading methods that are specified for tasks.

If you select fiscal periods for the project:

- you can allocate planned hours to fiscal periods and edit planned start, planned finish and planned hours, provided that they are in current or future fiscal periods. You require the appropriate security feature to edit information in past fiscal periods.
- the default loading method for tasks is **1 - Auto distribute - update past and future**.

  Note: If you do not want planned hours in past fiscal periods to be updated with actual hours, then you must change the loading method for each task to loading method 3 or 4. For more information, see "About selecting loading methods" on page 191

If you do not select fiscal periods for the project, then only the following loading methods are available:

- **3 - Manually distribute – no update**
- **4 - Auto-distribute – no update to past** (default)

Differences between PPW and project worksheet

Using PPW, you can do the following, which is not possible in project worksheet.

Manually allocate planned hours to nonworking days

In PPW only, you can allocate planned hours to nonworking days if the loading method is a manually distribute method.

> **Note:** If you use the project worksheet or resource management worksheet (RMW) to edit a demand item that has effort on nonworking days, you may have to either redistribute the effort manually or change to an auto-distribute loading method (to automatically redistribute the effort) before you can save the demand item.

Change a planned start date in the past when using a loading method that replaces planned hours in past periods

You can change a planned start date that is the past when the loading method is one that replaces planned hours in past periods with actual hours, provided that you have access rights to edit data in past fiscal periods.

> **Note:** If you change a planned start date this way, keep in mind that existing actual hours can cause the date to revert back to the original date upon saving. Also, if there are no actual hours at the time that you change the date, actual hours on a future date can change the date automatically.

About selecting loading methods

The default loading method for tasks is:

- if fiscal periods are selected for the project – 1 - Auto-distribute – update past and future
- if fiscal periods are not selected for the project – 4 - Auto-distribute – no update to past

The loading method applies to each task assignment for the task. In PPW, you can change the loading method for task assignments. In project worksheet, you can change the loading method for tasks as well as individual task assignments.

To allocate planned hours, you can select the loading method to specify how planned hours are distributed across fiscal periods, and how (or whether) actual hours are applied to past fiscal periods when the project is rolled up.

When you select a manually distribute loading method, you can manually allocate the planned hours in the current and future fiscal periods. However, you cannot edit the total planned hours for the task assignment.

When you select one of the auto-distribute loading methods, you can update planned start, planned finish and planned hours for the task assignment, but the system automatically allocates the hours to the fiscal periods.

> **Note:** When open tasks are rolled up, the planned hours for the task are evenly distributed to each fiscal period between the planned start and planned finish dates, and planned hours are not rolled up from task assignments. Therefore the total planned hours for open tasks might not balance with the total task assignment hours.

The loading method affects how planned and actual information is rolled up for each task assignment.

0 - Manually distribute – update past only

- Planned hours in past periods are replaced by actual hours
- Planned start and planned finish in past periods are replaced if time records are earlier than the planned start or later than the planned finish. For more information, see "About replacing planned start and finish dates with actuals" on page 193.
- Current and future planned hours are not changed
- Total planned hours are set to: past period hours + current and future planned hours
- Resources can manually update current and future periods

1 - Auto-distribute – update past and future

- Planned hours in past periods are replaced by actual hours
- Planned start and planned finish in past periods are replaced if time records are earlier than the planned start or later than the planned finish. For more information, see "About replacing planned start and finish dates with actuals" on page 193.
- Total planned hours minus planned hours from past periods, are distributed evenly to current and future periods

2 - Auto-distribute – update past only

- Planned hours in past periods are replaced by actual hours

- Planned start and planned finish in past periods are replaced if time records are earlier than the planned start or later than the planned finish. For more information, see "About replacing planned start and finish dates with actuals" on page 193.
- Current and future periods are not changed (unless the resource changes the planned start, planned finish or planned hours)
- Total planned hours are set to: past period planned hours + current and future planned hours

3 - Manually distribute – no update

- Planned hours in past periods are not replaced by actual hours
- Resources can manually update current and future periods
- Resources with the required access rights can manually update past periods

4 - Auto-distribute – no update to past

- Planned hours in past periods are not replaced by actual hours, but can change when planned start, planned finish or total planned hours are changed
- Total planned hours are evenly distributed across the working days between the planned start and finish dates, and the planned hours for fiscal periods (including past fiscal periods) are updated accordingly

About replacing planned start and finish dates with actuals

If the loading method for a task assignment is one that includes “update past”, then if a time record is entered before the planned start date in a past period, the planned start date is changed to the date of the time record. Similarly, the planned finish date in a past period is changed to the date of a time record that is later than the planned finish date.

When the planned start date for a task assignment is changed in this way, then all effort that is allocated to daily periods for the task assignment is deleted.

However, the planned start and finish dates for task-level or project-level resource requests that have resource restrictions enabled will not be replaced with dates of time records if the new dates are outside of the dates for the original resource request item.

Loading method examples

The following table shows the results after a project rollup, of the different loading methods on a task assignment with the following conditions:

- Planned start: September 1
- Planned finish: October 31
- Planned hours: 50
- Fiscal periods selected for the project, and the fiscal periods are months (September, October)
- 20 actual hours were entered during the September fiscal period
- The current fiscal period is October

Note: All of the tables in the loading method examples show the results after the project has been rolled up. However on the project worksheet, you may see method 2 providing the same results as method 1 if you update the planned hours and loading method for a task that has planned hours in a past period.

Loading Method	Total Planned Hours	Fiscal Period September	Fiscal Period October
Original task assignment	50	25	25
0 - Manually distribute – update past only	45	20	25
1 - Auto-distribute – update past and future	50	20	30
2 - Auto-distribute – update past only	45	20	25
3 - Manually distribute – no update	50	25	25
4 - Auto-distribute – no update to past	50	25	25

The following table shows the results of the loading methods on the same original task assignment, but with 60 actual hours entered during the September fiscal period.

Loading Method	Total Planned Hours	Fiscal Period September	Fiscal Period October
Original task assignment	50	25	25
0 - Manually distribute – update past only	85	60	25
1 - Auto-distribute – update past and future	60	60	0
2 - Auto-distribute – update past only	85	60	25
3 - Manually distribute – no update	50	25	25
4 - Auto-distribute – no update to past	50	25	25

The following table shows the results of the loading methods on the same original task assignment, but with 40 actual hours entered in the September fiscal period and the planned hours changed to 60. You can only change planned hours on task assignments that have auto-distribute methods, therefore this example applies to the auto-distribute methods only.

Loading Method	Total Planned Hours	Fiscal Period September	Fiscal Period October
Original task assignment	50	25	25
1 - Auto-distribute – update past and future	60	40	20
2 - Auto-distribute – update past only	70	40	30
4 - Auto-distribute – no update to past	60	30	30

About allocating planned hours to daily or fiscal periods in PPW

You can allocate planned hours to daily or fiscal periods to individual resources in a task assignment view:

- for fiscal periods, one year of fiscal periods starting from the fiscal period that contains the current date is displayed
- for daily periods, 31 days from the current date are displayed initially

You can scroll backward and forward within the fiscal periods, or set a different start date for them.

To display daily or fiscal periods in PPW you must add the **Effort distribution** column to the view.

Allocating recurring planned hours in PPW

You can allocate planned effort of the same amount over a number of consecutive daily or fiscal periods.

To allocate the same number of planned hours to consecutive daily or fiscal periods

Using the following formula, enter the recurring planned hours into the daily or fiscal period where you want the allocations to begin:

```
[Planned hours amount]x[Number of daily or fiscal periods]
```

For example, to allocate 5 hours each to the next 10 daily or fiscal periods, enter "5x10" in the first daily or fiscal period.

To evenly distribute planned hours over consecutive daily or fiscal periods

Enter the recurring planned hours based on the following formula into the daily or fiscal period where you want the allocations to begin:

```
[Planned effort amount]/[Number of daily or fiscal periods]
```

For example, to evenly distribute 50 hours over the next 10 daily or fiscal periods, enter "50/10" in the first daily or fiscal period. Five hours would then be allocated to each of the 10 consecutive daily or fiscal periods.

Using different fiscal periods in PPW

By default, the fiscal periods come from the billing office for the project. You can use different fiscal periods (if available) in PPW without changing the project billing office. For example, you might want to use daily or weekly periods for the current time period, and then switch to monthly periods for future time periods.

When you switch from fiscal periods to daily periods, the daily periods start at the first date of the first fiscal period that was in the view prior to switching. When you switch from daily periods to fiscal periods, the fiscal periods start at the one that contains the first date of the daily periods that were in the view prior to switching.

Whichever periods that you use last are saved in PPW until you switch them again.

Note: Regardless of which periods you use in the view, the project data is always rolled up and stored in the fiscal periods that come from the billing office for the project.

About replacing planned effort or forecast effort in PPW

This topic describes the options for replacing planned or forecast effort in PPW.

Replace planned effort with past actual effort plus forecast effort

This option applies only to task assignments with auto-distribute loading methods.

When this option is selected:

- Planned effort in past days or fiscal periods is replaced with the actual effort.
- Planned effort on the current date or in the current fiscal period is replaced with remaining hours, which are evenly distributed in the current fiscal period
- Planned effort is replaced up to the current date or fiscal period, or the specified date, depending on the PPW settings

Replace past planned effort with actual effort

This option applies to all loading methods.

When this option is selected:

- Planned effort in past days or fiscal periods is replaced with actual effort, up to the current date or fiscal period, or the specified date (if selected on the PPW settings).

  Note: The default PPW settings for replacing past effort do not apply to loading methods that replace past planned effort with actual effort (loading methods 0, 1, 2).

- If actual effort exists:
  - total planned effort becomes the total of actual effort that replaced planned effort (up to the current date or fiscal period, or the specified date), plus planned effort in the current and future fiscal periods or up to the specified date
  - planned start date is changed to the actual start date; planned finish is not changed
- If there is no actual effort:
  - total planned effort is the total of all past, current and future effort distributions
  - planned start

Replace forecast remaining effort with planned effort minus actual effort

This option does not affect planned hours, and applies to all loading methods.

When this option is selected, remaining effort is replaced with planned effort less the actual effort.

Note: Remaining effort is not replaced if the actual effort up to the specified or current date exceeds the planned effort.

Specifying the default settings for replacing past effort in PPW

You can specify the default settings for when you want to replace planned effort in past periods with actual effort.

You can specify whether the planned effort in past periods is replaced with all of the existing actual effort, or only up to a date that you specify at the time when you want the effort replaced. You can also specify that only the effort for task assignments that have actual effort be replaced.

1. In PPW, click . The **Project Planning Worksheet Settings** dialog box appears.
2. In the **Replace past planned effort with actual effort** section:
   - To replace the planned effort in past periods with all actual effort for those past periods, select **All actual effort**.
   - To replace the planned effort only up to a date that you specify at the time that you select the option to replace the planned effort, select **Up to a specified date**.

   Note: This setting applies only to loading methods that do not replace past planned effort with actual effort (loading methods 3 and 4).
3. To replace the planned effort in past periods only for task assignments that have actual effort for the past periods, select the **Do not replace the effort for task assignments that have no actual effort** check box.

About activating tasks in PPW

You must activate tasks in PPW before they are available to resources in the time sheet and **Projects** tree-view.

To activate a task, you must first mark it for activation. When you mark a task for activation, all of the tasks in the same task hierarchy and all of the tasks linked to the tasks in the

hierarchy are marked as well. For this reason, tasks can be activated only from a task view that has no sorting or filter applied.

Once you have marked tasks for activation, you cannot make any edits to the tasks that affect the WBS or task dependencies.

You can choose to automatically mark tasks for activation by selecting the option in PPW settings. For more information, see "Automatically activating draft tasks in PPW" on page 200.

When you mark tasks for activation and then click **Save**:

- all active tasks that you modified and all draft tasks that you marked for activation will be validated in a background process
- active tasks that pass validation are saved
- all draft tasks are activated only if they all pass validation (none of the draft tasks are activated if one or more fail validation)
- warnings are cleared
- PPW is closed and errors appear the next time you access PPW

  Tip: To review error and warning messages immediately, click **Apply** instead of **Save** .

Tasks that pass validation are activated and can be viewed and edited in all the usual ways. Tasks that fail validation are flagged and the error messages are available in the information column. You can either correct the errors and activate the tasks, or delete them.

Note: Tasks that fail validation appear in the project worksheet, but you must correct all errors before saving the project worksheet.

Activating a task in PPW

To activate a task, you first mark it for activation and then submit it for activation. You can remove a task from being marked for activation, but you cannot revert an activated task to draft status.

1. To mark tasks for activation, select one or more draft tasks, and then click .

   The cell in the **Draft** column turns green.

2. To remove a task from being activated, select the task and then click .

3. To activate the marked tasks, click **Save** or **Apply**.

Validating changes in PPW

Because only basic validation is performed when you create and edit tasks and task assignments in PPW, it is possible that you unknowingly introduce errors as you work. You can validate your work to check it for errors so that you can view and correct the errors before activating or saving.

1. Select the draft tasks that you want to validate, and then click .

   Note: Active tasks that have been edited are automatically included.

2. Click .

Automatically activating draft tasks in PPW

You can set an option to automatically mark draft tasks for activation. After you select this option, all existing tasks and new tasks for the current project are activated when you save the project in PPW. Existing draft tasks in other projects are activated only after you access and then save each project in PPW.

Note: This setting applies to all projects that you access in PPW.

1. Access PPW.
2. Click . The **Project Planning Worksheet Settings** dialog box appears.
3. Select the **Automatically activate draft tasks** check box.
4. Click **Save**.

About editing tasks in PPW

Changing the loading method

If you change the loading method for a task assignment from one that does not replace planned hours in past fiscal periods with actual hours to one that does, the planned hours in past fiscal periods will initially be replaced with an even distribution of the total actual hours. To see the true distribution of actual hours in the past, you must save the project in PPW. Saving the project saves the daily distribution of the task assignment and initiates a project rollup.

Editing the planned start date

When you change the planned start date of a task, the start dates of its task assignments are moved to maintain the same relationship to the task start date. That is, if the original start date of the task assignment was 5 days after the original task start date, then the new start date of the task assignment will be 5 days after the new task start date. The duration remains the same, and the finish date is changed based on the duration.

If the new start date for a task assignment is on a nonworking day, the effort is moved to the next available working day and the new finish date is determined based on the duration, which can move the task finish date. Planned start and planned finish dates can be on nonworking days, but effort can only be allocated to nonworking days manually.

When you change the planned finish date of a task, the dates of its task assignments are moved relative to the new finish date. The planned start date remains the same and the duration is recalculated.

If dependencies on other tasks prevent the finish date from being moved, or the new finish date is earlier than the planned start date of the task assignment, the task assignment dates are set to same date as the task start date.

Editing a task in PPW

1. Access PPW.
2. If necessary, lock the project for task editing by clicking .
3. Make the necessary changes.
4. Click **Save**.

About marking tasks and task assignments as completed in PPW

In a task view, you mark a task as completed by selecting the **Completed** check box.

If there are actual hours for the task, the following occurs:

- the actual start date is set to the date of the earliest time record and the actual finish date is set to the date of the latest time record.
- The actual start date, finish date, and completed status are applied to all subtasks and task assignments that are not completed and have no actual hours.

- If a task assignment has actual hours, the actual start date is set to the date of the earliest time record and the actual finish date is set to the date of the latest time record.
- If the completed task is later reopened, the actual finish date is cleared.

If there are no actual hours for the task,

- the actual start date is set to the same date as the actual finish date and the actual finish date is automatically set to the current date. You can change the actual finish date.
- If a completed task is later reopened, both the actual start and actual finish dates are cleared and will be updated during the save and project rollup.

About the Gantt chart in PPW

You can move tasks, change task durations, and create or delete task dependencies within the same project in the Gantt chart.

The items in PPW are represented in the chart as follows:

- tasks – blue bars
- summary tasks – dark gray bars
- milestone tasks – black diamonds

To show/hide the Gantt chart

Click .

To show/hide the worksheet

Click the darker bar in the split bar between the worksheet and the Gantt chart.

To scroll outside of the time frame that is currently displayed

There is a second set of arrows in the horizontal scroll bar of the Gantt chart that you can use to scroll outside of the time frame that is currently displayed.

To scroll to dates prior to the earliest date displayed, click the arrow on the far left.

To scroll to dates after the latest date displayed, click the arrow on the far right.

To scroll vertically on the Gantt chart

To scroll up or down in the Gantt chart, you use the scroll bar that is between the worksheet area and the Gantt chart.

Changing the timescale in the Gantt chart in PPW

You can zoom in to show less information in greater detail, or zoom out to show more information in less detail.

To change the timescale in the Gantt chart

To zoom in, click . The lowest zoom level shows the timescale in days per week.

To zoom out, click . The highest zoom level shows the timescale is semiannual.

To display the entire Gantt chart in the available space, click . The Gantt chart is scaled to fit in the width of the pane.

To start the time frame displayed in the Gantt chart at the planned start date of a task, click the task row and then click .

Managing tasks in the Gantt chart in PPW

You can change the planned start date of a task by moving it forward or back in the timescale. The duration for the task remains the same. If you move a predecessor task, its successor tasks are moved automatically to maintain the constraints of the dependency type.

You can change the planned finish date of tasks as well as shorten or lengthen their duration by moving the right (planned finish) end of the task bar.

> **Note:** You cannot move a successor task, nor change its dates that are dependent on its predecessor task.

To change the planned start date for a task

Point to the task, and when the four-sided arrow appears, move the task forward or back to the desired date.

To change the planned finish date for a task

Point to the right (planned finish) end of the task bar, and when the double-sided arrow appears, drag the end to the desired date.

Linking tasks in the Gantt chart in PPW

Tasks that you link in the Gantt chart initially have a finish-to-start dependency by default, but you can change the dependency type, and add a lag or lead time.

1. Click the predecessor task, and then drag it down towards the successor task.

   A tooltip indicates the potential successor tasks as you point to them.

2. Release the predecessor task on the successor task.

   A finish-to-start dependency is created by default, and the successor task is moved to start on the first working day after the finish date of the predecessor task. A line links the predecessor task to the successor task.

3. To change the dependency type, right-click the link and then select the dependency type.

4. To add a lag, in the **Predecessors** column, add `+n`, where *n* is the number of lag days (or `-n` to specify lead time).

To unlink tasks

Right-click the dependency link, and then select **Delete**.

8. Reporting Project Progress

Viewing the Task Status Compliance report

Project managers can access the **Task Status Compliance** report to view and update the status of tasks in their projects.

1. Click **General** > **Reports**.

   The **Reports** tree view appears.

2. Expand the **Project Management** folder.

3. Select the **Task Status Compliance** report.

   The filter criteria window appears.

4. To include subprojects in the report, select the **Include subprojects** check box.

5. To include completed tasks, select the **Include completed tasks** check box.

6. In the **Project** list, select one or more projects.

7. Click **Go**.

   The **Task Status Compliance** report appears.

8. To update the status of a task:

   a. Click or the task name in the task row. The **Update Task Status** dialog box appears.

   b. Update the status. For more information, see "Update Task Status dialog box options" in the *Time and Expense Management User Guide*.

9. Creating quick plans and quick projects

Creating a project using the Create Quick Plan report

You can use the **Create Quick Plan** report to enter engagement, project, task, and resource assignment information in one place. The report guides you through the required fields for creating an engagement, project, task, and resource assignment.

1. Click **General** > **Reports**.
2. Expand the **Project Management** folder.
3. Click **Create Quick Plan**.

   The **Create Quick Plan** opens in a new window.
4. Complete the engagement fields as required. For more information, see "Create Quick Plan report, engagement options" on page 207.
5. Click **Save**.
6. To add other engagement information, click **Engagement Details**.

   The **Edit Engagement** dialog box appears.
7. Complete the fields as required.
8. Complete the project fields as required. For more information, see "Create Quick Plan, project options" on page 211.

Create Quick Plan report, engagement options

For detailed information about engagements, see the *Engagement Management User Guide*.

General section

Field	Description
Company type-ahead field	Company of the engagement.
Company ID type-ahead field	ID of the company.
Engagement name field	Name of the engagement.

Field	Description
Alternate Name field	Alternate name for the engagement.
Description field	Description of the engagement.
Billing office list	Billing office for the engagement.
Engagement status list	Status of the engagement.
Manager type-ahead field	Resource responsible for the engagement.
Staffing workgroup type-ahead field	Workgroup for the engagement.The staffing workgroup is used in resource demand calculations. Default is the engagement manager's workgroup.
Main contact list	Main company contact.
Opportunity list	Opportunity that resulted in the engagement.
Additional contact list	Additional contact.
Enable two-level approval check box	When selected, a second level of approval after the engagement manager is required for all invoices for the engagement.
Enable two-level approval on contract overage check box	When selected, a second level of approval after the engagement manager is required for invoices with net amounts that exceed the contract amount specified on the engagement.
Second-level approver type-ahead field	Resource who approves the invoices after the engagement manager approves the invoices.
Enable two-level approval for write-offs/ups check box	When selected, a second level of approval after the engagement manager is required for invoices that contain write-offs.
T/E Approver field	Resource who approves time and expenses.

Field	Description
Secondary T/E Approver field	Resource who approves the time and expenses for the resource specified in the **T/E Approver** field.
Support desk list	Support desk that handles issues for the engagement.

Contract section

Field	Description
Contract number field	Contract number for the engagement
Contract start field	Date that the engagement begins.
Contract amount field	Total amount of the contract, excluding taxes.
Contract end field	Date that the engagement ends.

Billing information section

Field	Description
Currency list	Billing currency for the engagement.
Billable check box	When selected, the engagement is billable.
Billing type list	Billing type.
Expense billing field	Portion of the expenses for the engagement that will be billed to the customer. The options include: • **All expenses** • **No expenses** • **Percentage of expenses**
% field	Percentage of expenses to be billed. Available only if **Percentage of expenses** is selected in the **Expense Billing**.

Field	Description
Invoice format list	Invoice format.
Remit-to address list	Address to which the customer sends remittances. Default is the remit-to address specified for the billing office. To display the full address, point to the **Remit-to Address** field.
Expense GL account list	Resource whose cost center is responsible for the expenses associated with the engagement.
Bill-to location group list	Location group where the work will be billed (for taxation purposes)
Bill-to location list	Location where the work will be billed (for taxation purposes)

Details section

Field	Description
Work code category list	Work code category for taxation purposes.
Work code list	Work code for taxation purposes.

Defining the project for a quick plan

The project section of a quick plan includes the mandatory project fields only. However, after you save the project, you can edit it as required.

1. Click the **Project** tab.
2. Complete the fields as required. For more information, see "Create Quick Plan, project options" on page 211.
3. To link the project with a product
   a. Expand the tree view and select the primary product associated with the project. The primary product is used for reporting purposes.

b. To change the primary product, select the name of the product instead of the check box.

c. Select additional products, as required.

4. Click **Save**.

Create Quick Plan, project options

Field	Description
Project name field	Name of the project.
Planned start date field	Estimated start date of the project.
Customer field	Customer for the project.
Planned finish field	Estimated end date for the project.
Engagement name field	Engagement for the project.
Planned hours field	Estimated planned effort for the project.
First status field	Date that resources must perform the first status updates for their assigned tasks.
Status field	Status of the project.
CP project type list	Custom project type that represents how the project is categorized within Changepoint.
Project plan editors field	Project plan editor for the project.
Billable check box	When selected, the project is billable.
Labor budget field	Proposed labor budget for the project.
Expense budget field	Proposed reimbursable expense budget for the project
Other expense field	Proposed budget for other expenses for the project.

Field	Description
Project value field and currency list	Value and currency of the project.
Fiscal period type-ahead field	Billing office whose fiscal periods apply to the project worksheet.
Comments field	Comments regarding the project.
Work location group list	Work location group for the project.
Work location list	Work location for the project.
Work code category list	Work code group for the project.
Work code list	Work code for the project.
Products list	Products associated with the project.

Adding and assigning tasks for a quick plan

You must enter and save all required information in the **Project** section before you can add the task information.

1. Click the **Task** tab.
2. Complete the fields as required. For more information, see "Create Quick Plan, task options" on page 213.
3. To link the task with a product
   a. Expand the tree view and select the primary product associated with the project. The primary product is used for reporting purposes.
   b. To change the primary product, select the name of the product instead of the check box.
   c. Select additional products, as required.
4. Click **Save**.

Create Quick Plan, task options

Field	Description
Task name field	Name of the task.
Planned start field	Estimated start date for the task.
Project field	Project name.
Planned finish field	Estimated finish date for the task.
Planned hours field	Estimated effort for the task. The value must equal the total planned hours of the task assignments.
Billing role list	Billing role for the task.
Function list	Function for the task.
Billable task check box	When selected, the task is billable.
Comments field	Comments about the task.
Allow work location override check box	When selected, resources can override the work location when entering time for the task.
Allow work code override check box	When selected, resources can override the work code when entering time for the task.
Work location group field	Work location group for the task.
Work location field	Work location for the task.
Work code category field	Work code category for the task.
Work code field	Work code for the task.
Resource type-ahead field	Resource who is assigned to the task.
Planned hours field	Estimated hours that the resource requires to complete the task.

Field	Description
Billing role field	Billing role for the task assignment.
Product field	Products associated with the task assignment.

Creating a project based on the projected resources of an engagement

You can create a project based on the projected resources of an engagement. A task is created for each projected resource that you select. The project status is **Draft** and task status updates are required once a week. The planned start date for the project is the earliest start date from the tasks, and the planned finish date is the latest finish date from the tasks.

1. Access the engagement.
2. Click the **Projected resources** tab.
3. Select the projected resources for which tasks will be created in the project.
4. Right-click and select **Create Quick Project**.

   The **Project name** field, which includes the engagement name, appears, and the following columns are added to the table:

   - **Quick project** – flag that indicates the projected resources to be created as project tasks
   - **Task** – includes the name of the billing role of the projected resources as the task names
5. Edit the project name and task names, if required.
6. Click **Save**.

   The project is created. The project resources that have been created as tasks for the project display a in the first column of the **Projected resources** tab.

10. Microsoft Project Integration

About Microsoft Project integration

The integration of Changepoint Changepoint with Microsoft Project combines the benefits of high-level planning options and detailed task lists from Microsoft Project with the capture of time and status information in Changepoint Changepoint.

After a Changepoint project is linked to Microsoft Project (called a linked MSP project), the project manager creates the tasks and resource assignments in the MSP project, and resources update their task status in Changepoint Changepoint. The actual data from the task status updates is transferred to the linked MSP project when the project manager updates the linked MSP project.

Although Changepoint does not integrate with Microsoft Project calendar functionality, the project manager can transfer nonworking days from Changepoint to the Microsoft Project calendar and set the resource maximum units based on the resources' available hours per day. Also, if the option to update the calendar is enabled for a task in Changepoint, the personal calendar will be updated for resources who are assigned to the task in the linked MSP project.

Note: Depending on the Microsoft Project version used in your organization, procedures may differ. For more information, see the Microsoft Project help.

About data transfer between linked MSP projects and Changepoint

The first time that you link a Changepoint project to Microsoft Project, the system creates a new MSP project with the same name as the Changepoint project. The MSP project is stored in a temporary Microsoft Project file (.mpp) on your computer while you are working with it. When you save and exit from Microsoft Project, the linked MSP project is saved in Changepoint.

The following information in the Changepoint project is transferred to the new MSP project:

- Project name
- Resources
- Resource cost information, if the project manager has access rights
- Planned, actual, remaining and baseline start and end dates
- Planned hours

- Tasks and task dependencies within the project

All tasks automatically have the fixed duration task type, regardless of the Microsoft Project default setting. The task duration, work start and finish match the values from Changepoint. After the project is linked, you can change the task type to fixed work or fixed units in Microsoft Project and the values will be recalculated.

When you edit and save a linked MSP project, the following information is transferred back to the Changepoint project:

- Task names
- Project planned start date
- Planned start and finish dates of tasks
- Phase information for tasks
- Resource assignments
- Work breakdown structure

After the transfer, the information is automatically distributed to project resources. If resource leveling is enabled for your organization, the system validates the task assignments and a validation report is displayed if there are any conflicts.

Data transferred from Changepoint when updating a linked MSP project

Each time you access a linked MSP project, you can select whether you want to update the following information from Changepoint:

- Actual hours spent on tasks
- Actual time by assignment, by date
- Actual start dates for assignments
- Task status (forecast to complete in hours)
- Estimated completion date of tasks (if not finished)
- Forecast start date of task assignments

Changepoint allows the status update requirement for projects to be overridden for specific tasks and task assignments, but this capability is not supported in Microsoft Project. If you

create a task or task assignment in Microsoft Project and then transfer the task to Changepoint, Changepoint applies the project status requirement to the task or task assignment.

Data transferred between Changepoint and MSP

You can enter the following task-related information in either Changepoint or Microsoft Project:

- Specification of whether a task is billable
- Text fields 1, 2, 3
- Code fields 1, 2, 3 (single values only)
- Utilization eligible
- Update resource calendar
- Associate with fixed fee
- Fixed-fee item

Steps required before linking a project

The following list describes the steps required before a Changepoint project can be linked with Microsoft Project.

1. Creating a project in Changepoint, with or without tasks and task assignments. For more information, see "About creating projects" on page 16.
2. Creating a list of resources for the project in Changepoint. For more information, see "About creating a list of resources for a linked MSP project" on page 217.
3. Setting up exchange rates in Changepoint Administration.

   If different currencies are used in Changepoint and Microsoft Project, ensure that the appropriate exchange rate values have been set up and activated in Changepoint Administration. Otherwise, an exchange rate value of 1 will be used during data transfers.
4. Installing the Changepoint MSP COM Add-in. For more information, see "Installing the Changepoint MSP COM Add-in" on page 218.

About creating a list of resources for a linked MSP project

Before you link your Changepoint project to Microsoft Project, you must ensure that all of the resources that you intend to assign to project tasks are specified in Changepoint. The type of

resource list depends on how resource requests are used by your organization:

- If resource requests are not used, the resources from your **Preferred resources** list are used.
- If resource requests are submitted from the engagement or task editing view, then the projected resources from the engagement are used. If task restrictions have been set up for the engagement to restrict assignments to projected resources, then these task restrictions are also applied in Microsoft Project.
- If resource requests are submitted from the project, then the resources from the project team are used.

Installing the Changepoint MSP COM Add-in

1. In Changepoint, click **Preferences**.

   The **Preferences** view appears.

2. Expand the **Add-in installations** section, and click the **Install Changepoint MSP COM Add-in** link.

   A file download dialog box for **Changepoint MSP COM Add-in** installer appears.

3. Click **Run** to launch the installer.

   Depending on your browser, you may have to save the installer first and then run it.

4. If a security warning displays, acknowledge the warning and continue with the installation.
5. Follow the installer prompts:
   - When you are prompted to select a language, select your Windows operating system language.
   - When you are prompted for the URL of the Changepoint website, copy and paste the URL from the **MSP** subsection of the **Add-in installations** section of the **Preferences** view.
6. When the installation complete message displays, click **Finish**.

   The following Changepoint-related items are added to the Microsoft Project interface:

   - **Changepoint** command on the **Add-Ins** tab.
   - **CP Gantt** view, accessible from the **Gantt Chart** command on the **View** tab.

- Changepoint fields for selection, accessible from the **Insert Columns** command on the **Gantt Chart Tools Format** tab.

Default schedule settings for Microsoft Project

It is recommended that you set the following schedule settings as default settings in Microsoft Project, before linking to Changepoint. The options are in the **Schedule** tab of the **Options** dialog box in Microsoft Project. For more information, refer to the Microsoft Project help.

MSP Schedule option	Recommended setting
Show assignment units as a	Percentage
Auto-scheduled tasks scheduled on	Project Start Date
Duration is entered in	Days
Work is entered in	Hours
Default task type	Fixed Duration (All tasks in Changepoint are defined as fixed duration.)
Show that scheduled tasks have estimated durations	Clear the check box

Configuring the Changepoint website settings

If you access different Changepoint websites, for example, an internal website at the office and an Internet website from home, then you must switch the Changepoint website settings in Microsoft Project.

Tip: When you open a linked MSP project, the Changepoint URL displays in the bottom left corner of the Microsoft Project window.

1. In Microsoft Project, click the **Add-ins** tab.
1. Click**Changepoint** > **Changepoint Setup**.

   The **Changepoint Setup** dialog box appears.
2. Enter the URL or website address for Changepoint.
3. Click **OK**.

Your Changepoint website settings are validated and saved. These settings are used the next time you link to Changepoint.

Accessing a linked MSP project

After a project is linked, you can view and edit it using Microsoft Project.

1. In Microsoft Project, click the **Add-ins** tab.
2. Click **Changepoint** > **Link Changepoint Project**.
3. If the Changepoint sign in dialog box displays, enter your Changepoint user ID and password and click **OK**.

   The **Changepoint Project List** dialog box appears.
4. Expand the **Linked Projects** folder and select a project.
5. Click **OK**.

   The **Link Changepoint Project** dialog box appears.
6. Do one of the following:
   - To access the linked project without transferring data from Changepoint, select the **Do not update the data in Microsoft Project** option and then click **OK**.
   - To update the linked project before accessing it, select the relevant update option and then click **OK**. For more information, see "Link Changepoint Project dialog box options" on page 221.

   The linked project opens in Microsoft Project.

About linking Changepoint projects to Microsoft Project

If you do not select additional update options when first linking a project, the start date, finish date and hours for tasks and task assignments in Microsoft Project will be preserved. If you select additional update options (such as, **Update the actual start date** or **Update actual hours**), it could cause Microsoft Project to recalculate the start date, finish date and effort, which means that these values will be different than what was originally in Changepoint. Changepoint will not interfere with the Microsoft Project calculations.

Note: Open tasks are not supported in linked MSP projects because entering time for open tasks creates an assignment in Changepoint, which is not allowed in linked MSP projects. Therefore, you cannot link a Changepoint project that includes open tasks.

If you link an MSP project that already contains actual work, costs, start dates or finish dates, this information is not transferred into Changepoint. Instead, the actual values are overwritten with values from Changepoint when you link and update the project. However, you can choose not to link certain tasks from the MSP project and the actual values for these tasks will not be overwritten.

After an MSP project is linked to a Changepoint project:

- You must enter all planning and resource assignment changes in the linked MSP project.
- The project manager, project plan editor, or summary task manager for the task can do limited editing on tasks in Changepoint, but cannot add tasks or modify the project worksheet. However, you can make changes to the project that are not related to tasks. For example, you can still change access rights in Changepoint.
- You cannot create open tasks for linked MSP projects.
- You cannot save baselines for linked MSP projects.

Link Changepoint Project dialog box options

In the **Link Changepoint Project** dialog box, you specify the options for transferring data from Changepoint to the MSP project.

Option	Description
Do not update the data in Microsoft Project	When selected, data is not transferred from Changepoint to the MSP project. Not available the first time the project is linked.
Update the modified tasks in Microsoft Project	When selected, transfers data only from tasks for which resources have entered time or status updates. Not available the first time the project is linked.
Update all tasks in Microsoft Project	When selected, transfers all of the data. Use this option to transfer all of the data from Changepoint if the linked project gets out of sync, for example, if an update is interrupted or there is a system crash. Not available the first time the project is linked.
Update the rates for Microsoft Project	When selected, transfers the cost rates for resources.

Option	Description
Update project and resource-level nonworking days and calculate resource maximum units	When selected, transfers the nonworking days from the project and resource-level to MSP. Also, calculates the maximum units for resources based on the percent available for planned work from the Changepoint workgroup and the default hours per day from MSP.
Update the actual start date	When selected, transfers the actual start dates of task assignments.
Update actual hours	When selected, transfers actual hours that resources entered against tasks.
Update remaining hours	When selected, transfers the remaining hours for tasks.
Project worksheet	When selected, transfers allocated planned hours from the project worksheet to the MSP project *the first time that the project is linked only*. After the project is linked, time allocation data is transferred only from Microsoft Project to Changepoint. This option is set automatically and cannot be changed if a billing office has been associated with the Changepoint project.
Only update tasks with a planned start date within the following date range	When selected, transfers the actual hours and dates for the tasks that have a planned start date that is within the date range that you specify. Not available the first time a project is linked.

Option	Description
Update the summary time in Microsoft Project	When selected, transfers time at the task assignment level, and only the **Actual Work** column is updated in Microsoft Project. For example, if time records for a task include 6 hours on Monday and 8 hours on Tuesday, the **Actual Work** column in Microsoft Project displays a total of 14 hours. However, Microsoft Project distributes the actual time based on the planned hours for each day. If 8 hours were planned for Monday and 8 hours for Tuesday, the actual time would be distributed as 8 hours on Monday and 6 hours on Tuesday in Microsoft Project. Available only when **Update actual hours** is enabled and a billing office has been associated with the Changepoint project.
Update the detailed time in Microsoft Project	When selected, transfers actual data at a detailed level, including a breakdown of task time by day. For example, if time records for a task include 6 hours on Monday and 8 hours on Tuesday, the actual time would be distributed in Microsoft Project as 6 hours on Monday and 8 hours on Tuesday. Available only when **Update actual hours** is enabled and a billing office has been associated with the Changepoint project.

Linking a Changepoint project to Microsoft Project

1. In Microsoft Project, click the **Add-Ins** tab.
2. Click **Changepoint** > **Link Changepoint Project**.
3. If the **Changepoint sign-in** dialog box displays, enter your Changepoint user ID and password and then click **OK**.

   The **Changepoint Project List** dialog box appears. The **Available projects** folder lists projects for which you are a project manager. The **Linked projects** folder lists your projects that are already linked with Microsoft Project.
4. Expand the **Available projects** folder, select the project, and then click **OK**.

   The **Link Changepoint Project** dialog box appears.
5. Do one of the following:

- To create the link to Microsoft Project without transferring actual data, or if no data exists yet, do not select any options. You can always update the actual data at a later time.
- To transfer data from the Changepoint project, select the relevant options. For more information, see "Link Changepoint Project dialog box options" on page 221.

6. Click **OK**.

   The new MSP project is created and linked to the Changepoint project.

About editing a linked MSP project

After a Changepoint project is linked to an MSP project, you must edit and create all tasks and task assignments in the MSP project. You can also enter additional project information and monitor project progress.

Note the following differences in behavior for working with linked MSP projects:

- When projects and tasks are linked through interproject dependencies, you cannot move the start date of the successor task to an earlier date than the latest finish date for the parent task plus lag time for all parent tasks.
- When adding a new task, you must enter values for fields that are mandatory in Changepoint.
- If you change the billing role for a task assignment, it is saved in Changepoint with the current date as the effective date. If you want to specify a different effective date, you must perform the change in Changepoint, which requires breaking the link to Microsoft Project.
- When using the **Insert project** option to import an existing MSP project, you must clear the **Link to project** check box. Otherwise, data will not be updated from Microsoft Project to Changepoint . Also, keep in mind that actual times and dates in this plan will be overwritten with actual data from Changepoint when the link is updated.
- When you create a task assignment in a linked MSP project, the effort amounts are converted to hours, days, or FTEs based on the system-level **Daily capacity** setting and not the **Daily conversion factor** that is normally used when task assignments are created in Changepoint.

Editing a linked MSP project

1. Access the linked project in Microsoft Project.

2. Make the necessary changes.
3. To update a task in the Changepoint project, select **Yes** in the **Update CP** column.
4. Click the **Save** icon.
5. Exit from Microsoft Project.
6. If a message appears, asking if you want to save the project, click **Yes**.
7. In Changepoint, roll up the project to update the planned hours, planned start and planned finish dates. For more information, see "Rolling up a project" on page 51.

Deleting a task or task assignment from a linked MSP project

You cannot delete a task or task assignment that has actual time or expenses entered against it. When you delete a task from a linked MSP project, the task is removed from Changepoint, but remains in Microsoft Project. If the task is an integral part of the **Projects** tree view, it remains in Changepoint but is inactive.

1. Access the linked project in Microsoft Project.
2. To delete a task in the Changepoint project only, select **Yes** in the **Remove CP** column.
3. Click the **Save** icon.
4. Exit from Microsoft Project.
5. If a message appears, asking if you want to save the project, click **Yes**.

Updating actual time and dates in a linked MSP project

Resources enter the time that they spend working on tasks into Changepoint, but this data is not transferred to the linked MSP project until you update it.

1. Access the linked MSP project.

   The **Link Changepoint Project** dialog box appears.
2. Select the **Update the modified tasks in Microsoft Project** check box.
3. Select the type of information you want to transfer to the MSP project. For more information, see "Link Changepoint Project dialog box options" on page 221.
4. Click **OK**.

   The data is transferred to the MSP project, which opens.

About identifying Changepoint resources in a linked MSP project

In linked MSP projects, there is a custom **Changepoint resource** flag that you can use to identify Changepoint resources. You can either insert the flag as a column into a resource sheet, or insert a column in your linked MSP project. For more information, see the Microsoft Project help.

About forecast start and finish dates in linked MSP projects

Only planned start and finish dates are updated from Microsoft Project to Changepoint, but not forecast start and finish dates. In both Changepoint and Microsoft Project, the forecast start and finish dates are the same as the planned start and finish dates until the first time that a resource updates the status of a task. After a resource updates the status of a task, the forecast start and finish dates are stored in separate fields in Changepoint and transferred to Microsoft Project into the Start10/Finish10 fields for information purposes. Changes to the planned start and finish dates, whether done in Microsoft Project or Changepoint, no longer affect the forecast start and finish dates.

Forecast dates in Changepoint may be different than the start and end dates in Microsoft Project. Forecast start and finish dates in Changepoint are updated when resources update the task status. Start and end dates in Microsoft Project are updated when the project manager changes planning information and by Microsoft Project calculations.

Viewing task usage information in a linked MSP project

Use the **Task Usage** view in Microsoft Project to view the distributed time information as it has been entered in Changepoint. Actual time is exported from Changepoint to Microsoft Project by assignment date.

1. Access the linked MSP project.
2. Click the **View** tab.
3. Click **Task Usage** > **Task Usage**.

About removing the MSP link

If you want to manage a linked MSP project in Changepoint without interfacing with Microsoft Project, you can remove the MSP link. When the MSP link is removed:

- All dependencies between Changepoint and Microsoft Project are removed. Reconnecting the MSP link after will not re-establish the dependencies.

- A snapshot of the MSP project is saved as an .mpp file attachment in the **Related knowledge** section of the project profile. The .mpp file is for information purposes only.

Removing the MSP link

You must use Microsoft Project to remove the link.

1. In Microsoft Project, click the **Add-Ins** tab.
2. Click **Changepoint** > **Remove Changepoint project link**.
3. If the **Changepoint sign-in** dialog box displays, enter your Changepoint user ID and password and then click **OK**.

   The **Changepoint Project List** dialog box appears.
4. Expand the **Linked projects** folder and select the project that you want to unlink.
5. Click **OK**.

   A confirmation dialog box appears.
6. Click **Yes**.

   The link is removed.

Microsoft Project and Changepoint field mappings

The following tables detail how the project, task and task assignment fields in Changepoint are mapped to the corresponding fields in Microsoft Project, and how and when the fields are updated automatically.

Note: The Changepoint **Alternate Name** field is not supported in Microsoft Project.

Restrictions with configurable fields in linked MSP projects

The Changepoint configurable fields **Text 1**, **Text 2**, and **Text 3** for projects are mapped to the **Text 1**, **Text 2**, and **Text 3** fields in Microsoft Project, which are text only. To ensure that these fields in linked MSP projects are updated properly, the field type of the Changepoint configurable fields must be text. Do not change the field type to numeric or date.

Project field mappings

Changepoint field	Direction	During creation and/or update	MSP column
Project name	To	Creation	Project Name
Billable	To	Creation and Update	Billable
First status	To	Creation	Status date
Currency	To	Creation and Update	Currency
Project start (calculated)	To	Creation	Project Start
Billing type	To and From	Creation and Update	Text 2

Task field mappings

Changepoint Field	Direction of Feed	During Creation and/or Update	Microsoft Project Column
Task name	To, during creation only. From, during updates		Name
Description	To and From	Creation and Update	Task Notes
Baseline start	From	Creation	Baseline Start
Baseline finish	To during creation only. From during updates		Baseline Finish
Baseline hours	To during creation only. From during updates		Baseline Work
Forecast start	To and From	Creation and Update	Start 10
Forecast finish	To and From	Creation and Update	Finish 10
WBS	To	Creation	Outline Level
WBS	From	Update	Outline Number

Changepoint Field	Direction of Feed	During Creation and/or Update	Microsoft Project Column
Billable task	To and From	Creation and Update	Billable
Text 1	To and From	Creation and Update	Text 1
Text 2	To and From	Creation and Update	Text 2
Text 3	To and From	Creation and Update	Text 3
Billed to fixed-fee portion of the engagement	To and From	Creation and Update	Fixed Fee (Flag 5)
Fixed fee (deliverable name)	To and From	Creation and Update	Fixed Fee Item (Text 4)
Utilization eligible	To and From	Creation and Update	Utilization Eligible (Flag 6)
Capital	To and From	Creation and Update	Capital (Flag 10)
Project phase	To during creation only. From during updates		Phase (Text 12)
Configurable code 1	To and From	Creation and Update	Text 6
Configurable code 2	To and From	Creation and Update	Text 7
Configurable code 3	To and From	Creation and Update	Text 8
Add to calendar	To and From	Creation and Update	Calendar CP (Flag 4)
Locked task	To and From	Creation and Update	Locked (Flag 7)
Open task	To	Creation and Update	Not editable in Microsoft Project
Work code	To and From	Creation and Update	Work Code (Text 9)

Changepoint Field	Direction of Feed	During Creation and/or Update	Microsoft Project Column
Location	To and From	Creation and Update	Location (Text 10)
Task status (completed only)	To and From	Creation and Update	Percent Complete
Planned hours (computed value)	To and From	Creation	Duration
Billing role	To and From	Creation and Update	Text 5
Function	To and From	Creation and Update	Text 11
Capital	To and From	Creation and Update	Capital (Flag 10)
Allow work code override	To and From	Creation and Update	(Flag 9)
Allow work location override	To and From	Creation and Update	(Flag 8)
Planned start	To during creation only. From during updates		Start
Actual start	To during creation, if the option to update the actual start date is selected. Thereafter, from during updates.		Actual Start
Actual finish	From	Update	Actual Finish
Planned finish	To during creation only. From during updates		Finish
Milestone	To and From	Creation and Update	Milestone

Task assignment field mappings

Changepoint Field	Direction of Feed	During Creation and/or Update	Microsoft Project Column
Planned hours	To during creation only. From during updates		Work
Not stored in Changepoint	To and From	Creation and Update	Units MSP calculates units based on work/duration, which is updated from Changepoint.
Actual hours	To during creation only.		Actual Work (summary) Time Scale Actual Work (detailed)
Forecast start Forecast finish When the task assignment is not completed, these are set to planned start and planned finish. When resource completes the task and agrees to update the planned hours, then they are set to planned start and planned finish.	To and From	Creation and Update	Start (Start 10)
	To and From	Creation and Update	Finish (Finish 10)
Actual start	To	Creation and Update	Actual Start

Changepoint Field	Direction of Feed	During Creation and/or Update	Microsoft Project Column
Actual finish	To	Creation and Update	Actual Finish (Changepoint updates the actual start and MSP calculates the actual finish)
Manager comments Notes entered in MSP will be updated in **Manager comments** only.	To and From	Creation and Update	Notes Both manager comments and resource comments are updated in **Notes**.
Resource comments	To	Creation and Update	Notes
Planned start	From	Creation	Start
Planned finish	From	Creation	Finish

Changepoint Field	Direction of Feed	During Creation and/or Update	Microsoft Project Column
Cost to date (task assignment – This figure is the total hours times the resource's hourly cost rate)	To	Creation and Update	Actual Cost (This value is calculated based on time entries and the effective dates on cost rates for each task assignment through a scheduled job run in Changepoint. The values calculated are added to the field in Microsoft Project.)
Remaining hours Remaining hours are sent to Changepoint only when the resource completes the task and selects to update the planned hours for the completed task. Then remaining hours is set to 0 (zero).	To and From	Creation and Update	Remaining Work
Text 1	To and From	Creation and Update	Text 1
Text 2	To and From	Creation and Update	Text 2
Text 3	To and From	Creation and Update	Text 3
Billing role description	To and From	Creation and Update	Billing role (Text 5)

Changepoint Field	Direction of Feed	During Creation and/or Update	Microsoft Project Column
Locked	To and From	Creation and Update	Locked (Flag 7)
Location	To and From	Creation and Update	Location (Text 10)
Functions	To and From	Creation and Update	Functions (Text 11)
Allow work code override	To and From	Creation	Location Override (Flag 8)
Allow work location override	To and From	Creation	Work Code Override (Flag 9)
Code 1	To and From	Creation and Update	Text 6
Code 2	To and From	Creation and Update	Text 7
Code 3	To and From	Creation and Update	Text 8
Work code	To and From	Creation and Update	Work Code (Text 9)

Resource Field Mappings

Changepoint Field	Direction of Feed	During Creation and/or Update	Microsoft Project Column
Indicate CP resource	To	Creation	Flag 1 (Read-only in MSP)
Resource name	To	Creation and Update	Resource
Hourly cost rate	To	Creation and Update	Standard Rate
Effective date	To	Creation and Update	Effective Date

Nonworking days settings

Changepoint Setting Level	Microsoft Project Setting
System level	Project Calendar
Global Workgroup	Personal Calendar
Workgroup	
Resource	

About editing tasks and task assignments in linked MSP projects

You can select the values for the following fields at the task level and at the task assignment level:

- **Work**
- **Duration**
- **Start**
- **Finish**
- **Code 1,2,3** (if used)
- **Text 1,2,3** (if used)
- **Forecast start**
- **Forecast finish**
- **Billable**
- **Billing role**
- **Function**
- **Work code**
- **Work location**
- **Work location override**
- **Work code override**

- **Locked**

  Tip: If the columns for the fields are not displayed, you can insert them.

When creating a task in Microsoft Project, you can select the values for these fields in the task view. Task assignments that you create for tasks automatically have the same field values as the task and are transferred to Changepoint when you save the linked project. However, you can edit these values for tasks and specific task assignments.

Editing a task in a linked MSP project

1. Access the linked MSP project.
2. Click the **View** tab.
3. Click **Gantt Chart** > **CP Gantt**.
4. Click **Table** > **CPUsage**.
5. Make the necessary changes.
6. If there are existing task assignments, a message displays, asking if you want to override this value for all assignments. Do one of the following:
   - To replace the values for all existing task assignments with the new value, select **Yes**.
   - To leave the values for existing task assignments unchanged, select **No**.
7. Save the project.

   Note: Changes to the **Billing role** field are handled in a different way. Existing task assignments that were previously saved with or without a billing role will not be updated. You must edit the task assignments accordingly. For more information, see "Editing a task assignment in a linked MSP project" on page 236.

Editing a task assignment in a linked MSP project

1. Access the linked MSP project.
2. Click the **View** tab.
3. Click **Task Usage** > **Task Usage**.
4. Click **Table** > **CPUsage**.
5. Make the necessary changes.

6. Save the project.

About setting baselines in linked MSP projects

In Microsoft Project, you can set up to 11 baselines. However, only the information from the first baseline option in the list (**Baseline**, without a number), is transferred to Changepoint. You can set this baseline multiple times; however, each time you set the baseline, the new baseline information replaces the previous baseline information in Changepoint.

> **Note:** Changes that you make to project and task assignment baselines in Microsoft Project are not transferred to Changepoint.

For information about setting a baseline, see the Microsoft Project help.

About saving interim plans in linked MSP projects

The use of interim plans is solely for the purpose of project tracking in Microsoft Project. The interim plan fields have no effect on the Changepoint project dates. That is, this information is not transferred back to Changepoint.

To view an interim plan after it has been saved, insert the interim baseline field columns into the table. For example, if you selected the **Start1** and **Finish1** fields when saving the interim plan, then you would add these fields to the table.

For information about saving an interim plan, see the Microsoft Project help.

Setting up multiple baselines in a linked MSP project

To display both the active and original baselines in Microsoft projects, each Microsoft Project user must configure a specific bar style for each of the baselines in their local Microsoft Project settings. You only have to perform this procedure once for each installation of Microsoft Project.

> **Note:** It may be possible to have one user perform this procedure and then email the Global.mpt file to the other Changepoint users at the organization. For more information, see the Microsoft Project online help.

1. In Microsoft Project, click **Format > Bar Styles**.
2. The **Bar Styles** dialog box appears.
3. Insert a new row and different color bar for each for the active and original baselines. For more information about configuring bar styles, see the Microsoft Project online help.

4. Click **OK** to close the dialog box.

5. Click the **View** tab.

6. Select **Additional View > More Views**.

   The **More Views** dialog box appears.

7. Click the **Organizer** button.

   The **Organizer** dialog box appears.

8. Select **CP Gantt** in the list to the right that displays the name of the current project.

9. Click the **Copy** button.

The CP Gantt entry is copied to the Global.mpt list (added to the Global.mpt template file).

10. When prompted to replace the existing file, click **Yes**.
11. Click **Close** to close the **Organizer** dialog box.
12. Click **Close** to close the **More Views** dialog box.

After you save the settings, the two new baseline fields are displayed in Microsoft Project for all projects in the CP Gantt chart view, and you can do the following with or without Changepoint:

- Show the **Baseline** and **Interim Baseline** on the **CP Gantt** view.
- Export the **Interim** baseline to the **Start1** and **Finish1** fields.

11. Project Management Troubleshooting

Scenarios for saving baselines

This topic provides project scenarios with different combinations of settings for rolling up subtasks and saving task baselines, and details the expected results of saving baselines on the different levels of projects and tasks within those scenarios.

The scenarios are based on the following project structure:

Project level 1	Project level 2	Project level 3	Project level 4
Project 1			
	– Task 1		
		– Project 1.1	
			Task 1.1.1
			Task 1.1.2
	Task 2		

Scenario 1

The following conditions exist:

- Project 1 is not configured to roll up planned information from subprojects to parent task
- Resources do not have the option to save task baselines without affecting upper-level tasks, OR
- Resources have the option to save task baselines without affecting upper-level tasks, but when saving a task baseline, the resource selects the option to roll up and baseline

Project or task	Rollup	Baseline
Project 1	Roll up Task 1 and Task 2 to Project 1	Task 1, Task 2, Project 1 No baseline in Project 1.1
Task 1*	Roll up to Project 1	Task 1, Project 1
Project 1.1*	No roll up to the parent task	Task 1.1.1, Task 1.1.2, Project 1.1
Task 1.1.1*	Roll up to Project 1.1	Task 1.1.1, Project 1.1
Task 1.1.2*	Roll up to Project 1.1	Task 1.1.2, Project 1.1
Task 2*	Roll up to Project 1	Task 2, Project 1

* When saving a task baseline, the system uses the previous (most recent) baseline values for the other project tasks when they are required to calculate summary task and project baselines.

Scenario 2

The following conditions exist:

- Project 1 is not configured to roll up planned information from subprojects to parent task
- Resources have the option to save task baselines without affecting upper-level tasks option
- When saving a task baseline, the resource selects the option to baseline the task and lower tasks only

Project or task	Rollup	Baseline
Project 1	Roll up Task 1 and Task 2 to Project 1	Task 1, Task 2, Project 1 No baseline in Project 1.1
Task 1	No roll up to the Project 1	Task 1
Project 1.1	Roll up Task 1.1.1 and 1.1.2 to Project 1.1. No rollup to the Task 1	Project 1.1, Task 1.1.1, Task 1.1.2 (Project 1 baseline rules apply)

Project or task	Rollup	Baseline
Task 1.1.1	No roll up to the Task 1	Task 1.1.1
Task 1.1.2	No roll up to the Task 1	Task 1.1.2
Task 2	No roll up to the Project 1	Task 2

Scenario 3

The following conditions exist:

- Project 1 is configured to roll up planned information from subprojects to parent task
- Resources do not have the option to save task baselines without affecting upper-level tasks, OR
- Resources have the option to save task baselines without affecting upper-level tasks, but when saving a task baseline, the resource selects the option to rollup and baseline

Project or task	Rollup	Baseline
Project 1	Project 1	All projects and tasks
Task 1*	Roll up to Project 1	Task 1, Project 1 Project 1.1, Task 1.1.1, Task 1.1.2
Project 1.1*	Roll up to Task 1, Project 1	Project 1.1, Task 1.1.1, Task 1.1.2 Task 1, Project 1, Task 2 (old baseline value)
Task 1.1.1*	Roll up to Project 1.1, Task 1, Project 1	Task 1.1.1, Project 1.1, Task 1, Project 1
Task 1.1.2*	Roll up to Project 1.1, Task 1, Project 1	Task 1.1.2, Project 1.1, Task 1, Project 1
Task 2*	Roll up to Project 1	Task 2, Project 1

* When saving a task baseline, the system uses the previous (most recent) baseline values for the other project tasks when they are required to calculate summary task and project baselines.

Scenario 4

The following conditions exist:

- Project 1 is configured to roll up planned information from subprojects to parent task
- Resources have the option to save task baselines without affecting upper-level tasks
- When saving a task baseline, the resource selects the option to baseline the task and lower tasks only

Project or task	Rollup	Baseline
Project 1	Project 1	All projects and tasks
Task 1	Roll up to Task 1 No rollup to Project 1	Task 1 Project 1.1, Task 1.1.1, Task 1.1.2
Project 1.1 * †	Rollup to Task 1, Project 1	Project 1.1, Task 1.1.1, Task 1.1.2 Task 1, Project 1, Task 2 (old baseline value)
Task 1.1.1 * †	Rollup to Project 1.1, Task 1	Task 1.1.1, Project 1.1, Task 1
Task 1.1.2 * †	Rollup to Project 1.1, Task 1	Task 1.1.2, Project 1.1, Task 1
Task 2	No Rollup to Project 1	Task 2

* When saving a task baseline, the system uses the previous (most recent) baseline values for the other project tasks when they are required to calculate summary task and project baselines.

† Baselines are saved for higher level tasks because the rolling up of planned information from subprojects to parent task takes precedence even when the resource saves a task baseline and selects the option to baseline the task and lower tasks only.

Troubleshooting projects

This topic provides troubleshooting information for the project profile and project dialog box.

Billable project check box is not available

The **Billable project** check box is available only if the option to allow project managers to override the **Billable** status check box has been selected in the engagement dialog box. For the project to display as a selection in the invoice dialog box, the project must be billable.

Cannot change the Billable status of a project

You cannot change the setting of the **Billable project** check box when the **Split billing** check box has been selected on the **Billing information** tab of the engagement and either of the following conditions exist:

- Invoices exist for an engagement or phantom engagement that is in **Draft**, **Pending Approval**, **Pending Second Approval** or **Approved** status.
- All invoices are committed, but there is time and/or expenses for the engagement or phantom engagement that have not been fully invoiced.

Project ID field is not available

The field has not been enabled by your organization.

Fiscal Periods field: billing office is not available

The **Fiscal periods** field lists only billing office that have defined fiscal periods.

Billing Contact field is not available

This field is available only if the option to allow project managers to specify the billing contact check box has been selected for the engagement. The address type (main, billing, shipping or another as configured by your System Administrator) for the contact is selected at the engagement level.

CP Project Type field is not available

The **CP project type** field has not been enabled by your organization.

Alternate Name field is not available

The field has not been enabled by your organization.

Request field is not available

The project did not originate from a request.

Enable project time approval check box is not available

This field is available only if the option to allow project managers to specify the time approver field has been enabled for the engagement associated with this project.

Project Plan editor cannot take ownership of a project
Project plan editor cannot create or delete tasks
Resource does not appear in project plan editor list

These issues are most likely related to access rights. See "Managing projects" in the *Security Access Reference Guide*.

“Baseline only” option selected when saving a baseline, but parent task is being rolled up and baselined

If the option to roll up planned information from subprojects to parent task is selected on the **Access** tab of the parent project, it takes precedence over the option to save a baseline without affecting higher level tasks.

Project Team section does not appear

In order for the **Project Team** section to appear, *both* of the following conditions must exist:

- resource requests must be enabled on the billing office
- resource requests must be enabled at the project level on the **Projected Resources** dialog box of the engagement

Fiscal Year Breakdown section does not appear

The section displays only if fiscal periods have been specified for the billing office that is associated with the project.

Allow users to override the [Billable] status on expenses entered for this project check box is not available in the Access section of the project dialog box

This option is available only if the engagement and project are billable, and the option for the project manager to override this status has been enabled on the engagement.

Troubleshooting linked MSP projects

Project is not available for linking from Microsoft Project

If your organization uses resource requests, all mandatory configurable fields on resource requests must be completed on the project editing and task editing views before the project

will be available for linking from Microsoft Project.

Troubleshooting tasks

This topic provides troubleshooting information for the task profile and task editing view.

A resource is not available to be assigned to a task

Resources require the **Track Project-Related Time** feature to be assigned to a task.

Open task field not available

If resource requests have been enabled for projects or tasks on the engagement, then the **Open task** check box is disabled on the task editing view.

Billed to fixed-fee portion of the engagement field is not available

This option is available only if the engagement uses fixed-fee billing

Fixed Fee field is not available

This field is available only if the engagement is billed under some variation of a fixed-fee method.

Billing rate field is not available

This field is available only if you have the **View Billing and Cost Rates in Task Assignment Section** feature. Also, the first time that you access a task in the system, you must right-click on the grid and select **Show billing rates** to view this field.

Cost rate field (Billing role cost rate or Resource-based cost rate) is not available

The **Cost rate** field is a non-editable field that displays the billing role-based or resource-based cost rate that is applicable to the task assignment. It is only available to resources who have the **View Billing and Cost Rates in Task Assignment Section** feature.

The cost rate that is displayed is determined by the settings for the billing office in Changepoint Administration:

- If the billing office for the task is configured to use billing role cost rates, then this field is called **Billing role cost rate**.
- If the billing office is configured to use resource cost rates, then the field is called **Resource-based cost rate** and you additionally require the **View Costs** feature for it to display.

The first time that you access a task in the system, you must right-click on the table and select **Show cost rates** to view this field.

Soft-booked field is not available

This field is available only if soft-booking has been enabled for the billing office.

Status update section is not available

The **Status update** section appears only on tasks that are assigned to you.

Troubleshooting the project worksheet

This topic provides troubleshooting information for the project worksheet.

Summary task manager cannot create a task or task assignment using a subtask as the insertion point

Adding a new task above an existing task requires edit access to tasks because the WBS has to be updated.

If summary task managers have been granted project access to create tasks, but not to edit tasks, then they must use the task assignment to add or paste new tasks or task assignments.

A resource in your preferred resources list in the Manage Preferred Resources dialog box does not appear in the task assignment resource list

Only resources who have the **Track Project-Related Time** feature can be assigned to tasks.

You cannot edit the planned hours for a task

Add the **Loading method** column to the worksheet view and select one of the auto-distribute loading methods for the task.

You get a validation error message when trying to save the project worksheet, but there are no errors on the project worksheet

The error may be on a row that is hidden by a filter. Remove the filter and try again.

Resource availability changes when planned start is moved in the past

Changing a planned start date for a task assignment in the past will affect the resource availability because the resource availability is calculated from the current date, while planned hours are distributed across the duration, regardless if the planned start is in the past.

For example, you have a task assignment with the following data:

- planned start in the past
- planned hours: 60
- 20 days duration (20 working days between the planned start and the planned finish)
- 4 working days between the current date and the planned finish
- total available hours per day: 6

The 60 planned hours would be spread over the 20 days, resulting in 3 planned hours per day (60 / 20 = 3).

If the total available hours per day is 6, then the resource's available hours per day is 3 (6 hours – 3 planned hours = 3). The total resource availability is: 3 hours * 4 working days = 12 available hours.

If you change the planned start date to 40 working days earlier, then the duration increases to 60 working days from the original 20 days. The planned hours for the task assignment are spread over a longer period, which reduces the planned hours per day to 1 (60 planned hours / 60 working days = 1).

Therefore the resource's availability per day is increased to 5 (6 total available hours minus 1 planned hour per day = 5). The total resource availability increases to 20 hours (5 hours * 4 working days = 20 hours).

Resource availability is 0

If you click on an assignment that has planned start and planned finish in the past, you will get 0 availability shown in the planned hours field and no availability shown in the fiscal or daily periods.

Fiscal period columns do not display in the project worksheet and the number of periods field is missing

You require the **Edit Project Information in Fiscal Periods** feature to view and use the fiscal and daily periods columns.

Daily periods are displayed and the switch timescale icon is missing

A fiscal period has not been associated with the project.

Fiscal Period field is not displayed when you are editing a project

Contact your system administrator.

Planned hours change to zero when task is viewed in the project worksheet

If you create a task in the task editing view and the planned hours are allocated over any nonworking days, then when you launch the project worksheet, the planned hours are automatically re-allocated over the working days only. However, if the duration of the task covers nonworking days only, then the planned hours are removed as there are no working days within the duration to allocate them to.

Planned hours remain at zero when you click the calculate icon

You must clear the values from the cells to be calculated, even if the value is zero. The calculation applies only to empty cells.

Planned hours are changed after the project is rolled up

Possible cause: Fiscal periods have been selected on the project, task assignment planned start and planned finish dates are in the past, and the default loading method is **1 - Auto distribute – update past and future**. This loading method will cause planned hours in past fiscal periods to be replaced with actuals and the difference to be allocated to current and future fiscal periods. When both planned start and planned finish are in the past, planned hours will be set to actual hours, or to 0 if no actual hours have been entered.

Solution: When creating tasks in the worksheet, ensure that you select a loading method that does not replace past period information with actuals is selected, for example: **4 - Auto distribute - no update to past**).

Only the project row appears in the project worksheet

You can only view the tasks and task assignments that you have edit access for are displayed in the project worksheet. Check whether a filter has been applied to the project worksheet.

You access a project for editing, but the Configurable Fields dialog box appears

The **Configurable Fields** dialog box appears when you access a project for editing and there are no values for the configurable fields because no project team entries have been added and no resource requests have been submitted. However, a resource request has been submitted automatically and it requires values for the mandatory configurable fields before it can be

processed. Before you can access the project, you must complete the mandatory configurable fields and then click **Save**.

A task is incorrectly marked as critical

For performance reasons, there is a default period during which nonworking days data for tasks is stored. The default period begins five years prior to the current date, and ends five years past the current date. Therefore, calculations for tasks with planned start and/or planned finish dates that are outside of the default period can be incorrect, and tasks can be incorrectly marked as critical.

Unassigned resource is not available for selection in a project worksheet filter

Unassigned resources are not listed in the **Value** column in a filer criteria row when the condition is **Equal to**. The workaround is to use the **Like** condition instead.

Troubleshooting PPW

Dependency link does not appear in Gantt chart

Check if the predecessor task has been hidden by a filter, which will result in the dependency link not appearing in the Gantt chart.

Actual effort in past periods is evenly distributed after changing the loading method

If you change the loading method from one that does not replace planned effort in past periods with actual effort (3,4) to one that does (0,1,2), the actual effort in the past periods is distributed evenly and not according to the dates and amounts when the actual effort was originally entered.

To see the exact distribution of actual hours in the past, you must save the project and then refresh the PPW. Saving the project saves the daily distribution of the assignment (including the actual effort in past periods) and initiates a project rollup.

Task field values not inherited when assigning tasks in task view
Field values not copied when copying tasks or replacing assigned resources

Configurable field values (and a few standard fields) are not inherited when assigning tasks in a task view unless the fields on the task and task assignment have been displayed in PPW.

Similarly, field values are not copied when copying or reassigning tasks unless the fields on the task and task assignment have been displayed in PPW.

To ensure that field values are inherited or copied, do the following:

1. Create a task view that contains the desired fields.
2. Create a task assignment view that contains the desired fields. Make the task assignment view your default view so that it appears each time you access PPW.
3. Switch to the task view to add or change data.

You cannot insert a task or make any modifications in PPW and the "Save" and "Apply" buttons are missing.

Check that you have a project lock. If PPW is locked by other resources, you must wait until you receive a message that project is unlocked before you can lock it. The project manager can take the lock from the other resources by clicking , which can cause the other resources to lose their changes.

Summary task managers can see only their summary tasks in PPW

To view all of the tasks in PPW, summary task managers must be granted view project access to the project by the project manager.

Rolled up amounts for the project are incorrect in PPW

Only the tasks that are currently displayed in the worksheet are rolled up after changes have been made.

Therefore the rolled up amounts can be lower than the project totals for the following reasons:

- filter has been applied to limit the tasks that are displayed
- you are a summary task manager and do not have view project access to the project

Cannot edit planned start, planned finish, and planned hours in a task view

If one or more task assignments for a task has a manual loading method, then you cannot edit the planned start, planned finish, or planned hours for the task in a task view.

Planned effort totals for daily distribution amounts are incorrect in PPW

Daily distribution amounts are calculated and stored using five decimal places, but are rounded to three decimal places when displayed in PPW. Therefore due to rounding, the daily distribution amounts for a task assignment might add up to a slightly different amount than the total planned effort that is displayed for a task assignment.

"Select/Deselect tasks for activation" icon does not appear in PPW

The **Select/Deselect tasks for activation** icon ( ) is available in a task view only when no sort criteria has been specified in the view and no filter has been applied.

Cannot add effort to a resource in the "Assign/Replace Resources" dialog box

When the default loading method is manual, you must use a task assignment view to allocate effort to daily or fiscal periods.

Index

B

baselines
- allowing resources to save 30
- saving, scenarios 241
- task, saving 71
- task, saving without affecting higher tasks 72
- task, saving without affecting higher tasks, about 71
- task, saving, about 69
- task, saving, example 70

Billable status, editing for tasks 76

C

Changepoint MSP COM Add-in, installing 218

check boxes
- editing in project worksheet 113

Copy Project dialog box
- completing, about 46

Copy Project dialog box options 44

Create/Edit Project dialog, General section options 20, 24

E

Edit Project dialog, Project team tab options 36

effort. See planned hours 117, 190

examples
- loading methods 121, 194

expense-only users, specifying 31

exporting
- project worksheet to Microsoft Excel 86, 156
- project worksheet to Microsoft Excel, about 86

F

filtering data in PPW 173

filters
- project worksheet 90

forecast dates
- MSP projects, about 226

G

Gantt chart
- project worksheet, viewing, about 143, 202
- timescale, changing 203

Gantt chart, PPW
- tasks, linking 204

Gantt chart, project worksheet
- accessing 144
- baseline, forecast info, showing 147
- critical path, showing 147
- managing tasks, about 145
- task dependencies, about 146
- task progress, showing 146
- tasks, linking 146
- tasks, moving in 145
- tasks, unlinking 146
- timescale, changing 144

Gantt chart. project worksheet
- duration of tasks, changing 145

Gantt charts
- duration of tasks, changing 203

L

Link Changepoint Project dialog box options 221

loading methods
- about 118, 191
- examples 121, 194
- selecting 123

M

Manage Filters (project worksheet) dialog box options 91

Manage Filters dialog box 175

Manage Views dialog box 160

Microsoft Project integration
- about 215

MSP projects
- accessing 220
- actual hours, updating 225
- baselines, setting up multiple 237
- baselines, setting, about 237
- Changepoint MSP COM Add-in, installing 218
- Changepoint resources, identifying 226
- data transfer between MSP and Changepoint 215
- editing 224
- editing, about 224
- fields, mapping with Changepoint 227
- forecast dates, about 226
- interim plans, about 237
- link, removing 227
- link, removing, about 226
- linking 223
- linking, about 220
- Microsoft Project default values, setting 219
- project worksheet, in 86
- resource lists, creating 217
- setting up 217
- task assignments, editing 236
- task or task assignment, deleting 225
- task usage information, viewing 226
- tasks and task assignments, deleting 225
- tasks and task assignments, editing, about 235
- troubleshooting 246
- website settings, configuring 219

O

open tasks
- about 53
- access to, restricting 72
- project worksheet, about 96

P

planned hours
- allocating in project worksheet 117, 190
- automatically allocating in project worksheet 124

PPW
- basics 149
- linking 178

PPW filters
- creating 174
- editing 175

PPW tasks
- indenting and outdenting 154

PPW views
- about 157
- creating 159
- editing 171

preferred resources
adding in project worksheet 110

products
tasks, linking to 59

project allocation worksheet. See project worksheet 81

project management
about 13
resources, about 13

project plan editors
assigning to project 29
assigning to project, about 28
reassigning projects to 48

project planning worksheet
accessing 152

project profile
noneditable sections 15

project teams
about 35
assigning resources to tasks 39
copying projected resources to the project team 37
creating project team entries 35
editing entries 39
entries, deleting 39
submitting resource requests 38

project worksheet
accessing 81
allocating planned hours, examples 132
basics 81
check boxes, editing 113
columns, related 111
critical path, about 131
critical path, viewing 131
date and effort calculations, about 136
date and effort calculations, examples 139
date and effort calculations, performing 137
date and effort calculations, required columns for 138
dates, specifying 115
dates, specifying using the calendar 116
dates, specifying using the date field 115
editing recurring demand 126
errors, about 85
exporting to Microsoft Excel 86, 156
exporting to Microsoft Excel, about 86
filtering information, about 90
forecast info for task assignments, editing 129
Gantt chart, viewing, about 143, 202
level option, using in calculations 137
linked tasks, editing settings 104
linked tasks, editing settings, about 104
lists, clearing values from 115
lists, editing multiple values 114
lists, specifying multiple values 113
locking tasks, about 96
MSP projects, about 86
open tasks, about 96
periods, displaying from a specific date 83
periods, displaying previous or next 83
periods, switching fiscal, daily 82
planned hours, allocating manually 124
planned hours, allocating manually, about 124
planned hours, allocating to match resource availability 128
planned hours, allocating, about 117, 190
planned hours, automatically allocating, about 124
predecessor and successor tasks, identifying 104

preferred resources, adding 110
printing 85
printing, about 85
replacing planned information with forecast and actual information 128
reports, running from 84
resource availability, displaying 127
resource availability, displaying, about 126
resource requests in, about 109, 186
resource searches, using for task assignments 107
resource searches, using for task assignments, about 107
searching 84
summary and subtasks, creating 99
summary tasks, about 96
troubleshooting 248
updating remaining effort or percent complete, about 130

project worksheet filters
about 90
applying 95
calculated columns, about 92
clearing from view 95
creating 93
deleting 95
editing 94
examples 92

project worksheet task assignments
copying 108
copying, about 108
creating 106
creating, about 106
deleting 112
deleting, about 112

project worksheet tasks
copying 102
copying, about 102
creating 101
creating, about 99
deleting 112
deleting, about 111
editing 111
editing multiple at once 117
editing, about 110
expanding and collapsing 82
indenting and outdenting 99
linking 103
linking, about 103
locking and unlocking 97
managing, about 95
moving 98
moving multiple 98
moving single 98
selecting multiple 97
unlinking 105

project worksheet views
copying 88
creating 87
deleting 90
editing 89

projects
access restrictions to requests, removing 28
access, about 27
accessing 15
baselines, allowing resources to save 30
baselines, saving 49
baselines, saving, about 48
baselines, scenarios 241
Budget information section, completing 22
copying to update a project 44
copying, about 43
creating 20
creating methods 15
creating, about 16
deleting 42
deleting, about 42
editing 42

editing, about 41
expenses, allowing resources to submit 31
fiscal periods, using 19
icons 16
ownership, taking 48
phases, about 18
products, linking to 32
products, unlinking 32
progress reporting 205
project plan editors, specifying 29
project plan editors, specifying, about 28
quick plan, creating based on projected resources 214
quick plan, project options 211
quick plan, task options 213
quick plans 207
reassigning 48
rolling up 51
rolling up, about 50
setting up split billing 26
statuses, about 17
subprojects, creating 33
summary task managers, granting project access 29
task status updates, about 18
time approvers, specifying 23
troubleshooting 244
view access, granting 27
work codes and locations, specifying 26
work codes and locations, specifying, about 25

Q

quick plans
project, defining 210
tasks, defining 212

R

reporting
project progress 205

reports
quick plan, engagement option 207
Task Status Compliance Report 205

resource availability
displaying in project worksheet 127
displaying in project worksheet, about 126

resource leveling, about 14

resource requests
in project worksheet, about 109, 186
submitting from tasks 68

resources
assigning to tasks in project worksheet 106
assigning to tasks in project worksheet, about 106
Changepoint, identifying in MSP projects 226
checking available hours 63
checking available hours, about 63
checking available hours, example 64
task assignments, deleting from 69

rolling up
projects from profile 51
projects from profile, about 50

S

soft-bookings 14

sorting tasks in project worksheet 98

split billing
setting up for projects 26

status updates
about 18

subprojects
creating 33
creating, about 33
granting access to 30
rolling up 51
rolling up, about 50

subtasks
creating in project worksheet 99

summary task managers
project access, granting 29
tasks, creating 100

summary tasks
about 53
creating in project worksheet 99
project worksheet, about 96

T

task assignments
allocating recurring planned hours 125
billing rates, viewing, about 66
checking available hours 63
checking available hours, about 63
checking available hours, examples 64
copying in project worksheet 108
copying in project worksheet, about 108
creating in project worksheet 106
creating in project worksheet, about 106
deleting in project worksheet 112
deleting in project worksheet, about 112
loading methods, selecting 123
multiple, editing in project worksheet 117
planned hours, allocating automatically 67
planned hours, allocating automatically, about 66
resource requests, submitting 68
resource searches in project worksheet, using, about 107
resource searches, using in project worksheet 107
resources, assigning 60
resources, deleting 69

task editing view
accessing 76
General section options 55
General section, completing 59

Task Status Compliance report 205

tasks
about 53
activating in PPW 199
assign multiple resources 183
assign multiple resources in PPW 181
assign resources 182
baseline, saving without affecting higher tasks 72
baseline, saving without affecting higher tasks, about 71
baselines, saving 71
baselines, saving, about 69
baselines, saving, example 70
Billable status, editing 76
billing role, changing 77
copying in project worksheet 102
copying in project worksheet, about 102
creating 58
creating in project worksheet 101
creating in project worksheet, about 99
creating, about 54
deleting 79
deleting in project worksheet 112
deleting in project worksheet, about 111
dependencies, creating 74
dependencies, creating in project worksheet 103
dependencies, creating, about 73

dependencies, removing 75
dependency options 74
editing configurable fields 77
editing in project worksheet 111
editing in project worksheet, about 110
expanding and collapsing in project worksheet 82
icons 53
indenting and outdenting in PPW 154
indenting and outdenting in project worksheet 99
linked in project worksheet, editing settings 104
linked in project worksheet, editing settings, about 104
linking in PPW 178
linking in project worksheet 103
linking in project worksheet, about 103
loading methods, selecting 123
locking and unlocking in project worksheet 97
locking, about 96
managing in project worksheet, about 95
moving in project worksheet 98
multiple, editing in project worksheet 117
open, about 53
open, restricting access to 72
products, linking to 59
profiles, accessing 54
reopening 80
reopening, about 79
resources, assigning to 60
resources, selecting, about 62
searching in project worksheet 84
sorting 80
summary and subtasks, creating in project worksheet 99
summary, about 53
troubleshooting 247
unlinking in project worksheet 105
validating in PPW 198
work codes, setting 78
work locations, setting 78

tasks, PPW
copying 180
creating 177
editing 201
moving 155

time approvers, specifying 23

troubleshooting
MSP projects 246
project worksheet 248
projects 244
tasks 247

W

Worksheet Print Setup dialog box options 147

worksheet, project allocation. See project worksheet 81