

Project Costing

Managing the Costs of Projects

Project Management

Project Management v2



Note: This article applies to Fuji and earlier releases. For more current information, see *Project Management*^[1] at <http://docs.servicenow.com>. **The ServiceNow Wiki is no longer being updated. Visit <http://docs.servicenow.com> for the latest product documentation.**

Overview

The Project Management application is a suite of tools that aids in managing projects, tasks, and resources. It provides the ability to create and manage projects of all sizes, from small projects with a few tasks to large portfolios of projects that contain complex tasks with various relationships and dependencies.

Project management includes tools to help you create, view, and manage projects:

- Project workbench gives project managers the ability to manage the different aspects of a project from a single page. This workbench supports both Project Management and Application Lifecycle Management applications, allowing for a hybrid approach to project management. Project managers can create projects that combine both Waterfall and Agile methodologies by using Waterfall, Agile, and Test phases. The project workbench is available starting with the Fuji release.
- Project templates define the basic structure of a project, including project tasks and sub-tasks, attachments, and other project information. The project template feature gives project managers a simple way to create, save, and reuse this project structure.

Project Management also includes features that enable you to achieve your project goals in alignment with the other activities your organization is managing with ServiceNow, such as:

- Integration with other features and applications on the ServiceNow platform, such as change management, resource management, and reports.
- Easy-to-read Gantt charts and Work Breakdown Structure lists that help you visualize large projects with complex relationships and dependencies.

Video Tutorial

This video provides a brief tour of the Project application in the Eureka release.

Key Terms

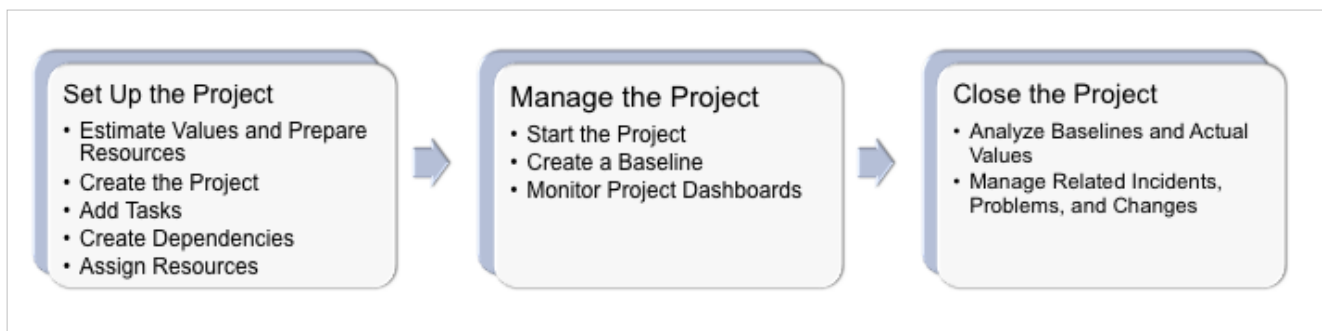
- **Portfolio:** a collection of projects managed as a group to achieve strategic and operational objectives.
 - **Project:** any planned, collaborative effort that is designed to achieve an objective.
 - **Agile project:** any planned, collaborative effort that is designed to achieve an objective and uses Agile.
 - **Project workbench:** a single page that presents project information in two panes. The upper pane includes a project timeline and displays the project phases and milestones. The lower pane presents details about the currently selected phase in either a list view or visual task board.
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- **Phase:** one stage or one segment of a project. Three types of phases can be added to the timeline in the project workbench:
 - **Waterfall phase:** a waterfall phase contains project tasks. A project can have multiple waterfall phases.
 - **Agile phase:** an agile phase contains stories. A project can have one Agile phase.
 - **Test phase:** a test phase contains test cases and can also include a team assignment. A project can have one test phase.
- **Story:** a brief statement of a product requirement or a customer business case that is used in the scrum method of agile software development. Typically, stories are expressed in plain language to help the reader understand what the software should accomplish.
- **Task:** a unit of work within a project. Projects typically contain several tasks.
- **Test case:** a collection of related tests. A test case is saved as part of a test suite and can be added to a test plan.

Basics of Project Management

The Project application helps you plan and track projects, plus it integrates with other ServiceNow applications. For example, if an incident, problem, or change is large enough to require an entire project to manage, create projects from an incident, problem, or change form.

There are several paths available to manage a project. The best path usually depends on business needs. The steps below are designed to get a project up and running with the minimum amount of effort. Alternative methods to these procedures are also explained.



Set Up the Project

Setting up a project involves deciding on an approach for creating and linking project tasks and making sure the necessary users and groups are created in ServiceNow so you can assign them to project tasks.

Plan the Project

Before creating a project, consider the following questions and issues:

- **Do you want a top-down or bottom-up approach to tasking?**

Top-down tasking involves creating a project first, then identifying major project phases. Later on, phases can be broken down into tasks and subtasks. The emphasis is on creating estimates for high-level items such as phases and parent tasks and then building the project down from there toward a more detailed level. Use caution when creating tasks for top-down tasking. If you first create a project and then create a task under it with a start-on date later than the project's start date, the project shifts later to start on the task start date. The Project application supports bottom-up tasking better.

Bottom-up tasking involves creating several sets of small tasks and estimating task items such as effort, cost, and duration. These estimations are then aggregated into high-level parent tasks (rollup tasks) and phases. The

emphasis is on estimating smaller chunks of work as accurately as possible first, then letting those estimations roll up into parent tasks, phases, and the project itself.

- **Is the project part of a larger portfolio of projects?**

Also consider portfolio planning and how the project relates to similar projects or initiatives.

- **What types of dependencies will the tasks have with other tasks?**

The Project application supports only finish-to-start dependencies.

- **Can milestones and project baselines help manage a project?**

A milestone is a project task with a duration of 0. Use milestones to indicate important dates in a project. If necessary, create dependencies between tasks and milestones so that a task does not start until a milestone has been reached.

A baseline is a snapshot of each task's current planned start and end dates at the time the baseline was created. A line appears under each task on the Gantt chart for the original planned start and end dates. The line appears shifted to the left or right depending on whether the task was started early or late. If tasks slip to later dates, the baseline indicator provides an easy way to see how severe the delays will be.

- **Have the necessary skills, groups, and resources been created in ServiceNow?**

If project tasks will be assigned to different groups or individual resources with the required skills, create users and groups and configure the Skills Management application.

- **Does an existing incident, problem, or change justify creating a project in order to track it?**

Of these record types, a change is most likely to lead to activities that should be tracked as a project.

- **Do you want to track project costs?**

Estimate group resource costs before starting the project and then track the actual cost of each user resource from time cards. The Project application can also calculate the costs of affected CIs in a project. The Project Management Costing add-on is required to track costs.

- **What goals do you want the project to achieve?**

Every project should have at least one goal. Project goals are saved in the Goal table and can link to any task. In a typical scenario, link one goal to each project and keep the goal's **State** field up to date.

Create the Project

After choosing an approach and gathering initial estimates for the planned start date, estimated cost, and a well-defined business case, create the project in the Project application or in the project workbench.

Add Project Tasks, Dependencies, and Relationships

After creating a project record, create tasks.

- For top-down planning, create a task that you already know will include several child tasks. Then create the child tasks and specify that they are child tasks of the first task you created.
- For bottom-up planning, create tasks for the smallest units of work first. Then you can create *intermediary* parent tasks that cover a group of related child tasks. For example, if there are five sequential tasks that comprise a phase of a project called *install database*, create the five tasks first. Then create another task called *Database installation* and make it the parent task of the five tasks. Rollup calculations, such as **Planned duration**, for the *Database installation* task are automatically calculated based on the child tasks.

It is easiest to build task relationships and dependencies while creating sets of tasks.

- A dependency means one task is forced to start after another task finishes. This is the only type of dependency ServiceNow supports.

- A relationship means a parent-child relationship whereby several subtasks are configured under a parent task or phase, which rolls up fields like **Planned duration** and **Estimated cost**.

Use the Gantt chart in conjunction with task forms and related lists to build relationships. Add milestones based on the project's major events and create dependencies between milestones and tasks, if necessary. See [Project Task Relationships and Dependencies and Gantt Chart](#) for more information.

Also set up notifications to alert project task assignees when their tasks move to the **Work in Progress** state. See [Creating Project Tasks](#) for more information on creating tasks.

Assign Resources or Assignment Groups to the Tasks

User resources are the individuals in an organization who are assigned to project tasks. You can manage your resources with resource plans in the Resource Management application, starting with the Dublin release. In versions prior to the Dublin release, or if you are not using the Resource Management application, you can select resources from users or groups.

See [Working with Resource Plans](#) if you are using the Resource Management application. Otherwise, see [Task Resources](#).

Add the Project to a Portfolio

A portfolio is a group of related projects. If the project is related to other projects, create a portfolio and add the project. The Project application provides a useful portfolio view that makes it easy to report on the status of all projects in a portfolio. Portfolios also include demands starting with the Fuji release.

Manage the Project

After the preceding steps are complete, the project can be started. To measure the project against initial estimates, create a baseline, which is a snapshot of the entire project including all planned dates for all project tasks and milestones. The project manager can manage a project from the project workbench starting with the Fuji release.

Start the Project

Start the project by clicking **Start project** on the Project form or changing the project state to **Work in Progress**. Starting the project changes the **State** field on the Project form to **Work in Progress** and changes the **Actual start date** of the project to the current date. See [Starting a Project](#) for more information.

Monitor the Project and Customize Dashboards

ServiceNow provides the ability to update important project status information, such as the number of milestones slipped. It also provides summaries for cost, scope, project risk, and so on. Modify this information as needed with the **Portfolio View** related list on the Portfolio form and display this information on the **Project Overview** homepage. In addition, use the project reports installed with the application, such as **Active projects** or **Projects (by priority)**, to show important project information.

When the project is underway, continue to access project records and make changes to several items, including costs, priority, schedule, and planned values that are not rollups. Keep detailed project records for risks and issues and refer back to them after a project is complete. Also create baselines along the way to easily see if any project phases or tasks are slipping at the time you create the baseline.

- See [Project Reporting](#) for more information on the available reporting options.
 - See [Project Portfolio Management](#) for more information on viewing a summary of all project information in a portfolio, including completed and slipped milestones.
 - See [Updating a Project in Progress](#) for more information on what is necessary while a project is underway.
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Close the Project

When the project is complete, change its state to **Closed complete** on the project form. When a project is in the closed state, the Project application calculates actual values like **Actual duration**.

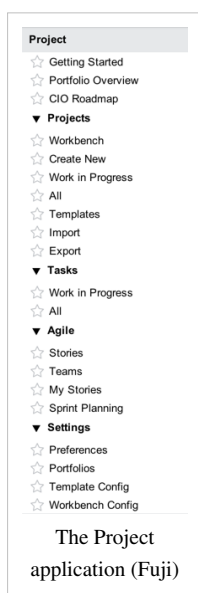
Post-project activities include analyzing project baselines and actual values and generating a final project dashboard. If the project was successful and can be used as a template for future projects, make a copy of it.

If the project was created from a change, incident, or problem record, there are several other activities you may need to perform in ServiceNow. See [Closing a Project](#) for more information.

Menus and Modules

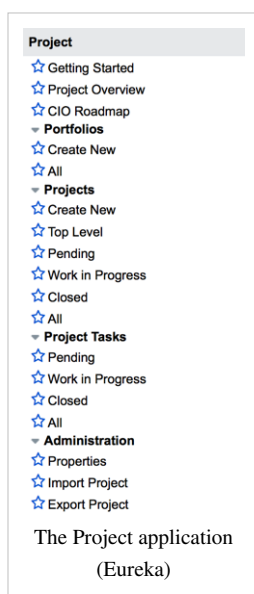
Activating this feature adds the Project Management menu to the application navigator with the following modules.

Fuji Menu



- **Getting Started:** Access the wiki documentation for the Project application.
- **Portfolio Overview:** Open the Project Overview homepage, which contains several built-in reports.
- **CIO Roadmap:** Open the CIO Roadmap.
- **Projects**
 - **Workbench:** Open the project workbench.
 - **Create New:** Create a new project.
 - **Work in Progress:** View projects currently in progress.
 - **All:** View all project records.
 - **Templates:** View project templates.
 - **Import:** Import a Microsoft Project.
 - **Export:** Export a ServiceNow project to be used in Microsoft Project.
- **Tasks**
 - **Work in Progress:** View project tasks currently in progress.
 - **All:** View all project task records.
- **Agile:** this module appears if the Project application is activated as part of the Project Portfolio Suite.
 - **Stories:** View all stories.
 - **Teams:** Display the Teams list, which shows a list of current teams.
 - **My Stories:** View a list of stories assigned to the current user.
 - **Sprint Planning:** Open the Sprint Planning page for the selected team.
- **Settings**
 - **Preferences:** Edit settings for project management properties.
 - **Portfolios:** View a list of portfolios.
 - **Template Config:** Open the project template configuration page.
 - **Workbench Config:** Open the workbench configurations page.

Eureka and Prior Versions



- **Getting started:** Access the wiki documentation for the Project application.
- **Project Overview:** Open the the Project Overview homepage, which contains several built-in reports.
- **Portfolios**
 - **Create New:** Create a new portfolio.
 - **All:** View all portfolio records.
- **Projects**
 - **Create New:** Create a new project.
 - **Top Level:** View all projects that do not have a parent project.
 - **Pending:** View pending projects.
 - **Work in Progress:** View projects currently in progress.
 - **Closed:** View projects already closed.
 - **All:** View all project records.
- **Project Tasks**
 - **Pending:** View pending project tasks.
 - **Work in Progress:** View project tasks currently in progress.
 - **Closed:** View project tasks already closed.
 - **All:** View all project task records.
- **Administration**
 - **Properties:** Edit settings for project management properties.
 - **Import Project:** Importing Projects from Microsoft Project.
 - **Export Project:** Exporting a ServiceNow project to be used in Microsoft Project.

Integration with Project Portfolio Suite

Project Management can be used as a separate application or it can be activated as part of the Project Portfolio Suite (PPS). This application provides a simplified, team-oriented approach to IT development by combining several individual applications and integrating the different components of the project development lifecycle.

Activating Project Management

Administrators can activate the Project Management plugin.

Upgrading to the Dublin release does not automatically upgrade you to the v3 application. If Project Management v2 is active and you want to upgrade to v3, read the upgrade instructions.

Click the plus to expand instructions for activating a plugin.

If you have the admin role, use the following steps to activate the plugin.

1. Navigate to **System Definition > Plugins**.
2. Right-click the plugin name on the list and select **Activate/Upgrade**.

If the plugin depends on other plugins, these plugins are listed along with their activation status.

3. [Optional] If available, select the **Load demo data** check box.

Some plugins include demo data—sample records that are designed to illustrate plugin features for common use cases. Loading demo data is a good policy when you first activate the plugin on a development or test instance. You can load demo data after the plugin is activated by repeating this process and selecting the check box.

4. Click **Activate**.

The Project application can also be activated as part of the Project Portfolio Suite.

Enhancements

Fuji

- The Project Management application is integrated with Project Portfolio Suite (PPS).
- Components of the SDLC (Scrum Process) are also integrated with Project Management to enable a project management approach that combines the Waterfall and Scrum methodologies.
- The project workbench provides a central location for managing projects and project phases. The workbench supports both the Project Management and Application Lifecycle Management applications, allowing for a hybrid approach to project management.
- The project calculation engine supports manual project calculation in addition to auto calculation.
- The composite field combines information from two different fields, typically a project or project task number and a short description.
- Project templates define the basic structure of a project and enable the project manager to create, save, and reuse project structure. This feature is available with the Fuji release.
- The IT Finance application adds a Finance view to the Project and Portfolio forms. The Finance view adds a chart that shows expenses that were allocated to the project or portfolio, shown by the financial bucket that the expense is associated with. See IT Finance for more information.

Eureka

- Project managers can export ServiceNow projects to Microsoft Project, where the project can be managed and then imported back into ServiceNow.
- New business rules populate project-specific fields on non-project tasks with default project task data when these tasks are added to a project.
- The Project application automatically creates a new record in the Portfolio Project table for all new projects. This allows project managers to add a project to a portfolio by associating the newly created record with the portfolio.

Dublin

- A new version of the Project application is available: version 3. See Project Management v2 to v3 Upgrade for upgrade information and instructions.
 - Resource planning can be accomplished through the Resource Management application.
 - The core project engine has been improved for the new version of the application. This results in better performance, usability, and scalability, especially with large projects.
 - The Project application includes a default schedule that is applied to all new projects and project tasks. The schedule uses a 40-hour work week, from 8 A.M. to 5 P.M. with an hour break at noon.
 - Project managers can now link existing change request records or create new change request records to link to project tasks. This feature links change management with project management.
 - The Project application framework that supports importing from Microsoft Project 2010 was improved.
 - State changes now roll down from the project to project tasks and from parent tasks to child tasks. For more information, see Project Task Relationships and Dependencies.
 - Project managers can no longer modify most of the form fields on parent tasks. This enforces the concept that all parent tasks should derive aggregate values from their child tasks.
 - A work breakdown structure (WBS) is available for project managers, and a new view, **WBS**, is available on the Project form.
 - For v3, the functionality of the project management costing add-on has been moved to the Cost Management plugin.
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- Projects can be included in multiple portfolios.

References

[1] https://docs.servicenow.com/bundle/jakarta-it-business-management/page/product/project-management/concept/c_ProjectApplicationOverview.html

Creating a Project



Note: This article applies to Fuji. For more current information, see *Create a Project*^[1] at <http://docs.servicenow.com>. The ServiceNow Wiki is no longer being updated. Please refer to <http://docs.servicenow.com> for the latest product documentation.

Overview

Creating the project is the first step in the Project Management process. Define important aspects of the project such as duration, estimated cost, and the net value to the organization.

To create and edit portfolios, projects, and tasks, users must have the `project_manager` role in their user profile record. See *Installed with Project Management* for more information on roles in the Project application.

Key Concepts and Terms for This Topic

- **Time constraint:** a restriction on a project task that determines when it should start. Two options are available: **Start ASAP** and **Start on specific date**. Note that the time constraint for a task might change based on dependencies and relationships.
- **Planned and actual values:** planned values (and estimated values for costs) are entered manually and used before a project or task begins. ServiceNow calculates rollups for planned items automatically. The value for **Actual start date** can be entered manually, but other actual values are determined by child tasks or the calculation of time cards or expense lines.
- **Advanced view:** used to view cost fields, such as **Estimated cost** and **ROI%**.
- **Project [pm_project] table:** the table where project records are saved. This table extends the Planned task [planned_task] table.

Creating the Project

Create a ServiceNow project using one of the following methods:

- Create a new project in the Project application and configure it manually.
 - Copy an existing project.
 - Create a project from the project workbench.
 - Create a project from the demand workbench.
 - Create a project from another task record, such as an incident, problem, or change request.
 - Import a Microsoft Project file into ServiceNow project management.
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Creating a Project Manually

To create a new project:

1. Navigate to **Project > Projects > Create New**.

The Project form appears with some pre-populated data and in the last view selected. Project forms have the following views:

- **Default view:** shows a basic set of form fields needed to start a project.
- **Advanced:** shows cost-related fields and other special fields like **Actual effort** and **Actual cost**.
- **WBS:** shows the WBS List related list.

2. Fill out the Project form (see table).
3. Click **Submit**.

Project Form Fields for the Fuji Release

The following table describes the project form fields from all views.

Field (Default View)	Description
Project Name	[Required] The name of the project.
Project manager	The project manager assigned to this project.
Portfolio	<p>The primary portfolio to which this project belongs. A project can belong to multiple portfolios. Click the magnifying glass icon to select a portfolio from the choice list. Mouse over the information icon to display a popup window with the portfolio details. Click the information icon to display the portfolio page.</p> <p>Note: If a Project view is added to a portfolio from the Portfolio form, the Portfolio field is populated with the portfolio name, if there is no primary portfolio currently assigned. If a portfolio is deleted, the portfolio name is removed from the Portfolio field on the Project form.</p>
Business service	The configuration item (CI) affected by this project.
Number	A system generated with a configurable prefix. See Managing Record Numbering for more information about customizing number prefixes.
State	<p>The current state of the project. All new projects begin as Pending and automatically change to Work in progress when you click the Start project button on the Project form.</p> <p>Following are the default states: Pending, Open, Work in Progress, Closed Complete, Closed Incomplete, Closed Skipped.</p>
Percent complete	The percentage of the project that has been completed.
Calculation	<p>The type of calculation to use for task dependencies:</p> <ul style="list-style-type: none"> • Manual: parent task dates do not reflect any changes made to dependents or child tasks. • Automatic: parent task dates are automatically updated to reflect any changes made to dependents or child tasks. <p>For more information, see Calculating Project Task Dependencies.</p>
Schedule	<p>The work schedule to be used for this project:</p> <ul style="list-style-type: none"> • v3 application: the default schedule is an 8-hour work day (from 8 to 12 and 1 to 5). A day is considered as a working day, not a 24-hour day. • v2 application: the optional schedule shows when project team members work on the project. Select a predefined schedule or create a new one on the Schedules table. The system uses the schedule to calculate the Planned end date. If no schedule is selected, the system calculates a planned duration of one day as 24 work hours.

Planned start date	<p>The intended date the project should begin. This value is set to the earliest time that the project schedule allows (v3 application). For example, if the project task is created at 3 P.M. and the default schedule is in use (which has an 8 A.M. start date), the default task start is 8 A.M. the next day. Note: The planned start date must be within 15 years of the current date.</p> <p>Click the calendar icon and select a date to start this project. Projects do not automatically start on the planned start date. The project actually starts when you click Start project on the Project form.</p>
Planned end date	<p>The intended date the project should end. Note: The planned end date must be within 15 years of the current date.</p> <ul style="list-style-type: none"> • v3 application: This field is editable but is automatically updated when the duration changes or when the planned start date changes (the planned duration is used to calculate the new end date). • v2 application: [Read-only] The intended date the project should finish. The system calculates this field from the Planned start date, the Planned duration, and the Schedule (if selected).
Planned duration	<p>The expected duration of this project. Note: The number of days cannot exceed 1500.</p> <ul style="list-style-type: none"> • v3 application: The duration is recalculated if the planned end date changes. The duration also considers the project schedule, accounting for any non-work time in the schedule. For example, if the default schedule is used, with a standard 8-hour work day, a project that starts at 8 A.M. on July 1 and ends at noon on July 2 is calculated as 1 day and 4 hours, not 28 hours. Any project or project task with no children is restricted to a maximum duration of 1500 days. • v2 application: Enter the value in days, hours, minutes, or seconds. If tasks are present, this field is read-only, and the duration is calculated from the planned duration of the child tasks. The estimated duration shows total project time and takes the project schedule into consideration.
Planned effort	An estimate of how much time this project will take to complete. This is a rollup calculation that sums planned effort values for all tasks in this project. If no tasks are in the project, this field is editable. If tasks are configured, this field becomes a read-only rollup calculation and overwrites any earlier entry that you made.
Actual start date	The date that this project actually began. If the project has not been started, this field is modifiable. At the time the project starts, this field becomes read only.
Actual end date	The date that this project actually ended. If the project has not been started, this field is modifiable. At the time the project completes, this field becomes read only.
Actual duration	The actual duration of the project from project start to project closure. As with planned duration, the actual duration shows total project time and takes the project schedule into consideration.
Actual effort	The actual number of hours charged to the resources on this project. If you are using the Time Cards application, ServiceNow automatically calculates the value for this field using the totals for the time worked from the time cards of all the resources who worked on this project.
Estimated cost	An estimate of the cost of this project. This is a rollup calculation that sums estimated cost values for all tasks in this project. If no tasks are in the project, this field is editable. If tasks are configured, this field becomes a read-only rollup calculation and overwrites any earlier entry that you made.
Actual cost	The actual cost of this project. This is a rollup calculation that sums actual cost values for all tasks in this project. It remains editable on the project form at all times, regardless of project state or whether tasks are configured in the projects.
Budget cost	Budgeted cost for this project. This field is for project management planning only, serving as an initial value. It is not involved in any estimated cost or actual cost calculations for the project. Nor is this field used by Cost Management.
Description	A detailed description of the project.
Watch list	Allows users to subscribe to project notifications.
Work notes list	The list of users to receive email notifications when the work notes on the project are updated.
Work notes	Information about the milestones, impediments, or changes as the project progresses.
Activity	Tracks information or items not saved with a field in the record.
Related Lists	Description
Project Tasks	The tasks in the current project. Only the next-level tasks (immediate subtasks) appear in this related list.
Sub Projects	The child project records of the current project (available with the v3 application).
Baselines	A collection of all planned dates for all tasks and milestones at the time you create the baseline.

Stories The list of stories in the current project.

Project Form Fields for Versions Prior to Fuji

The following table describes the project form fields from all views.

Field (Default View)	Description
Number	A system generated with a configurable prefix. See Managing Record Numbering for more information about customizing number prefixes.
Company	[Required] Select the company this project belongs to. This field is in the v3 application (available starting with the Dublin release).
Time constraint	<p>The field that indicates when a project is scheduled to start (available in the v2 application).</p> <p>Select a starting time constraint from the following choices:</p> <ul style="list-style-type: none"> • Start ASAP: The project is scheduled to start immediately. When you create the project, the Project form uses Start ASAP by default and sets the Planned start date to the current date. • Start on specific date: The project is scheduled to start on a date that you specify. <p>Note: The time constraint is for planning purposes. The project actually starts when you click Start project on the Project form.</p> <p>This field is not available on the Project form starting with the v3 application.</p>
Planned start date	<p>The intended date the project should begin. This value is set to the earliest time that the project schedule allows (v3 application). For example, if the project task is created at 3 P.M. and the default schedule is in use (which has an 8 A.M. start date), the default task start is 8 A.M. the next day. Note: The planned start date must be within 15 years of the current date.</p> <p>Click the calendar icon and select a date to start this project. Projects do not automatically start on the planned start date. The project actually starts when you click Start project on the Project form.</p>
Planned end date	<p>The intended date the project should end. Note: The planned end date must be within 15 years of the current date.</p> <ul style="list-style-type: none"> • v3 application: This field is editable but is automatically updated when the duration changes or when the planned start date changes (the planned duration is used to calculate the new end date). • v2 application: [Read-only] The intended date the project should finish. The system calculates this field from the Planned start date, the Planned duration, and the Schedule (if selected).
Planned duration	<p>The expected duration of this project. Note: The number of days cannot exceed 1500.</p> <ul style="list-style-type: none"> • v3 application: The duration is recalculated if the planned end date changes. The duration also considers the project schedule, accounting for any non-work time in the schedule. For example, if the default schedule is used, with a standard 8-hour work day, a project that starts at 8 A.M. on July 1 and ends at noon on July 2 is calculated as 1 day and 4 hours, not 28 hours. Any project or project task with no children is restricted to a maximum duration of 1500 days. • v2 application: Enter the value in days, hours, minutes, or seconds. If tasks are present, this field is read-only, and the duration is calculated from the planned duration of the child tasks. The estimated duration shows total project time and takes the project schedule into consideration.
Phase	<p>The project management phase the project is in. Select from the following: Initiating, Planning, Executing, Monitoring/Controlling, or Closing. The phase <i>does not</i> change automatically when you change the state. Change it manually. For example, a project could be in a closed state but still in the planning phase if you do not keep it up to date.</p>
State	<p>The current state of the project. All new projects begin as Pending and automatically change to Work in progress when you click the Start project button on the Project form.</p> <p>Following are the default states: Pending, Open, Work in Progress, Closed Complete, Closed Incomplete, Closed Skipped.</p>
Configuration item	The configuration item (CI) affected by this project.
Short description	A brief description of the project.
Description	A detailed description of the project.
Business case	The reason the project is underway. If there is a pressing need for this project from a business perspective, make the case here.

Work notes	Information about the milestones, impediments, or changes as the project progresses.
Planned effort	An estimate of how much time this project will take to complete. This is a rollup calculation that sums planned effort values for all tasks in this project. If no tasks are in the project, this field is editable. If tasks are configured, this field becomes a read-only rollup calculation and overwrites any earlier entry that you made.
Actual effort	The actual number of hours charged to the resources on this project. If you are using the Time Cards application, ServiceNow automatically calculates the value for this field using the totals for the time worked from the time cards of all the resources who worked on this project.
Budget cost	Budgeted cost for this project. This field is for project management planning only, serving as an initial value. It is not involved in any estimated cost or actual cost calculations for the project. Nor is this field used by Cost Management.
Estimated cost	An estimate of the cost of this project. This is a rollup calculation that sums estimated cost values for all tasks in this project. If no tasks are in the project, this field is editable. If tasks are configured, this field becomes a read-only rollup calculation and overwrites any earlier entry that you made.
Net value	The project's value to the company. This is expressed in expected revenue.
ROI%	[Read-Only] The system calculates the return on investment using the (net value/estimated cost) x 100 formula. To disable this feature, deselect the Calculate ROI percentage property.
Priority	A priority for this project: Critical , High , Moderate , Low , or Planning . The priority is for planning purposes only and is not determined by the priorities of the project tasks.
Actual start date	The date that this project actually began. If the project has not been started, this field is modifiable. At the time the project starts, this field becomes read only.
Actual end date	The date that this project actually ended. If the project has not been started, this field is modifiable. At the time the project completes, this field becomes read only.
Actual duration	The actual duration of the project from project start to project closure. As with planned duration, the actual duration shows total project time and takes the project schedule into consideration.
Actual cost	The actual cost of this project. This is a rollup calculation that sums actual cost values for all tasks in this project. It remains editable on the project form at all times, regardless of project state or whether tasks are configured in the projects.
Risk cost	The potential cost of the risk for this project. This field is for project management planning only, serving as an initial value. It is not involved in any estimated cost or actual cost calculations for the project, nor is this field used by Cost Management.
Schedule	<ul style="list-style-type: none"> v3 application: the default schedule is an 8-hour work day (from 8 to 12 and 1 to 5). A day is considered as a working day, not a 24-hour day. v2 application: the optional schedule shows when project team members work on the project. Select a predefined schedule or create a new one on the Schedules table. The system uses the schedule to calculate the Planned end date. If no schedule is selected, the system calculates a planned duration of one day as 24 work hours.

Related Lists	Description
Project Tasks	The tasks in the current project. Only the next-level tasks (immediate subtasks) appear in this related list.
Sub Projects	The child project records of the current project (available with the v3 application).
Resource Plan	The resource plans for this project (available with the v3 application if resource management is active).
Group Resources	The group resources assigned to all the tasks in the project. When you add a resource to the Assignment group field on a Project Task form, the group appears in this related list (only in the v2 application). In the v3 application, this related list is not available.
User Resources	The user resources assigned to all the tasks in the current project. When you add a resource to the Assigned to field on a Project Task form, the user appears in this related list (only in the v2 application). In the v3 application, this related list is not available.
Baselines	A collection of all planned dates for all tasks and milestones at the time you create the baseline.
Goals	An optional related list of records that summarize one or more goals the project should accomplish. Goals are saved in the Goal table.
Risks	An optional related list of records for tracking any risks, such as cost overruns. Risks are saved in the Risk table.
Issues	An optional related list of records for issues related to the project. Assign a user resource and a priority level to each issue and track its progress with the State field. Issues do not appear on the Gantt chart, or project resource timeline, and are not used in any rollup calculations.

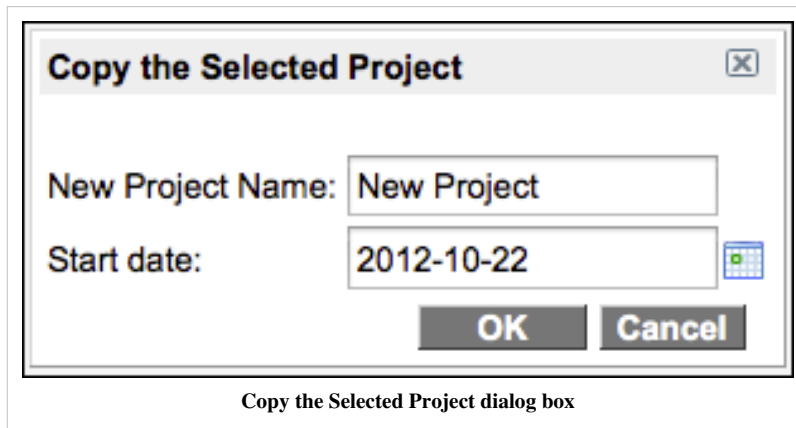
WBS List

The list of all project tasks and subtasks in their hierarchy (available with the v3 application).

Copying a Project

Another option for creating a project is to copy an existing project with all of its tasks and relationships. After you specify the start date for the copy, the system adjusts all task start and end dates automatically.

1. In the Project form, right-click the header bar and select **Copy Project**.
2. Enter a **New Project Name** for the new project that you are creating.
3. Select a **Start date**.
4. Click **OK**. The system creates the new project.



Copy partial project provides similar functionality. It copies all task or project relationships and children from the selected project and inserts them into the current project. In this case, a new project record is not created.

Copied Fields

When you copy a project, all fields are copied over to the new project. Child tasks are defined with the same

relationships, each lasting for the same duration as the original tasks. All project tasks are set to **Pending**. Task duration and the actual start and end dates are reset to null values. The state is set to **New** and percent complete is set to **0**.

Administrators can modify the **copy_project** UI page to determine which fields are reset or change the default values:

1. Navigate to **System UI > UI Pages**.
2. Open the **copy_project** record.
3. In the **Processing script** field, modify the values for `resetFields` or `defaultFields`. For example:

```
/* resetFields is the array containing the list of names of
fields that need to be erased from the copied project tasks
* defaultFields is the array containing the key, value pairs
of field names and values that need to be set on the copied tasks
*/

var resetFields = new Array();
var defaultFields = {};
resetFields.push("work_start", "work_end", "work_duration");
defaultFields["state"] = "-5";
defaultFields["percent_complete"] = "0";
```

Creating a Project from the Project Workbench

Navigate to **Project > Projects > Workbench** and click the **New Project** button in the project workbench header. For more information, see [Creating a New Project from the Project Workbench](#).

Creating a Project from the Demand Workbench

From the demand workbench, you can create a project from a qualified demand if you have the demand manager role. For more information, see [Creating an Artifact from a Demand](#).

Creating a Project from an Incident, Problem, or Change

If an incident, problem, or change is large enough to justify managing with a project, use the **Create Project** UI action on the incident, problem, or change form. All incidents, problems, and changes are part of the task table, which extends the [pm_project] table.

You can create a project from an incident, problem, or change by using

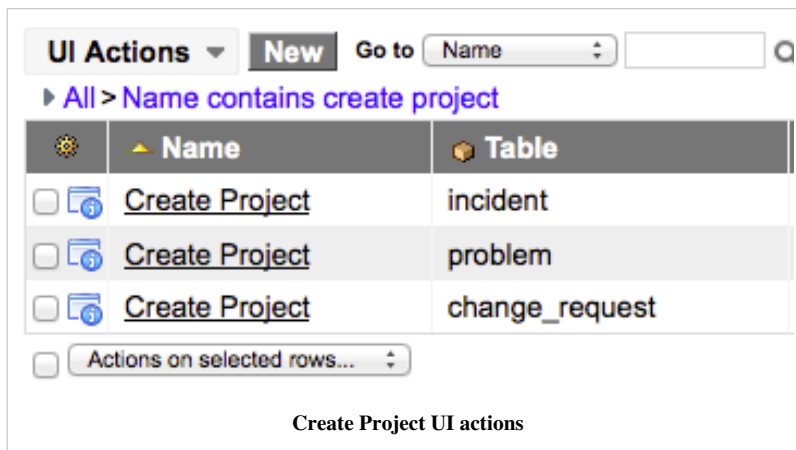
- The **Create Project** UI action
- The **Projects** related list

Using the Create Project UI Action

This UI action is similar to the existing actions that allow users to create problem and change records from an existing incident record.

To configure the **Create Project** UI action:

1. Navigate to **System Definition > UI Actions**.
2. Open the **Create Project** UI action for the appropriate table (incident, problem, or change_request).



3. On the UI Action form, select the **Active** check box.

4. Select any of the following locations for the UI action:

- **Form Context menu:** the action appears on the menu when a user right-clicks in the header bar of a record.
- **Form button:** the action appears as a **Create Project** button on the form.
- **Form link:** the action appears

under **Related Links** on the form.

When a user clicks one of these links, the Project form appears with preconfigured data from the source table.

The screenshot shows the ServiceNow Incident form. In the top right corner, the 'Create Project' button is highlighted with a red box. In the bottom left corner, under the 'Related Links' section, the 'Create Project' button is also highlighted with a red box. The form contains various fields for incident details such as Number, Caller, Location, Category, Subcategory, Configuration item, Impact, Urgency, Priority, and Short description. It also includes sections for Notes, Watch list, and Activity.

Create Project UI actions on the incident form

Using the Projects Related List

1. Navigate to the Incident, Problem, or Change Request form.
2. Configure the form to add **Project** -> **Parent** if the related list is not already present.
3. In the **Projects** related list, click **New**.
4. Fill in the Project form.

The project actually becomes a child task of the incident, problem, or

change record.



Note: Because a project view is automatically created when a project is created, the **New** button on the Projects related list is disabled (starting with the Fuji release).

What Do I Do Next?

Add the Project Attachments Related List

Project participants can add attachments to project tasks and the project record itself. To view a list of all attachments in a project, configure the form and add the **Project Attachments** related list (available with the v3 application).

Create Project Tasks

After the project is submitted, create the project tasks.

References

- [1] https://docs.servicenow.com/bundle/jakarta-it-business-management/page/product/project-management/task/t_CreateAProject.html

Creating Project Tasks



Note: This article applies to Fuji. For more current information, see *Project Tasks*^[1] at <http://docs.servicenow.com>. The ServiceNow Wiki is no longer being updated. Please refer to <http://docs.servicenow.com> for the latest product documentation.

Overview

Tasks are the units of work that make up a project. The term *task* itself is arbitrary. For planning purposes, break down a project into several large tasks that can be referred to as phases or assignments. They, in turn, can be broken down further into smaller units of work. The size and number of tasks that comprise a project depends on the level of detail you want. For example, if part of a task requires a specific skill that is not required by the other activities in the task, it is a good idea to break down that task further.

To create and edit portfolios, projects, and tasks, users must have the `project_manager` role in their user profile record. See *Installed with Project Management* for more information on roles in the Project application.

Key Concepts and Terms for This Topic

- **Project task creator:** a feature that allows you to create multiple tasks at the same time.
- **Project copy:** an option that allows you to replicate a project, including all tasks, relationships, and dependencies. Use this feature to quickly create a new project with tasks.
- **Assignment groups:** a collection of users with similar skills who could be assigned to the same types of project tasks.
- **Skills:** competencies assigned to groups or individual users. Assign skills to an individual user or to all the members of an assignment group. This helps you determine which users or groups should be assigned to tasks.
- **Dependencies and Relationships:** tasks can have nested relationships (parent and child tasks) and can also be dependent upon the completion of other tasks. See *Project Task Relationships and Dependencies* for more information.
- **pm_project_task:** the table where project task records are saved. This table extends the `[planned_task]` table.

Approach to Tasking

You should decide on what approach you want to take to build a project. Consider the following approaches.

Bottom-up (tactical) Tasking

This is the recommended approach for the Project application. Take this approach when you know what individual tasks need to be accomplished and you are more flexible about overall project duration and estimated cost. Use this approach to see how much a project will cost and how long it will take if you include every possible task. Project management supports tactical tasking by using rollup calculations on several project fields, such as project duration, so that the project adjusts to the tasks it contains.

To take this approach:

1. Use the Skills application to set up assignment groups and users.
2. Create the project.
3. Create the lowest-level tasks first. Use the default time constraint of **Start ASAP** rather than **Start on specific date** so that tasks remain flexible as you build relationships.

4. Assign resources who have the right skills to each task.
5. Continue to build low level tasks. When a set of tasks fits together into a larger unit, create another task that will serve as the parent task and add the smaller tasks as child tasks. See Parent-Child Task Relationships. For these parent tasks, and for the project itself, values like **Planned End Date** roll up to the parent automatically. This way, child tasks determine the duration and estimated cost for parent tasks and for the project.

Top-down (strategic) Tasking

Take this approach when you want to build a project with fixed or inflexible time and budgetary constraints and well-defined phases. Establish well-defined milestones and dependencies between tasks that you should take into consideration from the beginning. Gradually add smaller tasks to the project at a later time. The main idea here is to avoid including all possible tasks in a project and stay flexible with what tasks should be included.

To take this approach:

1. Create the project with a specific start date and duration.

Note: If you first create a project and then create the first task with a start-on date that is later than the project's start-on date, the project shifts later to start on the task's start date. To get around this, after you create the project, create the first task (or a milestone) with an ASAP start date. This ASAP task will hold the project start date in place while you add other tasks and sub-tasks. If you delete that ASAP task and no other tasks are holding the project start date in place, the project start date shifts to the date of the earliest task.

1. Create the highest-level tasks first with specific values for duration and estimated cost.
2. Create the necessary dependencies between tasks.
3. Create child tasks, if necessary, and create the resources or skills that you need at the same time through related lists.

Project management still rolls up several values, such as task duration. Therefore, if you create a task that has a longer duration than the project, the project adjusts to cover the entire duration of the task, which might defeat the purpose of this approach. Values are not rolled down from parent tasks, nor are there any restrictions on creating child tasks that are longer than specified duration of the parent.

Default Values for New Tasks

When you create a task, the Project application automatically populates the following task fields:

- **Number:** the numerical reference to the task starting with **PRJTASK** followed by a number that is incremented one digit from the previous task record in the [pm_project_task] table.
- **Time constraint:** set to **Start ASAP**, indicating that the task starts after its predecessor task finishes (plus any defined lag time). See Project Task Relationships and Dependencies for more information about time constraints.
- **Planned start date:** set to the same time as the parent task, if any, allows (starting with the v3 application). If the project has a schedule, the new task's planned start date defaults to the earliest time allowed on the upcoming work day. For example, if the project task is created at 3 P.M. on Tuesday and the default schedule, which has an 8 A.M. start date, is in use, the task starts at 8 A.M. on Wednesday.

For the v2 application, set to the date and time that you create the task.

- **Planned end date:** set to one day after the start date.
 - **v3 application:** This field is editable but is automatically updated when the duration changes or when the planned start date is changes (the planned duration is used to calculate the new end date).
 - **v2 application:** This field is calculated from the planned duration.
- **Planned duration:** set to 1 day by default. The duration is recalculated if the planned end date is changed, starting with the v3 application.

- **State:** set to **Pending**.



Note: Any project or project task with no children is restricted to a maximum duration of 1500 days.

Creating Tasks

Project management provides the following ways for users with the project_manager role to create a task:

- Using the Project Tasks related list
- Creating a task from the Project Workbench
- Using the project task creator
- Copying an existing task
- Inserting a row into the Project Tasks list
- Using the Gantt chart
- Using the Project Tasks related list from an incident, problem or change
- Using a project task template

Using the Project Tasks Related List

1. Navigate to **Project > Projects > All**
2. Select the project from the list.
3. In the **Project Tasks** related list, click **New**.
4. Enter a **Short description**.

The short description identifies the task in records and in the Gantt Chart.

5. If necessary, change the **Priority** (for Eureka and prior releases).
6. To specify the skills required for this task, configure the form and add the **Skills** field.
7. Select a user resource for this task in the **Assigned to** field. The following conditions apply:
 - If an assignment group is defined, only users in that assignment group appear in the lookup list.
 - If skills are defined, only users with those skills appear in the lookup list. See Assigning Resources with the Right Skills for more information.
 - If no assignment groups or skills are defined, only users with one of the Project application user roles appear in the lookup list.
8. Enter a detailed **Description** of the task.
9. Click **Submit**.

A new project task

Field

Description

Short description	[Required] A brief description of the project task.
Number	A system generated with a configurable prefix. See Managing Record Numbering for more information about customizing number prefixes.
State	The current state of the project. The states include: Pending, Open, Work in Progress, Closed Complete, Closed Incomplete, Closed Skipped.
Planned start date	The estimated date and time for the project task to start.
Planned end date	The estimated date and time for the project task to end
Planned duration	The estimated length of time (from start time to end time) of the project task.
Percent complete	The percentage of the work that has been completed for the project task.
Assignment group	The group assigned to the project task.
Assigned to	The user assigned to the project task.
Actual start date	The date that the project task actually began. If the project task has not been started, this field is modifiable. At the time the project task starts, this field becomes read only.
Actual end date	The date that the project task actually ended. If the project task has not been started, this field is modifiable. At the time the project task completes, this field becomes read only.
Description	A detailed description of the project task.
Additional comments	Any additional information about the project task.
Work notes	Information about the project task as work progresses, such as milestones, changes, or impediments.

The new task appears in the **Project Task** related list on the Project form. If time cards are in use, clicking **Submit** creates a time card for the resource.

The task in the Project Tasks related list

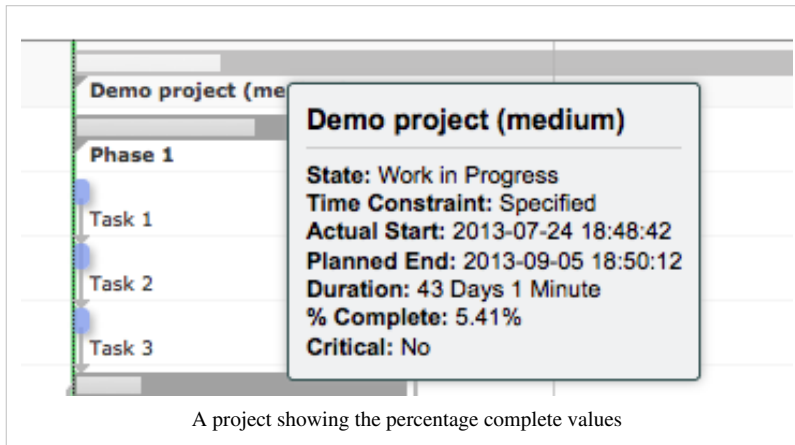
The Percentage Complete Field

As a good practice, add the **Percentage complete** field to the Project Task form if it is not already present on the form. This field lets you

keep track of how much work has been completed on the task.

The value in this field is related to the **State** field in the v3 application (available starting with the Dublin release). If you change the percentage complete from **0** to any other value, the state of the task changes to **Work in Progress** when you save or update the record. Likewise, if you change the state of the task to **Closed Complete**, the value **100** is put in the **Percent complete** field.

This field is represented visually in the Gantt chart for parent tasks as a light-colored bar (the part of the task that is complete) over the darker, underlying bar (the full task). In this example, the Demo project is 5.41% complete as shown in the pop-up window, while the **Phase 1** task is about 50% complete (not shown in the pop-up window).



The Dependency Field

The Project Tasks list and the Project Tasks related list on the Project form include a **Dependency** field, starting with the Fuji release. Any dependencies for a task, such as a parent task, are displayed in this field. Clicking on a dependency takes you to that record. For more information, see [Project Task Relationships and Dependencies](#).

Creating a Project Task from the Project Workbench

If Project Portfolio Suite is activated, you can create a project task from the Project Workbench. For more information, see [Creating a Project Task](#).

Using the Project Task Creator

Use the project task creator to create multiple tasks at once.

1. In the Project form, right-click the header bar and select **Project task creator**.

The Child Task Creator dialog box appears.

2. Enter the **Quantity** of tasks to create.
3. Select the **Create relationships** check box to create a *finish-to-start* dependency between these tasks (when the first task finishes, the next task starts). Clear the check box to create the tasks with no dependencies.
4. Click **OK**.

The new tasks appear in the **Project Tasks** related list. ServiceNow automatically creates a task **Number** and a **Short description** that starts with **Auto created task**, followed by a number if more than one task is created.

The project task creator

Copying an Existing Task or Project

You can save time when building a project by copying tasks from other projects. The **Copy partial project** option copies a selected task, or even a whole project, if needed, including all child tasks. It also preserves all dependencies and relationships among

the copied tasks and their child tasks. Any relationships or dependencies that involve tasks outside of the scope of the copied task are not preserved.

Copied tasks are inserted as a child of whatever task or project that you are currently viewing. Copied projects are added as a sub project of the current project or project task, which you can view in the **Sub Projects** related list.

1. In the Project or Project Task form, right-click the header bar and select **Copy partial project**.
2. In the **Task** field, select a project task or project to copy. By default, projects begin with **PRJ** and project tasks begin with **PRJTASK**.
3. Enter a **Name** for the new project or task.
4. Click **OK**.
 - The copied task is added as a child of the current task or project.
 - The copied project is added as a sub project of the current task or project.

Copying a task and subtasks

Copied Fields

All fields are copied over to the new partial project. Task duration and the actual start and end dates are reset to null values. The state is set to **New** and percent complete is set to **0**.

Administrators can modify UI pages to determine which fields are reset or to change the default values:

1. Navigate to **System UI > UI Pages**.
2. Open the **copy_partial_project** record.
3. In the **Processing script** field, modify the values for `resetFields` or `defaultFields`. For example:

```

/* resetFields is the array containing the list of names of
fields that need to be erased from the copied project tasks
* defaultFields is the array containing the key, value pairs
of field names and values that need to be set on the copied tasks
*/
var resetFields = new Array();
var defaultFields = {};
resetFields.push("work_start", "work_end", "work_duration");

```

```
defaultFields["state"] = "-5";
defaultFields["percent_complete"] = "0";
```

Start Dates for Copied Projects

The start date for the set of tasks or whole project you just copied is set to the earliest possible start date:

- If the copied task has an ASAP start date, then the task starts as soon as the parent task, under which you imported the task, starts.
- If the copied task is scheduled to start earlier than the parent task, the copied task start is changed to match the parent task start.
- If the copied task is scheduled to start any time after parent task starts, that specified date remains the same.

Inserting a Row Into the Project Tasks List

Quickly create a new project task from the Project Task list. ServiceNow administrators must enable this feature. See [Configuring List Control Settings for the List Editor](#) for instructions.

1. In the Project form, navigate to the **Project Tasks** related list.
2. Double-click **Insert a new row**.
3. Click the green check mark.
4. Open the new task and edit the record as required.

Inserting a new task into the Project Tasks related list

Using the Project Tasks Related List from an Incident, Problem, or Change

Just as you can create a project record from an incident, problem, or change, you can also create a project task.

1. Navigate to the Incident, Problem, or Change Request form.
2. Configure the form to add **Project Task -> Parent** if the related list is not already present.
3. In the **Project Tasks** related list, click **New**.
4. Fill in the Project Task form.

The project task actually becomes a child task of the incident, problem, or change record.

Using a Project Task Template

You can save a project task as a template and reuse it when creating a new task.

1. If you do not have a template based on a project task, create one. Make sure it has many or all of the values for the fields you require.
2. Navigate to **Project > Tasks > All**.
3. Click **New**.
4. Right-click the form header and select **Templates > Apply Template > {template_name}**.

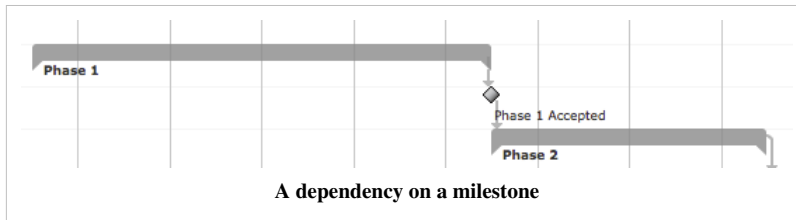
The new task is created with the fields from the saved template, except the planned start and end dates.

The task does not yet belong to a project. You must add it to the relevant project.

Creating Milestones

Gantt Chart

Milestones are project tasks with a duration of zero (0). Use milestones to mark key dates in your project, such as key decision points, approvals, and holidays. Milestones are treated like any other project task and you can create dependencies between tasks and milestones. On the Gantt chart, milestones are represented by a diamond.



Note: Milestones cannot be shared between different projects unless one project is nested under another project.

Project Workbench

Milestones indicate important dates in a project and are represented by colored circles on the project workbench timeline. For more information, see Milestones.

Assigning Resources with the Right Skills



Note: The Resource Management application provides a more advanced way to plan for, request, and assign users and groups to tasks. The Resource Management application is available starting with the Dublin release.

Assign configurable skills to an individual user or to all the members of an assignment group, and then assign a user who has the appropriate skills to complete the task. See Skills Management for instructions on creating skills and assigning them to users or groups. The instructions below explain how to select skills and assign users through the Project Task form. See Task Resources for more details on managing user and group resources and using the resource timeline.

Selecting Skills for a Task

To assign a skill to a task, a user or an assignment group must have that skill. The selection list for the **Assigned to** field on the Project Task form shows only the users and groups that have the skill selected. To select skills:

1. Open a project.
2. In the **Project Tasks** related list, open a task.
3. Configure the Project Task form and add the **Skills** field.
4. Click the padlock icon in the **Skills** field to enable selection.
5. Click the magnifier icon and select the skills required by this task.
6. Click **Update**.
7. Select a user in the **Assigned to** field.

The picklist for this field is filtered for users who have the selected skills. This field has a reference qualifier that filters the picklist using the following logic:

- If an Assignment group is defined, then the list shows only members of that group.
- If Skills are defined, then the list shows only users with all the skills selected.
- If Assignment group and Skills are defined, then the list shows only group members who possess the defined skills.
- If the list does not include the correct user, verify the field qualifiers by editing the dictionary definition for **Assigned to** (right-click the field name and select **Configure Dictionary (Personalize Dictionary** in versions prior to Fuji). Also review the user record (**Skills > User**) to verify that the user has the correct attributes.

Parents: PRJ0000001 > PRJTASK0000001

Number: PRJTASK0000001

State: Work in Progress

Time constraint: Start ASAP

Planned start date: 2012-10-27 13:00:00

Planned end date: 2012-11-11 15:03:56

Planned duration: 5 Days

Planned effort:

Estimated cost: 0.00 \$ Edit

Priority: 4 - Low

Assignment group:

Assigned to: Joe SysAdmin

Actual start date: 2012-11-06 15:03:56

Actual end date:

Actual duration:

Actual effort:

Actual cost: 0.00 \$ Edit

Skills: ServiceNow Certified Administrator

Assigning a resource with a desired skill

Skills Inherited from an Assignment Group

It is not necessary to select a skill when an assignment group, with preconfigured skills, is assigned to the task.

1. Open a project.
2. In the **Project Tasks** related list,

select a task.

3. in the **Assignment group** field, select a group.
4. In the **Assigned to** field, select a user to do the work.

The selection list is filtered on the members of the assignment group. Any skills defined for the group are inherited by its members and are available to the task.

Using a Schedule

Without an assigned schedule, a project calculates a day as a full 24 work hours. If you want to schedule tasks by a more realistic work day, assign a schedule to the project. If the schedules provided in the base system do not suit your needs, define a new one.

To add a schedule to the project:

1. Open a project.
2. If **Default** view is active, right-click the header bar and select **View > Advanced**.
3. Select a **Schedule**.

Setting Up Project Task Notifications

It is good practice to send a notification to the user assigned to a project task when the task state changes, for example, from **Pending** to **Work in Progress**. You can activate default notifications or set up notifications with a workflow.

Activating Email Notifications

The following email notifications for the Project application are available by default starting with the Dublin release, but are inactive. You must manually activate them.

Notification	Table	Field	Condition	Description
Project task assigned	pm_project_task	Assigned to	Inserted or updated	Sends an email notification when a task is assigned to a resource or the assigned resource is changed.
Project task started	pm_project_task	State	Changes to Work in Progress	Sends an email notification when the project task starts.
Project task commented	pm_project_task	Additional comments	Any changes occur	Sends an email notification when the comment field is updated.

Setting Up Notifications with a Workflow Tool

Setting this up is simple with the workflow tool. This section provides an example of a workflow that sends an email notification when the state of a project task becomes **Work in Progress**. To configure a workflow with a notification:

1. Create a workflow with the following attributes:

- **Name:** *Notify assignee*
- **Table:** *Project task [pm_project_task]*
- **If condition matches:** *Run if no other workflows matched yet*
- **Condition:** *State is **Work in Progress** AND Assigned to is not empty*

Do not modify other attributes in this example.

2. Add a single **Notification** activity between the **Start** and **End** activities. Drag the activity onto the connector line until it changes color.

Its attributes are similar to the following:

- **Name:** *Notify assignee*
- **To:** *\${assigned_to}.*
- **Subject:** *Project task \${number} has been activated and is assigned to you.*
- **Message:** *Project task \${number} has been activated and is assigned to you.*

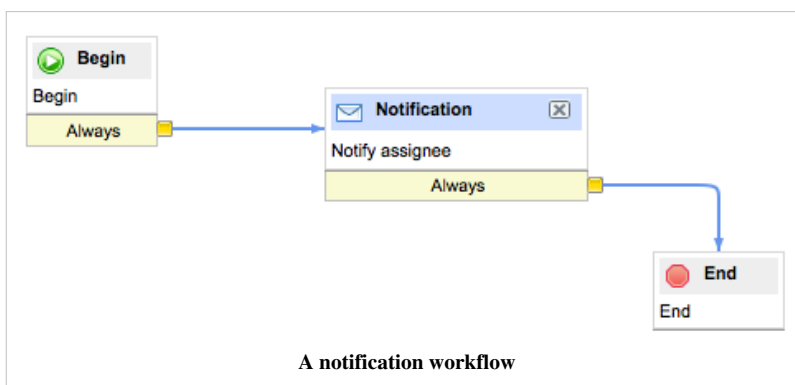
Number: *\${number}*

Short description: *\${short_description}*

Planned start date: *\${start_date}*

Planned end date: *\${end_date}*

Planned duration: *\${duration}*



Linking Changes to a Project Task

Project managers can link change requests, created in the Change application, to project tasks in the v3 application, which is available starting with the Dublin release. Project tasks that link to change requests cannot also have child project tasks. Likewise,

project tasks that already have child project tasks cannot also link to change requests. For more information, see [Linking Changes to Project Tasks](#).

What Do I Do Next?

After the project tasks are configured, create the necessary dependencies and relationships between tasks using the Gantt chart. You can also link changes to project tasks. For more information, see:

- Project Task Relationships and Dependencies
- Gantt Chart
- Linking Changes to Project Tasks

References

[1] https://docs.servicenow.com/bundle/jakarta-it-business-management/page/product/project-management/concept/c_ProjectTasks.html

Task Resources



Note: This article applies to Fuji and earlier releases. For more current information, see Task Resources ^[1] at <http://docs.servicenow.com>. **The ServiceNow Wiki is no longer being updated. Visit <http://docs.servicenow.com> for the latest product documentation.**

Overview

Resources are the individuals assigned to perform tasks and subtasks in Project Management. You can manage your resources with resource plans in the Resource Management application, starting with the Dublin release.

In versions prior to the Dublin release, or if you are not using the Resource Management application, you can select resources from users or groups. **Skills** can be defined for individuals and for entire groups, ensuring that capable people are available for each project task. Because of the way in which Project Management is integrated into the task table, resources use basic ITIL task management processes. SLAs, approvals, and reporting are built in, just as they are for Incident Management and Change Management. A project task appears in a user's queue like any other task and does not indicate that it is a part of a project.

Prerequisites

Before you perform the procedures in this page, be sure you have completed the **Gantt Chart** for your project, showing task relationships and durations.

Adding User Resources

The User Resources record enables an administrator to associate a user with the project, with a project responsibility, and a percentage allocation. This percentage allocation checks against the project's schedule and calculates the amount of hours the percentage allocation represents. These hours are then used to determine whether this resource can continue to work project tasks, or if the resource is *out of time* for the project.

You add resources to a project in the **User resources** Related List in a project form. After selecting the project's resources, you attach those resources to their tasks in the **Resource Timeline**. Only one resource is assigned to a task at a time.



Note: You can add resources to **tasks** at the time the tasks are created. However, the best practice is to add multiple resources to the project through the Related List and then use the Timeline to make assignments, particularly for large projects. Resource allocation on large projects usually involves frequent adjustments.

To create user resources from a project:

- 1. Click **Edit** in the **User resources** Related List.
- 2. In the slushbucket of users that appears, select the resources for the project and save the choices.

The **User resource** list is populated with starting values of 100% allocation and zero hours.

Responsibility	User	Allocation %	Planned hours	Actual hours
<input type="checkbox"/> Project resource	Beth Anglin	100	48	0
<input type="checkbox"/> Project resource	Howard Johnson	100	48	0
<input type="checkbox"/> Project resource	Jim Rancetti	100	48	0
<input type="checkbox"/> Project resource	Luke Wilson	100	48	0

The User Resources related list

- 3. Click a link in the **Responsibility** column to open the User resource record.
- 4. Configure the resource's **Planned hours** and **Responsibility** (if different from **Project resource**).

- 5. Update the record and configure the next resource.

The totals in the **Actual hours** column can be updated manually or automatically from the resource's **Time Card**.

User resource

Allocation %:

50

Planned hours:

48

Planned task:

PRJ0010004

Responsibility:

Project manager

User:

Beth Anglin

Actual hours:

0

Update

Delete

Configuring a user resource

User Resources with Costing Add-on

The **Project Management v2 Costing Add-on plugin** adds an additional column called **Actual Cost** to the **User Resources** Related List. The platform

calculates the **Actual Cost** of a resource by multiplying the **Actual Hours** consumed by the *labor rate* for the resource on the **Labor Rate Card** that applies to the user.

Adding Group Resources

The **Group Resources** Related List in the Project form enables an administrator to associate ServiceNow groups with a project to facilitate resource planning. The following process illustrates how a large organization might use group resources to plan a project:

- 1. The project is created and the group resources are estimated, providing details for project review and approvals.
- 2. The project is approved, and the tasks are created without user resources being assigned. All that is necessary at this stage is to assign each task to a group that has the necessary skills.
- 3. Group managers review the work requirements and select the appropriate person to work on the task.



Note: When a project task has a group in the **Assignment group** field, the list of users in the **Assigned to** field in the Project Task form is filtered on the members of the assigned group.

Add group resources to projects at the task level and select the user resource to assign to the task at the same time. All group resources assigned to project tasks appear in the **Group Resources** Related List in the Project form.

1. Navigate to *Project > Projects > Pending* and select a Project.
2. In the Project record, select the **Project Tasks** Related List.
3. Select a task from the list.
4. Select a group from the **Assignment group** field.

If the **Skills Management Plugin** is activated, an assignment group with pre-configured skills can be assigned to this task. For details, see **Assigning Skills to Tasks**.

5. Select a user from the **Assigned to** field.

The selection list in this field is filtered on the members of the assignment group selected, ensuring that the user has the necessary skills required for the task.

6. Click **Update**.

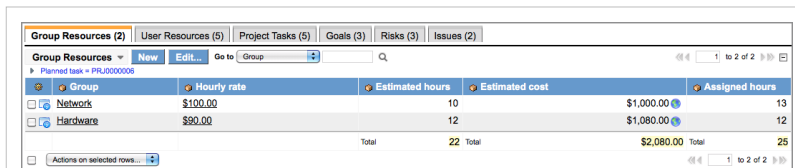
In the Project form, the selected groups appear in the Group Resource Related List.

Group Resource Related List

The fields provided in the **Group Resources** Related List depend on whether or not the Project Management v2 Costing Add-on plugin is installed.

Field	Input Value
Group	Name of an assignment group defined for a task in this project. All members of an assignment group are available to work on a task and inherit any skills assigned to the group.
Hourly rate	Defines the hourly rate for members of this group, as defined in the Group record. This field requires the Project Management v2 Costing Add-on plugin . The hourly rate is multiplied by the Estimated hours for the group to estimate project costs.
Estimated hours	Estimated number of effort hours needed from this group to complete the project. This field is used during project planning to estimate resource requirements. The estimated hours are multiplied by the Hourly rate of the group to estimate project costs. This field is found on the Group resource form. Use one of the following methods to access this form: <ul style="list-style-type: none"> • If the Project Management v2 Costing Add-on plugin is installed, click the link in the Hourly rate column. • If the Project Management v2 Costing Add-on plugin is NOT installed, click the link in the Estimated hours column.
Estimated cost	Total of a group's Hourly rate multiplied by the Estimated hours . The total of each group's estimated cost is the estimated cost of the project. This field requires the Project Management v2 Costing Add-on plugin . For more information, see Managing Project Costs .
Assigned hours	The total of the hours assigned to each group from the Planned effort field in a Project Task form. This field is only visible in the Advanced View. Assigned hours represent specific time estimates on the task level that will differ from the Estimated hours .

The following illustrates the Group Resources related list when the Costing Add-on is activated:



Group	Hourly rate	Estimated hours	Estimated cost	Assigned hours
Networks	\$100.00	10	\$1,000.00	13
Hardware	\$80.00	12	\$1,080.00	12
Total		22	\$2,080.00	25

Group Resources related list with Costing Add-on

The following illustrates the Group Resources related list without the Costing Add-on:

Group Resources (2)

User Resources (23)

Project Tasks (5)

Goals (3)

Risks (3)

Issues (2)

Group Resources

New

Edit...

Go to

Group

Q

Planned task = PRJ00000006

	Group	Estimated hours	Assigned hours
<input type="checkbox"/>	Hardware	8	6
<input type="checkbox"/>	Network	14	13
<input type="checkbox"/>	Actions on selected rows...		

1

to 2 of 2

Group Resources related list without the Costing Add-on

Resource Timelines

The following updates were added to the User Resources timeline in the Spring 2010 Stable 2 release:

- Improved rendering performance, particularly for projects with a large number of items.
- Visual improvements including summary pane overlay bevel, timeline drop shadow, font adjustments, and preview mask coloring tweaks.
- Capability to split the timeline into multiple frames.
- Quick range selection buttons and start/end time view adjustment.
- Inner segments for Timeline Span elements on the timeline, useful for % complete on Gantt Charts or travel time for Field Service Management visual dispatching.
- Auto-refresh capability.



Note: For more details and API documentation on the new features please see: *Schedule Page Spring 2010 Stable 2 Updates*

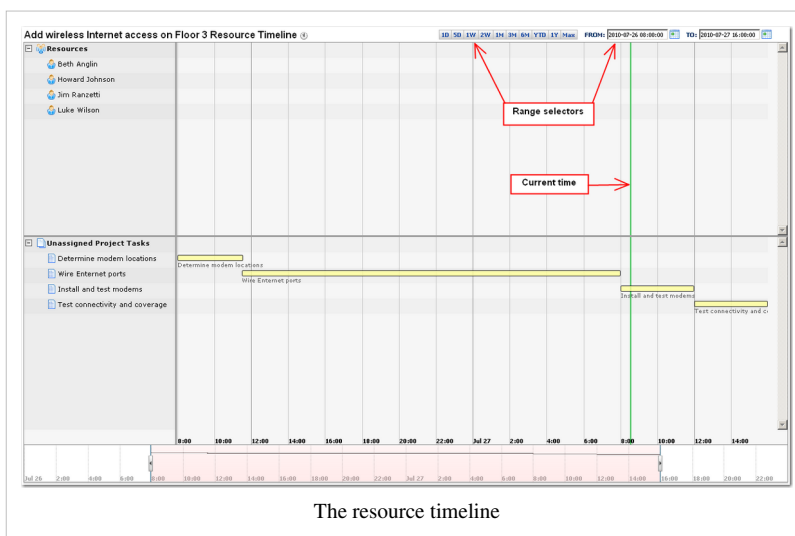
The *Resource Timeline* is a graphical, interactive map that establishes the relationships of tasks and sub-tasks to user resources for a project. Create the timeline after you identify the resources and tasks for the project. You must establish the relationships manually between the unassigned tasks and the free resources.

At this point, you should have a project record containing tasks and a list of resources to associate with those tasks.

1. Click the **Resource Timeline** Related Link in the project record.

The Timeline displays two panes: *Resources* and *Unassigned Project Tasks*. You can resize the panes by dragging the dividing line that separates them. The tasks are arranged in the proper order (as defined in the **Gantt Chart**) and with the proper durations. In this example, the duration for the second task, **Wire Ethernet ports**, extends over two days, yet is configured for 8 hours. This is because we specified a project schedule of **8-5 weekdays**, and the time slot for that task must span the off-work hours between the days.

NOTE: The **Schedule** field in the Project form is optional and visible only in the **Advanced** view of the form.



2. Use the pink slider at the bottom of the timeline to change the perspective.

a. Move the slider from right to left to view all the tasks on a long timeline.

b. Adjust the end points of the slider to change the magnification.

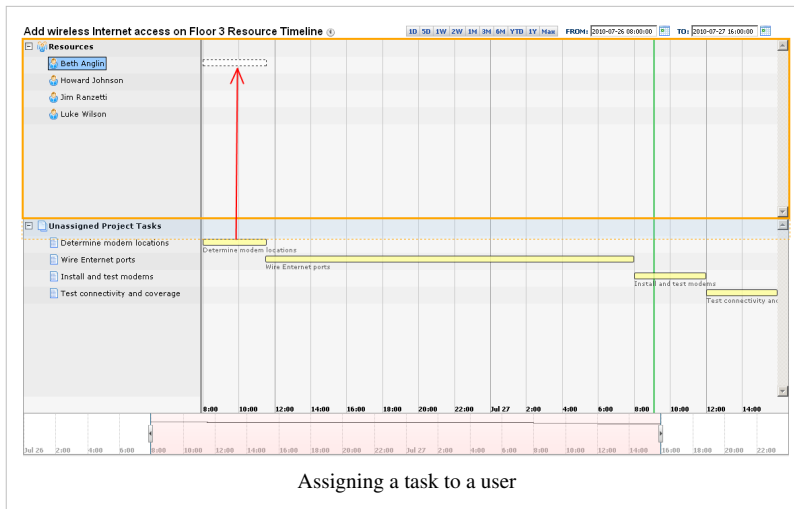
A narrow slider zooms in on the tasks and provides a more detailed view of complex timelines. A wide slider pulls the view out

and makes more of the timeline visible on the screen.

3. Use the Range Selectors at the top of the timeline to change the perspective.

The increments go from one day to one year. To limit the timeline to the length of the current project, click **Max**. The green, vertical line is the current time and sweeps across the resource timeline automatically.

4. To assign a task to a resource, drag the task bar from the *Unassigned Project Tasks* pane up until the resource's name is highlighted, and then release the task bar.

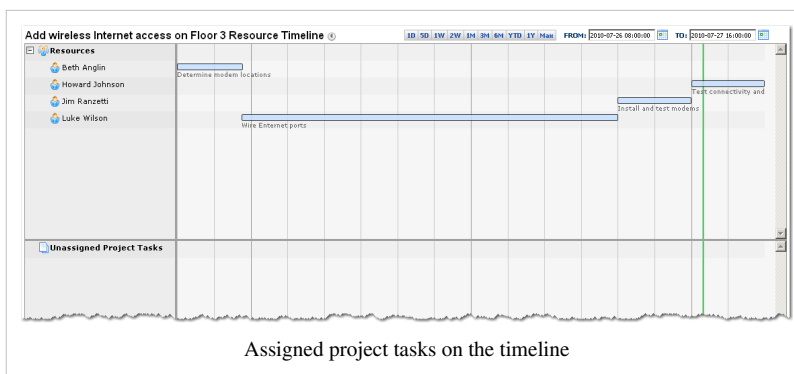


5. To *unassign* a task to a resource, grab the task bar with the mouse and move it back down into the *Unassigned Project Tasks* list. A dialog box appears asking you to confirm the action.

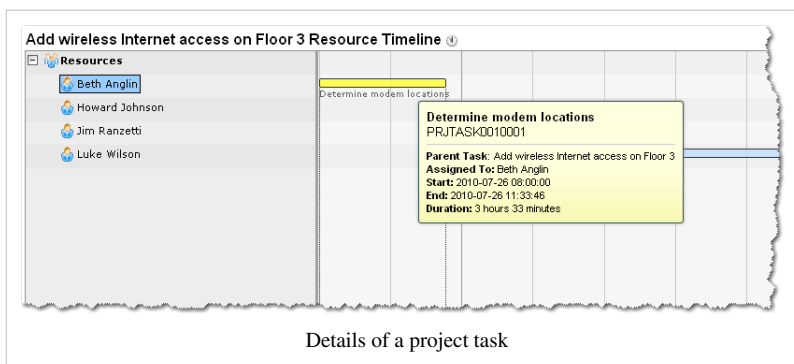
6. Click **OK**.

7. Assign the remaining tasks to resources.

When you are done, the *Unassigned Project Tasks* pane is empty, and all the tasks are aligned with their resources.



8. To view the specifics of a task, hover the cursor over the task bar in the Timeline.



9. To edit or delete a task record, double-click on the bar.

The task record shows a log of all resource assignments for that task in the **Activity** field.

What Do I Do Next?

If you have finished selecting user resources for your project and have assigned tasks to the resources in the timeline, you are ready to **start the project**.

Using Task Resources with Other Planned Tasks

If the Project Management v2 Plugin is activated, the Task Resources related lists and timeline are available on any planned task, using the method detailed above.

References

- [1] https://docs.servicenow.com/bundle/jakarta-it-business-management/page/product/project-management/concept/c_TaskResources.html

Cost Management

Cost Management Plugin



Note: This article applies to Fuji. For more current information, see *Cost Management*^[1] at <http://docs.servicenow.com>. The ServiceNow Wiki is no longer being updated. Please refer to <http://docs.servicenow.com> for the latest product documentation.

Overview

IT cost tracks configuration item costs. The costs can be allocated to business units and used in reports. Specifically, IT cost enables these features:

- Using rate cards.
- Defining configuration item (CI) costs.
- Tracking one-time costs for CIs.
- Processing recurring CI costs to generate expense lines.
- Distributing bulk costs to multiple expense line sources.
- Tracking costs related to tasks and projects.
- Aggregating configuration item costs and charging the total cost to a business service or application
- Allocating expense lines to business units with flexible allocation rules.
- Tracking planned and actual budget costs by cost center.

IT Cost Options

Use the following IT cost options to plan and control business costs.

- Create rate cards to properly track configuration item, contract, task, and labor costs.
- Create expense lines and expense allocation rules.
- Aggregate configuration item costs and apply the total cost to a business service or application using relationship paths.
- Create distribution costs and distribution cost rules to divide costs between a group of records.

Roles

IT cost uses the following user roles:

Role title [name]	Description
financial admin [financial_mgmt_admin]	Manages financial processes in the system.
financial user [financial_mgmt_user]	Participates in financial processes and has limited access to functionality.



Note: *The IT Finance application also uses these roles, starting with the Fuji release.*

A user with the user_admin or admin role can assign the appropriate roles. For more information about user administration and instructions for assigning roles, see [Creating Users and Associating to a Group](#).

Menus and Modules

Activating the IT Cost Management feature adds the **IT Cost** application menus.



Note: *The application name in the navigator is **Financial Management** prior to the Fuji release.*

<div>IT Cost</div> <ul style="list-style-type: none"> Cost Overview Depreciation Fixed Assets Costs <ul style="list-style-type: none"> Rate Cards CI Rate Cards Contract Rate Cards Distribution Costs Task Rate Cards Labor Rate Cards Expense Lines Expense Allocations Config <ul style="list-style-type: none"> Business Services Allocation Units Cost Center Budgets Administration <ul style="list-style-type: none"> Properties Distribution Cost Rules Expense Allocation Rules Relationship Paths Log 	<ul style="list-style-type: none"> • Cost Overview: View the Cost Management overview page, which is a homepage that displays graphs and charts for managing costs. • Depreciation: View, create, and edit depreciation schedules, which calculate depreciation for fixed assets. This module is available by default. • Fixed Assets: View, create, and edit fixed assets, which are containers that can hold multiple assets. This module is available by default. • Costs <ul style="list-style-type: none"> • Rate Cards: View, create, and edit rate cards. • CI Rate Cards: View, create, and manage rate cards for configuration items (CIs). • Contract Rate Cards: View, create, and edit contract rate cards, which provide detailed price information for a contract. • Distribution Costs: View, define, and edit distribution costs, which are costs that can be divided among a group of records. • Task Rate Cards: View, define, and edit task rate cards, which define the type of task and the method of calculating the associated costs. • Labor Rate Cards: View, define, and edit labor rate cards, which define worker's labor rates when calculating task cost based on time worked. • Expense Lines: View, create, and edit expense lines, which track costs and represent a point-in-time expense incurred. This module is available by default. • Expense Allocations: View, create, and edit expense allocations, which associate expenses with items such as users, groups, or departments. • Config <ul style="list-style-type: none"> • Business Services: View, define, and edit business services in the CMDB. The list of business services appears in the Cost view. • Allocation Units: View, define, and edit allocation units, which define the capacity and usage of a business service. • Cost Center: View, define, and edit cost centers, which represent business entities in the organization. This module is available by default. • Budgets: View, define, and edit budgets, which allow tracking of planned and actual IT spending. • Administration <ul style="list-style-type: none"> • Properties: Configure properties for IT cost management. • Distribution Cost Rules: View, define, and edit distribution cost rules, which determine how distribution costs are divided among the CIs. • Expense Allocation Rules: View, create, and edit allocation rules, which associate expenses with an item, such as a user, group, or department. • Relationship Paths: View, define, and edit relationship paths, which aggregate expenses to parents. • Log: View the IT cost management logs, which store information for tracking and debugging.
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Activating IT Cost Management

Administrators can activate the IT Cost Management plugin.

Click the plus to expand instructions for activating a plugin.

If you have the admin role, use the following steps to activate the plugin.

1. Navigate to **System Definition > Plugins**.
2. Right-click the plugin name on the list and select **Activate/Upgrade**.

If the plugin depends on other plugins, these plugins are listed along with their activation status.

3. [Optional] If available, select the **Load demo data** check box.

Some plugins include demo data—sample records that are designed to illustrate plugin features for common use cases. Loading demo data is a good policy when you first activate the plugin on a development or test instance. You can load demo data after the plugin is activated by repeating this process and selecting the check box.

4. Click **Activate**.

Enhancements

Fuji

- The application name appears as **IT Cost** in the application navigator. The plugin name remains **IT Cost Management**.

Dublin

- The plugin is named IT Cost Management.
- Only users with the financial_mgmt_admin or admin role can customize the Cost Overview page.
- The contract rate card end date is automatically set to the contract end date if no value is entered.

References

- [1] https://docs.servicenow.com/bundle/jakarta-it-business-management/page/product/cost-management/reference/r_CostManagement.html

Managing Task and Labor Rate Cards



Note: This article applies to Fuji and earlier releases. For more current information, see *Task and Labor Rate Cards* ^[1] at <http://docs.servicenow.com> **The ServiceNow Wiki is no longer being updated. Visit <http://docs.servicenow.com> for the latest product documentation.**

Overview

In Cost Management, task rate cards and labor rate cards capture operating costs by generating expense lines representing the cost of performing a task.

- *Task rate cards* are templates used to define the type of task and the method of calculating the associated costs.
- *Labor rate cards* are templates used to define worker's labor rates when calculating task cost based on time worked.

Managing a Task Rate Card

To define a task rate card, navigate to **Financial Management > Task Rate Cards** and create or edit a record (see table for details).

Field	Input Value
Name	String field summarizing the purpose of the rate card.
Table	Which type of tasks the rate card applies to.
Order	If more than one task rate card apply to the same task, the one with the lowest order is used.
Active	Check box which determines if the rate card will be actively used.
Summary type	High-level type of expense for easier summary reports. This value will be used to set the expense line summary type field.
Condition	Filter to run on the table selected to determine whether this rate card applies to a given task. This field uses the Condition Count Widget to preview what records would be returned by the conditions.
Task rate	Rate of the task, with a currency drop-down. To add a new currency, use the Edit link.
Use time worked	By default a flat rate per task is defined in the rate card. Selecting the check box will force the rule to calculate the task cost based on the related task time worked entries.
Default labor rate	Defines the default hourly rate to apply to the time worked entries if the worker does not have a labor rate card. Displayed when Use time worked is selected.

Managing a Labor Rate Card

To define a labor rate card, navigate to **Financial Management > Labor Rate Cards** and create or edit a record (see table for details).

Field	Input Value
Name	String field summarizing the purpose of the rate card.
Rate code	For reference use only, if you want to align rates with an external system.
Active	Check box which determines if the rate card will be actively used.
Hourly rate	Identifies the hourly rate to be applied to task time worked entries if the worker meets the condition defined.
Condition	Defines a filter on the user table to determine whether the task time worked user applies to this rate card. This field uses the Condition Count Widget to preview what records would be returned by the conditions.

Processing Task Rate Cards

The business rule **Process Task Rate Cards** runs when tasks close and checks to see if any task rate cards apply. If they do, an expense line is created according to the rate card.

The process flow of the "Process Task Rate Cards" business rule is:

1. Task closes.
2. Business rule runs.
3. Query active task rate cards in order looking for a matching condition.
4. Qualifying rate card not using time worked.
 1. Generate expense line linked to the task using the task rate value.
5. Qualifying rate card using time worked.
 1. Get task time worked entries for the task grouped by user (worker).
 2. For each user, check to see if they match conditions in any of the labor rate cards.
 1. Labor rate card found, generate expense line using the time worked and labor rate.
 2. Labor rate card not found, generate expense line using the default labor rate from the task rate card.

References

[1] https://docs.servicenow.com/bundle/jakarta-it-business-management/page/product/cost-management/concept/c_TaskAndLaborRateCards.html

Working with Expense Lines and Expense Allocations

Overview

Expense lines track costs and record expenses incurred. Create expense lines manually or view expense lines generated automatically when costs are created by scheduled processing. Use expense allocation rules to associate expenses with items such as users, groups, or departments.

Expense lines are a key component of IT cost management because they can be generated from any application and are used to allocate expenses to business entities.

Users with the Financial Admin (financial_mgmt_admin) and Financial User (financial_mgmt_user) roles can use expense lines and expense allocation rules.

To use expense allocation rules, activate the Cost Management application.

Creating Expense Lines Manually

Create expense lines at a single level or multiple levels. Adding an expense line under another expense line to create a hierarchy is just another way to organize information. Use a hierarchy if it makes sense for your organization. In the example, the last two expense lines are a level under expense line number EXP0010001.

Expense Lines							
New Go to Number <input type="text"/> <input type="button" value="Q"/>							
All							
	Number	Inherited	Parent	Date	Short description	Source ID	Amount
	EXP0010001	false		2012-11-19	Automatically generated expense line for creation of asset	Hardware: first asset - Apple MacBook Pro 15"	\$1,799.99
	EXP0010002	false		2012-11-19	Automatically generated expense line for creation of asset	Hardware: second asset - Apple MacBook Pro 15"	\$1,799.99
	EXP0010003	false		2012-11-19	Automatically generated expense line for creation of asset	Consumable: Apple iPhone 5	\$799.99
	EXP0010004	false		2012-11-19	Automatically generated expense line for creation of asset	Consumable: Apple iPhone 5	\$1,799.99
	EXP0010006	false		2012-11-19	Automatically generated expense line for creation of asset	Hardware: the asus - Asus G Series	\$839.99
	EXP0010007	true	EXP0010001	2012-11-20		Hardware: first asset - Apple MacBook Pro 15"	\$0.00
	EXP0010008	true	EXP0010001	2012-11-20		Hardware: first asset - Apple MacBook Pro 15"	\$0.00
							Total \$7,039.95
Actions on selected rows... <input type="button" value="Q"/>							

1. Navigate to **Financial Management > Expense Lines**.
2. Do one of the following:
 - Click **New**.

- Click a **Number** and, in the **Expense Lines** section, click **New** to create a new expense line under an existing expense line.
3. Fill in the fields, as appropriate.

Field	Description
Number	The unique number identifying the expense line.
Date	The date on which the expense line was created.
Rate Card	The identification number of the rate card to which the expense line is associated.
Source ID	The identification number of the item associated with the expense line. If this field is filled in, corresponding information is automatically added to the Source fields on this form.
Amount	The monetary value of the item specified in the Source ID field. Enter a negative value to indicate a credit.
Process date	The date the expense line is processed.
Inherited	Check box that indicates whether the expense line is located on another expense line.
State	The current state of the expense line, either Pending or Processed .
Summary type	The expense line category: Grow Business , Run Business , or Transform Business . Categorizing expense lines can be useful for reporting.
Short description	A brief description of the expense line.
Asset	The identification number of the asset associated with the expense line, if any
Fixed asset	Fixed asset that contains the asset in this expense line. A fixed asset is a container that holds one or more individual assets, including hardware or software assets. ServiceNow auto-populates this field with the appropriate fixed asset if the named Asset is contained within that fixed asset. Software fixed assets are available starting with the Eureka release.
Contract	The identification number (not the contract number) of the contract associated with the Asset , if any.
User	The name of the user associated with the Asset , if any.
Configuration Item	The name of the configuration item associated with the expense line, if any.
Task	The identification number of the task associated with the expense line, if any.
Cost center	The cost center financially responsible for the item identified in Source ID , if any.

Creating Expense Lines Automatically

The following processes generate expense lines automatically if enabled:

- Active CI rate cards are processed monthly to generate expense lines for each CI in the rate card. If a CI relationship is changed, existing expense lines are not affected. Changes are reflected in the next scheduled expense line.
- Active distribution costs are processed monthly to generate expense lines based on distribution rule targets.
- Closed tasks on task rate cards are processed to generate expense lines.

Expense lines can also be imported from external systems or generated from scripts. To generate an expense from a server-side script use the ExpenseLine API.

Deleting Expense Lines

Deleting an expense line also deletes all expense allocations generated from the expense line. Deleting expense lines and allocations should be limited to an emergency case only when they were created incorrectly.

1. Navigate to **Financial Management > Expense Lines**.
2. Select an expense line.
3. Click **Delete**.
4. In the confirmation message, click **OK**.

Creating Allocation Rules

Expense allocation rules enable you to associate expenses with an item, such as a user, group, or department.

To use expense allocation rules, activate the Cost Management application.

1. Navigate to **Financial Management > Admin > Expense Allocation Rules**.
2. Click **New**.
3. Fill in the fields, as appropriate.
4. Click **Submit**.

Field	Description
Name	The allocation rule name.
Table	The table to which the allocation rule is associated.
Allocation field	The field on the Table to populate with the expense allocation.
Inherited	Check box that indicates whether the expense allocation is inherited.
Active	Check box that indicates whether the expense allocation is available to use.
Percentage	The percentage of the expense line allocated to the table and field combination. Not available if the Advanced check box is selected.
Summary type	The expense allocation category: Grow Business , Run Business , or Transform Business . Categorizing expense allocations can be useful for reporting.
Condition	The conditions under which the expense allocation is applied. Not available if the Advanced check box is selected.
Advanced	Check box that indicates whether to display the Script field.
Script	The script field that determines expense allocations. This field is only available if the Advanced check box is selected. For more information, see Using Scripted Allocations.

Sample Allocation Rule

Follow the steps to create a sample expense allocation rule that allocates the cost of an incident to the department of the caller. To use expense allocation rules, activate the Cost Management application.

1. Navigate to **Financial Management > Admin > Expense Allocation Rules**.
2. Click **New**.
3. In **Name**, enter **Incident Caller Department**.
4. In **Table**, select **Incident**.
5. In **Allocation field**, click the control, expand the **Caller** element, and select a department.
6. In **Percentage**, enter 100 to allocate all of the expense to the caller's department.
7. Select the **Active** check box.
8. Click **Submit**.

After an incident expense line is created, the allocation rule processes the expense line and generates an expense allocation linking the expense and amount to the caller's department. The expense is stored in the **Target** field on the Expense Allocation record.

Using Scripted Allocations

Scripted allocations define custom allocation amounts and targets by executing a script. For example, use scripted allocations to:

- Allocate an expense to all cost centers based on the current head count in the cost center.
- Query usage data to determine the allocation amount to assign to a target.
- Track the business users that are consuming business services.

To use a script on an expense allocation rule:

1. Navigate to **Financial Management > Admin > Expense Allocation Rules**.
2. Select an expense allocation rule.
3. Select the **Advanced** check box.
4. Use these concepts to build the script:
 - Query for target records and data to use for calculating the allocation amount.
 - Create allocation records using the ExpenseAllocation API.

The following variables are available during the script processing:

- **allocation:** expense allocation object used to create new allocations (see ExpenseAllocation API).
- **expense:** GlideRecord for the expense_line that is being processed.
- **rule:** GlideRecord for this rule.

To create an allocation record, use the allocation object already instantiated in the script scope:

```
allocation.createAllocation(targetGlideRecord, amount);
```

Using Business Services with Expenses

Overview

Manage the relationships between business services and their expenses with allocation units and cost centers.

Business Service Allocation Units

Allocation unit records define the capacity and usage of a business service. To define them, navigate to **Financial Management > Allocation Units** and select a record to edit or select **New**.



Note: *Selecting the name of the configuration item will display the CI record, not the Allocation Units.*

Field	Description
Configuration Item	Select the Business Service to define allocation units for.
Total Units	The total number of units of expense available to allocate. A unit is a generic measurement which can represent anything. Should match the cost center relationship unit. What units represent can be recorded in the Unit Type field. Note that using the Total units option may result in unallocated expenses if there are unallocated business service units. Using the Allocated unit option always results in 100% expense allocations.
Allocated Units	How many of the total units are allocated. Populated by script.
Available Units	How many of the total units are unallocated. Populated by script.
Updated	When the units were last updated.
Fields which can be added by configuring the form:	
Unit Type	Used to record what the units represent (e.g. seats, licenses, Gigabytes, etc.).

Cost Center Consumption of Business Services

Cost centers are a commonly used reference between financial systems and IT. Cost center records represent business entities, and have a related list of CI Cost Center Relationships that measure the cost center's consumption of business services.

Cost centers and their CI relationships are defined by navigating to **Financial Management > Cost Centers** and selecting a record to edit or selecting **New**.

Field	Description
Name	A unique name for the cost center.
Account Number	An account number associated with the cost center, if one exists.
Code	A code associated with the cost center, if one exists.
Location	A reference to the location of the cost center.
Manager	A reference to the user who manages the cost center.
Valid from	The date that the cost center is valid from.
Valid to	The date that the cost center is valid to.
Related List: CI Cost Center Relationships	
Service	A reference to a Business Service.
Cost Center	The cost center to apply the relationship to. If reached through the related list, it should already be related to the appropriate cost center.
Allocation Percentage	<i>Feature not yet implemented.</i>
Allocation Type	A choice list. Should be Units .
Allocation Units	The number of units that the cost center is using. This is measured using the same type of unit used to define the total capacity of the business service in the allocation unit record. This number will be used to update the number of allocated units in the allocation unit record. It will also be used to determine the amount of expenses to allocate to the cost center based on the percentage of business service used versus the total capacity.

Default Allocation Rule

For every expense line generated for a business service, the default allocation rule **Process Svc-CC Relationships** will attempt to process the expense and create allocations for each cost center that is consuming the service.

The amount of the expense allocation is calculated by dividing the number of units the cost center is consuming by the total number of units for the business service. This calculation method is referred to as "all unit" allocation as it uses the total unit capacity to determine the allocation percentage.

Refer to the demo walk-through for a detailed example.

For a given business service expense line, it is typical that less than 100% of the expense would be allocated using this method not all units have been allocated to cost centers. The unallocated expenses could be considered IT overhead. Some organizations prefer to show 100% expense allocation regardless of how many units are in use. This method is referred to as "allocated unit" since the percent of allocation calculated by dividing the number of units the cost center is consuming by total number of allocated units from all cost centers.

Allocation calculation method	Example
all_units	Service supports 100 units but only has 50 units allocated, and cost center ABC is allocated 25 units. This method will result in an allocation cost of 25/100, or 25% of the total cost of the service. 50% of the expenses (from the 50 unallocated units) will not be allocated.
allocated_units	Service supports 100 units but only has 50 units allocated, and cost center ABC is allocated 25 units. This method will result in an allocation cost of 25/50, or 50% of the total cost of the service. 100% of the expenses will be allocated, showing full cost recovery.

This is a system wide setting that can be configured by navigating to **Financial Management > Properties** module and selecting an option from the choice list.

Project Costing Add-on

Project Management v2 Costing Add-on

Overview

The **Project Management v2 Costing Add-on Plugin** adds features that connect the Project Management Plugin to the Cost Management Plugin, to allow for estimating and tracking the costs associated with projects. After activating the plugin, see Managing Project Costs.



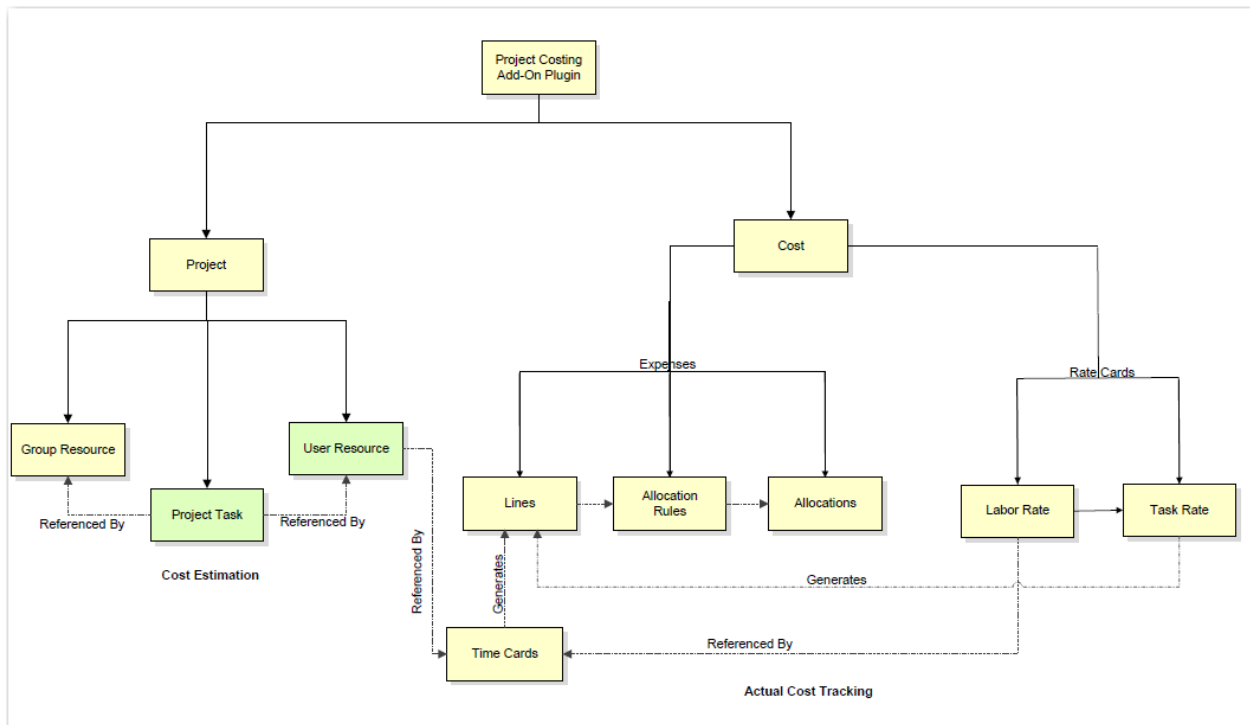
Note: *The functionality for the Costing add-on is built into the new Project v3 application starting with the Dublin Release.*

This plugin enables the following project costing features:

- Estimate **group resource** costs during project planning.
- Tracking the actual cost of each **user resource** for a project.
- Track actual project task costs from **time cards** and other project expenses.
- Allocate project costs to the business.
- Represent project costs to the project's affected CIs.
- Rollups of actual task expenses to parent tasks and the project record.

Concepts

The concepts within the Project Management v2 Add-on Plugin are the same as those within Project and Cost. The following diagram details how the concepts work together:



Installed Components

Properties

To access these properties, type **sys_properties.list** in the Navigation tree filter.

Property	sys_property Name	Description
For planned tasks types, calculate the actual cost field using the total of expense lines for the task.	glide.cost_mgmt.calc_actual_cost	Value: true/false . Default: <i>true</i> . This property is from Cost Management. When an expense line is created against any task of planned_task type and this property is <i>true</i> , the system gets a sum of the costs for all the task's expense lines and sets the total cost in the task's work_cost field.
When creating a task expense line should the system also create expense lines for the task's top task?	glide.cost_mgmt.process_task_top_task	Value: true/false . Default: <i>true</i> .
Enable project cost rollup (estimated and actual) - updating the cost of a project task will update the cost of its parent	com.snc.project.rollup.cost	Value: true/false . An existing property is set to true with this plugin.

Business Rules

The following business rule is used by this plugin:

- **Project Cost Rollup [planned_task]:** This business rule is installed with the Project Management plugin. It calculates and rolls up project cost.

The following business rules are modified by this plugin:

- **Calculate Group Estimated Cost [group_resource]:** Calculates estimated group resource cost using the group's hourly rate and number of hours estimated.
- **Process Top Task Parent [fm_expense_line]:** For task source expenses, determines if a duplicate expense for the task's top task should be created.
- **Update User Resource Cost [user_resource]:** Calculates the users actual cost for a given number of actual hours. The cost is calculated using labor rate cards for the user. If no labor rate cards can be found for the user, the default rate is used from property `com.snc.time_card.default_rate`. See Managing costs for more information.

Getting Started

There is no need to activate this plugin for new instances starting with the Dublin release. For instances upgrading from an earlier release, administrators need to activate the plugin.

Activating the Plugin

Click the plus to expand instructions for activating a plugin.

If you have the admin role, use the following steps to activate the plugin.

1. Navigate to **System Definition > Plugins**.
2. Right-click the plugin name on the list and select **Activate/Upgrade**.

If the plugin depends on other plugins, these plugins are listed along with their activation status.

3. [Optional] If available, select the **Load demo data** check box.

Some plugins include demo data—sample records that are designed to illustrate plugin features for common use cases. Loading demo data is a good policy when you first activate the plugin on a development or test instance. You can load demo data after the plugin is activated by repeating this process and selecting the check box.

4. Click **Activate**.
-

Managing Project Costs



Note: This article applies to Fuji and earlier releases. For more current information, see *Project Management Costing Add-On*^[1] at <http://docs.servicenow.com> **The ServiceNow Wiki is no longer being updated. Visit <http://docs.servicenow.com> for the latest product documentation.**

Overview

Once the Project Management v2 Costing Add-on Plugin is installed, the costs associated with a project can be estimated before-hand, and actual costs can be tracked as they are recorded. Actual costs can then be associated to the Business Services affected by, or driving the project, and then costs can be allocated to Cost Centers.

Estimating Cost

There are two methods of estimating project costs, based on what costs are being estimated:

- Labor Costs - estimated using **Group Resources**.
- Task Costs - estimated using the **Estimated Cost** field on the Project and Project Task form.

Estimating Labor Costs

Labor costs are estimated using the **Group Resources** related list.

The plugin creates an **Hourly rate** field on the Group form and adds a new form called **Group resource**, which calculates the estimated cost for the group, based on the hourly rate provided. The **Group Resources** will be added automatically based on the groups associated with the Project or its associated Project Tasks.

'To estimate the Project's cost using Group Resources:

1. Select a group and configure an **Hourly rate** using the new field in the Group record.

2. Click **Update**.
3. In the Group Resources Related List, click the link on the newly configured **Hourly rate**.

Group Resources (2)

Project Tasks (5)

User Resources (2)

Group Resources

New

Edit...

Go to

Group

Planned task = PRJ00000006

	Group	Hourly rate	Estimated hours	Estimated cost	Assigned hours
<input type="checkbox"/>	Network	\$100.00		\$0.00	0
<input type="checkbox"/>	Hardware	\$0.00		\$0.00	0
Total			0	Total	\$0.00
Total			0	Total	\$0.00

Actions on selected rows...

1

to 2 of 2

The **Group resource** form appears.

4. Configure the **Estimated hours** this group will need to complete the project. **Note:** if the group has already been assigned to the lowest level sub-tasks, and those sub-tasks have an **Planned Effort** field (visible in the advanced view) populated, then the **Assigned Hours** field will total all of the time currently assigned to this group resource. Use this as a guideline as the **Estimated Hours**.

Group resource

Assigned hours: 0

Estimated cost: 2,000.00 \$ Edit

Estimated hours: 20

Group: Network

Planned task: PRJ0000006

Update Delete

5. Click **Update**.

The Costing Add-on plugin calculates the **Estimated cost** for this group and displays the results in the **Group Resources Related List**.

Group	Hourly rate	Estimated hours	Estimated cost	Assigned hours
Network	\$100.00	20	\$2,000.00	0
Hardware	\$0.00		\$0.00	0
Total		20	\$2,000.00	0

6. Repeat this process for the other group resources in the project.

Estimating Task Costs

Task costs can be estimated using the **Estimated Cost** field which can be added to the Project and Project Task forms.

To estimate task costs:

1. Enable the Estimated Cost field calculations.
 1. Navigate to **Project Management > Properties**
 2. Set the property *Enable project cost rollup (estimated and actual) - updating the cost of a project task will update the cost of its parent* to **Yes** (true).
2. Navigate to the lowest level sub-tasks of the project and populate the *'Estimated Cost* fields.

Once those fields are set, the top-level project's **Estimated Cost** field should reflect the sum of all the lowest level sub-tasks' estimated costs.

Tracking Actual Costs

Once the project is planned, actual expenditures can be tracked while the project is underway. To track costs, define rate cards for the task and labor expenses. These rate cards will automatically generate expense lines showing actual expenditures, which will be associated with the projects.

If rate cards are defined, the Task Expense Lines will be generated as each Project Task closes, and Labor Expense Lines will be generated when Time Cards are approved. These are visible in the **Expense Lines** related list (advanced view). This screenshot has one expense line incurred by a **Task Rate Card** and one generated by a Time Card associated with the project:

Project Tasks (3)			Time Cards (1)			Expense Lines (2)																																																				
Expense Lines			New			Go to			Number			Q			1 to 2 of 2																																											
Expense Lines																																																										
<table><tr><th></th><th>Number</th><th>Inherited</th><th>Parent</th><th>Date</th><th>Short description</th><th>Cost ID</th><th>Source ID</th><th>Amount</th><th>Type</th><th>Summary type</th></tr><tr><td><input type="checkbox"/></td><td>EXP0001517</td><td>false</td><td></td><td>2010-12-03</td><td>PTASK</td><td>Task Rate Card: PTASK</td><td>Project Task: PRJTASK0000001</td><td>\$10.00</td><td>One-time</td><td></td></tr><tr><td><input type="checkbox"/></td><td>EXP0001519</td><td>false</td><td></td><td>2010-12-03</td><td>PRJTASK0000001 Time Card (System Administrator 2010-11-28)</td><td>(empty)</td><td>Project Task: PRJTASK0000001</td><td>\$100.00</td><td>One-time</td><td></td></tr><tr><td colspan="8"></td><td>Total</td><td colspan="2">\$110.00</td></tr></table>																Number	Inherited	Parent	Date	Short description	Cost ID	Source ID	Amount	Type	Summary type	<input type="checkbox"/>	EXP0001517	false		2010-12-03	PTASK	Task Rate Card: PTASK	Project Task: PRJTASK0000001	\$10.00	One-time		<input type="checkbox"/>	EXP0001519	false		2010-12-03	PRJTASK0000001 Time Card (System Administrator 2010-11-28)	(empty)	Project Task: PRJTASK0000001	\$100.00	One-time										Total	\$110.00	
	Number	Inherited	Parent	Date	Short description	Cost ID	Source ID	Amount	Type	Summary type																																																
<input type="checkbox"/>	EXP0001517	false		2010-12-03	PTASK	Task Rate Card: PTASK	Project Task: PRJTASK0000001	\$10.00	One-time																																																	
<input type="checkbox"/>	EXP0001519	false		2010-12-03	PRJTASK0000001 Time Card (System Administrator 2010-11-28)	(empty)	Project Task: PRJTASK0000001	\$100.00	One-time																																																	
								Total	\$110.00																																																	

These expenses are totaled in the tasks' **Actual Cost** field:

Actual cost:	110.00	\$	Edit
--------------	--------	----	----------------------

And the parent tasks will add these costs into their own **Actual Cost** fields.

Allocating Costs

Project costs can be allocated to a **Cost Center** using Expense Allocation Rules. For more information, see Expense Allocation Rule.

Cost Rollups

Costs are rolled up from child tasks to parent tasks all the way up to the project. See Parent-Child (Rollup) Task Calculations for more information.

References

- [1] https://docs.servicenow.com/bundle/jakarta-it-business-management/page/product/project-management/concept/c_ProjectManagementCostingAddOn.html

Time Cards



Note: This article applies to Fuji. For more current information, see *Time Cards*^[1] at <http://docs.servicenow.com>. The ServiceNow Wiki is no longer being updated. Please refer to <http://docs.servicenow.com> for the latest product documentation.

Overview

The time card management feature works with the Task table to record time worked on Projects, Incidents, Problems, and Change Requests. Task assignees can record time worked in the **Time worked** field on a task record or enter hours directly into their time card. Some tables support automatic time card creation based on start and end date fields.

Time cards also have an optional approval mechanism for project managers. Administrators and other roles that act as approvers can see all the time cards for the week. All users who are in a role that is responsible for working on tasks also can access their personal time cards. Time cards can have any of the following states.

- **Pending**
- **Approved**
- **Submitted**
- **Rejected**



Note: The Time card management plugin is required to use time cards. Some of the procedures on this page require the project management feature, which activates time cards automatically.

Recording Time Worked

Time accrued on a project or spent working on any record in the Task table is retrieved by the time card from the **Time worked** field. This field is present on Project Task records by default, but does not appear on the Incident, Problem, and Change forms and must be added by configuring the form. Time recorded in this field is used to populate an existing time card or to create a new time card if one does not already exist. This behavior is controlled by a time card **property**. The **Time worked** field has a counter that acts like a stopwatch for the duration of the time spent in the record. The counter can be stopped and started by a button in the field. By default, the **Time worked** counter is enabled and begins recording the elapsed time when the record is opened. Stop the counter with the red stop sign button and restart it with the green *play* button.

Time counter started:

Time counter stopped:

If you are creating time cards from time worked entries, you can add the related list to display the time worked records on the time card form.

You will also notice an informational message on the time card to let you know that changes to time worked records will override values in the time card. This is displayed using a formatter, which can be added or removed by

configuring the form.

← Time Card | = Required field

Time Worked property enabled, values may be overwritten by time worked records

Week starts on:	2011-01-02	📅
State:	Pending	⬆️⬆️⬆️⬆️⬆️⬆️⬆️⬆️⬆️
Category:	Task work	⬆️⬆️⬆️⬆️⬆️⬆️⬆️⬆️⬆️
 Task:	INC0000003	🔍 ⓘ
User:	John Roberts	🔍 ⓘ

Project Management User Resources

When the project management feature is enabled, the total time from each time card is displayed in the User Resource record for that Project Management task. To view a resource record, navigate to either of the following locations:

- **Project > Views > Resources by Project:**

← User resource

Allocation %:	100	
Planned hours:	293	
Planned task:	PRJ0000006	🔍 ⓘ
Responsibility:	Project resource	⬇️
User:	Eric Schroeder	🔍 ⓘ
Actual hours:	64	

Update
Delete

- **Project > Views > Project by Resources:**

User: Eric Schroeder (2)					
Responsibility	User	Short description	Allocation %	Planned hours	Actual hours
Project resource	Eric Schroeder	Demo project (small)	45	30.6	12
Project resource	Eric Schroeder	Demo project (medium)	100	293	64

Creating a Time Card

Time cards can be created automatically or manually:

- **Automatic:** Configure time cards to be created when a user updates a task record. This behavior is controlled by a time card property that is set to *false* by default. See the table of properties in this page for details. In Incident, Problem, and Change records, the **Time worked** field must be added to the form.
- **Manual:** Create a new time card for each task and enter the times manually.



Note: Time cards cannot be created automatically when you use the mobile interface. Use the desktop interface if you want to use the automatic time card feature.

Users with the `timecard_admin` role can create a time card manually:

1. Navigate to **Time Cards > All** and click **New**.

The **Week starts on**, **State**, and **Category** fields are completed automatically. The category defaults to **Task work**, but can be any of the following:

- Task work
- Admin
- Meeting
- KTLO (maintenance of existing system)
- Out of office
- Training

2. Select a **Task** from the pop-up list.

This can be anything from the Task table.

3. Select your name from the list in the **User** field.
4. Click **Submit**.

After the time card is created, the hours for that task can be incremented automatically from the **Time worked** field in the task record. This is controlled by a time card property, which is set to *true* by default. See the table of properties in this page for details. If automatic updates are not configured, the time card must be updated manually by the user or an administrator.

Time Card

= Required field

Update

Delete

Week starts on:	2010-05-23		Sunday:		0
State:	Submitted		Monday:		4
Category:	Task work		Tuesday:		2
Task:	PRJTASK0000013		Wednesday:		8
User:	Bow Ruggeri		Thursday:		3
			Friday:		4
			Saturday:		0
			Total:		21

Update

Delete

Managing Time Cards

The **My Time Cards > Current** module presents a page showing all of your time cards for the current week. There is also a control to **Generate Task Cards**. This button will search for all planned tasks that are scheduled for the current time card period, if you don't already have a time card for the task.

Properties

Users with the `timecard_admin` role can set time card properties by navigating to **Time Cards > Administration > Properties**.

Name	Description	Default
<code>com.snc.time_card.autocreate</code>	Auto-create a user's time card when they update a task	No
<code>com.snc.time_card.time_worked</code>	Auto-fill a user's time card with time from their 'Time worked' entries	No
<code>com.snc.time_card.update.effort</code>	Update the task's 'Actual effort' based on the hours entered in the time card	No
<code>com.snc.time_card.update.resource</code>	Update the project/user's resource allocation record based on the hours entered in the time card	No
<code>com.snc.time_card.start_day</code>	What day should time cards start on, default is Sunday. Changing this value may create duplicate time cards for the week of the change, since time card queries are based on this value.	Sunday

Managing Costs

When the cost management feature is enabled, time cards can be used to manage the cost of labor in the **Financial Management** application.

When a time card is marked **Approved**, the user's rate (listed in the **Labor Rate Card**) is used to generate a one-time Expense Line for the time worked. If no Labor Rate Cards apply to the user, the property `com.snc.time_card.default_rate` defines a default rate.

Roles

The `timecard_admin` role enables users to approve, modify, and delete the time cards of other users.

Activating Time Card Management

Administrators can activate the Time card management plugin.

Click the plus to expand instructions for activating a plugin.

If you have the admin role, use the following steps to activate the plugin.

1. Navigate to **System Definition > Plugins**.
2. Right-click the plugin name on the list and select **Activate/Upgrade**.

If the plugin depends on other plugins, these plugins are listed along with their activation status.

3. [Optional] If available, select the **Load demo data** check box.

Some plugins include demo data—sample records that are designed to illustrate plugin features for common use cases. Loading demo data is a good policy when you first activate the plugin on a development or test instance. You can load demo data after the plugin is activated by repeating this process and selecting the check box.

4. Click **Activate**.

References

- [1] https://docs.servicenow.com/bundle/jakarta-servicenow-platform/page/administer/task-table/concept/c_TimeCards.html
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