



SERENA®

SERENA AGILE ON DEMAND

Serena Agile On Demand

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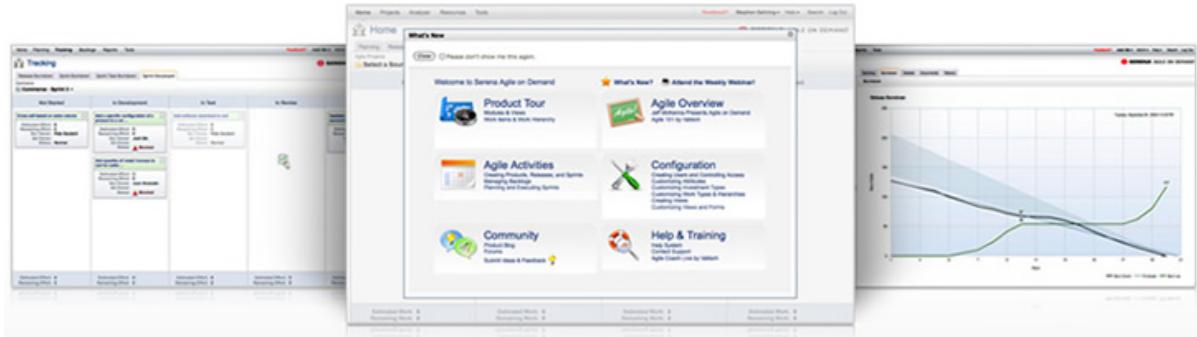
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Agile On Demand

Built by a team that includes two co-founders of SCRUM, Serena Agile On Demand combines agile management software, best-practices, and coaching into a revolutionary new product that will make your teams more effective and productive.



Agile On Demand is the ideal tool for multi-team and multi-project Agile environments.

- **All Your Projects In One Place** Does your team have more than one project? How about more than 50? With Agile On Demand, you can keep all of your projects in one place. Portfolio views and reports can be accessed in real time. Your portfolio can include multiple products, projects and teams. Agile On Demand handles complex enterprise portfolios and gives you a dashboard view of the health status of all your releases.
- **Team Backlogs** Use team backlogs to assign work from multiple projects to a single team. Product owners can assign work from the product and release backlogs into the team backlog. Then the team can break the work down into sprints according to priority and rank. Team backlogs can help you unlock the benefits of that single-team Agile experience for your entire organization. Just because your situation is complex doesn't mean that you cannot be Agile in your enterprise.
- **Innovation, Creativity, Visibility** Are all your teams doing Agile in their own way, with their own flavor? Now you can encourage innovation and creativity without sacrificing visibility. Agile On Demand allows each team to maintain their own configurations but still roll up all the data the business needs in reports and dashboards. The teams will be happy doing Agile the way they want. You'll still get visibility and insight across the portfolio of backlogs within your organization.
- **Super-Scrum And Scrum Of Scrums** Do you have a complex product and team structure with many teams working on dependant projects? Coordinating releases in that environment can be challenging to say the least. We've built flexible backlog views that will help you easily coordinate work between teams and projects. Super scrum is a strategic meeting that is held across projects to coordinate goals. Scrum of scrums is a tactical meeting that is held across teams to tackle impediments and coordinate sprints.

For more information, see the following topics:

- [Release Notes \[page 13\]](#)
- [Document Downloads \[page 19\]](#)
- [Guidance \[page 20\]](#)

- [Application Toolbar \[page 39\]](#)

Release Notes

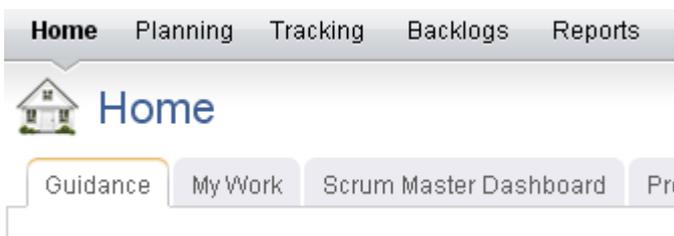
What's New

The following features and activities are new in Agile On Demand:

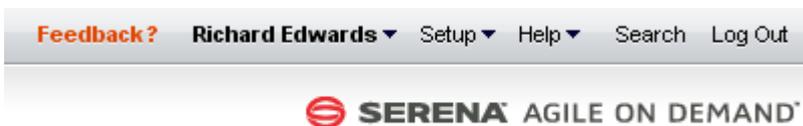
Simplified User Interface

Agile On Demand has an updated user interface with a simple, clean look and an information architecture that is built around an activity-based navigation. It is designed to make it easier to find what you want and to reduce the number of clicks it takes to get there.

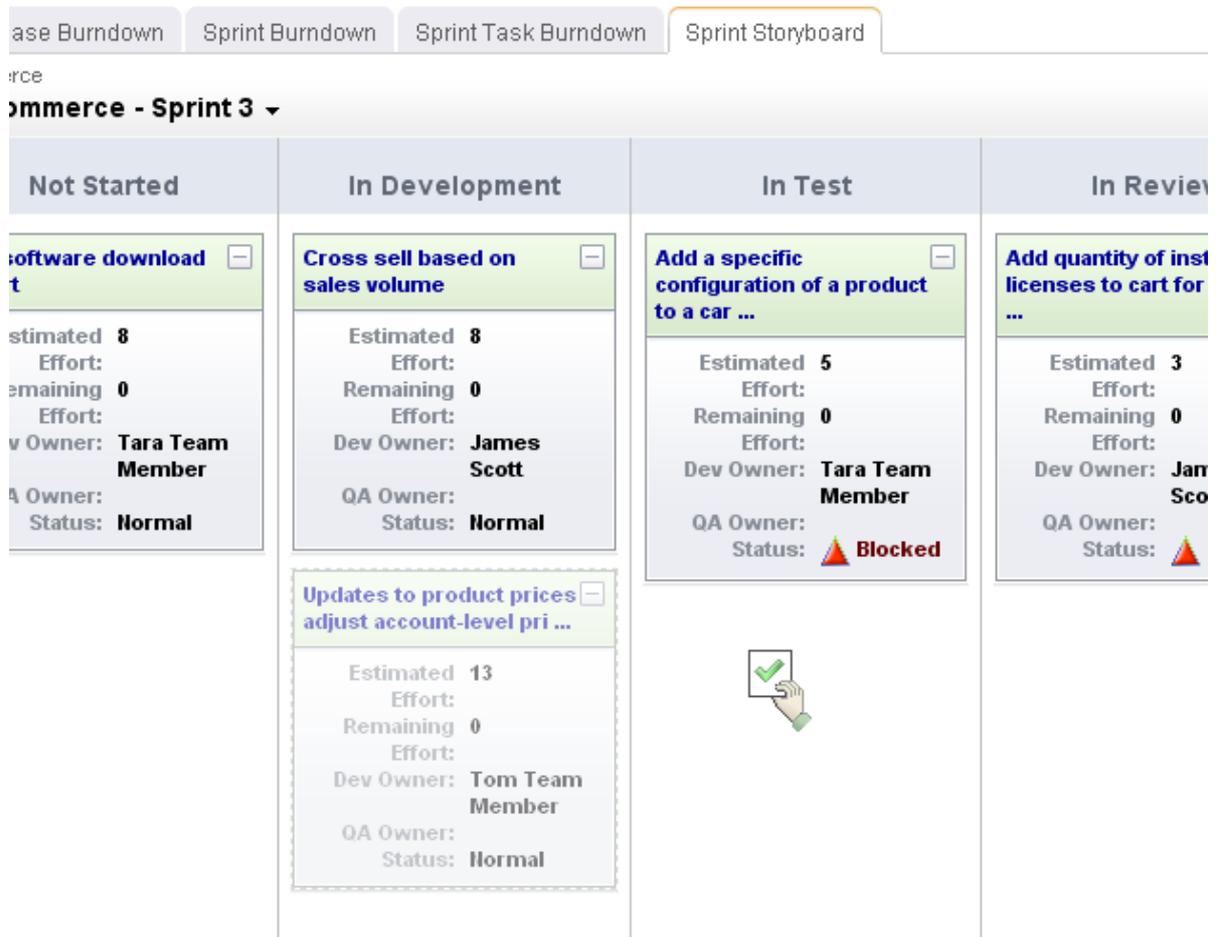
The simplified user interface contains modules (such as **Home**, **Planning**, or **Tracking**) from left-to-right:



The application toolbar contains the following options and settings (such as **Settings**, **Change Password**, or **Setup**) from right-to-left:



To access any module, change settings, find the Serena Agile community, search within your portfolio, and so on, just click the appropriate location in the application toolbar.



You can drag-and-drop work items within backlogs and you can drag work items from one backlog and drop them into another.

Icon	Description
	New backlog. This will drop the work item into the new backlog. The backlog will refresh and the work item will appear in the new backlog (and disappear from the old backlog).
	Re-rank. This will drop the work item into the selected location; the backlog will refresh and the work items will be in the new order.
	Re-parent. This will drop the work item into the selected location; the backlog will refresh and the work items will be in the new order.

Icon	Description
	<p>New phase. This will drop the work item into a new phase in a storyboard (or card wall). The storyboard will refresh and the work item will be moved to the new phase.</p>
	<p>Invalid. You cannot drag-and-drop a work item into a backlog when this icon appears.</p>

Firefox 3.5

Agile On Demand is now compatible with Firefox 3.5. (Only some administration tasks, such as customizing modules and views or creating custom attributes, will require Internet Explorer.) Microsoft Internet Explorer 8.0 is also supported.

Guidance

We have prepared a homepage that helps users to quickly see what the product can do and what types of Agile/SCRUM activities can be performed. You can select any activity in the Guidance page, learn more about that activity, or even be taken directly to the location in Agile On Demand where that activity is performed.

[Guidance](#)
[My Work](#)
[Scrum Master Dashboard](#)
[Product Owner Dashboard](#)
[Stakeholder Dashboard](#)

select your Process: [Basic Scrum](#) | [Advanced Scrum](#)



Setup Projects & Users

- ▶ [Create Project](#)
- ▶ [Add Users](#)



Build Backlogs

- ▶ [Import Backlog Items](#)
- ▶ [Author Stories](#)
- ▶ [Prioritize the Backlog](#)
- ▶ [Estimate the Backlog](#)



Plan Sprint

- ▶ [Plan your Sprint](#)
- ▶ [Break Stories into Tasks](#)

Author Stories

Agile on Demand offers intuitive, fast, and robust story authoring capabilities. Simply navigate to a backlog and click "Add" to enter in a new Epic or Story. You can continue adding items quickly by clicking "Save & Add Another" after every item.

[More Info](#)

Reports and Charts Enhancements

Agile On Demand launched in preview with ad-hoc reporting for project-level objects (products, releases, sprints, and so on). Now, you can create ad-hoc reports and charts on work-level objects (stories, tasks, defects, and so on).

Reports | (Status) Portfolio Status

Move/Copy Delete More...

Agile Projects

- (Status) Portfolio Status
- (Work) Story Effort & Task Hours

Products

- (Defects) Defects by Sprint
- (Status) Release Status
- (Summary) Product Work Totals
- (Work) Investments by Theme
- (Work) Items by Blocked Status

Teams

- (Status) Sprint Status
- (Summary) Team Velocity History

Datasheet Charts

Filtering is off

		Name
1	<input checked="" type="checkbox"/>	Agile Projects
2	<input checked="" type="checkbox"/>	Products
3	<input checked="" type="checkbox"/>	Shop Online
4	<input checked="" type="checkbox"/>	Alpha
5	<input checked="" type="checkbox"/>	Beta
6	<input checked="" type="checkbox"/>	Teams
7	<input checked="" type="checkbox"/>	Commerce
8	<input checked="" type="checkbox"/>	Commerce - Sprint 1
9	<input checked="" type="checkbox"/>	Commerce - Sprint 2
10	<input checked="" type="checkbox"/>	Commerce - Sprint 3
11	<input checked="" type="checkbox"/>	Commerce - Sprint 4

New Project Wizard

The New Project Wizard is a convenient feature that allows you to quickly create a set of intervals (products, releases, sprints, and teams). A few simple steps and you're done. Name your products and teams, specify the length of releases and the number of sprints each will contain, click OK and have the corresponding intervals created for you.

New Project Wizard

Product

The Product contains the Product Backlog of work items.

Name
Shop Online

Release

The Release contains the Release Backlog and is a time interval bounded by dates.

Starting Date
10/26/2009

Ending Date
3/29/2010

Sprints

Each Sprint contains a Sprint Backlog and is a time interval of the length specified here. Enough Sprints to fill the Release interval will be created for each Team.

Interval Length
2 weeks

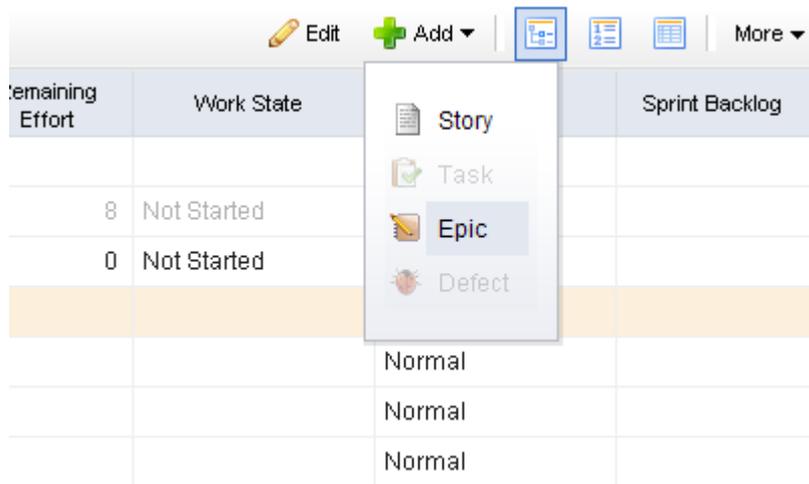
Teams

Each Team contains a Team Backlog and Sprints will be created within them.

New Team Name

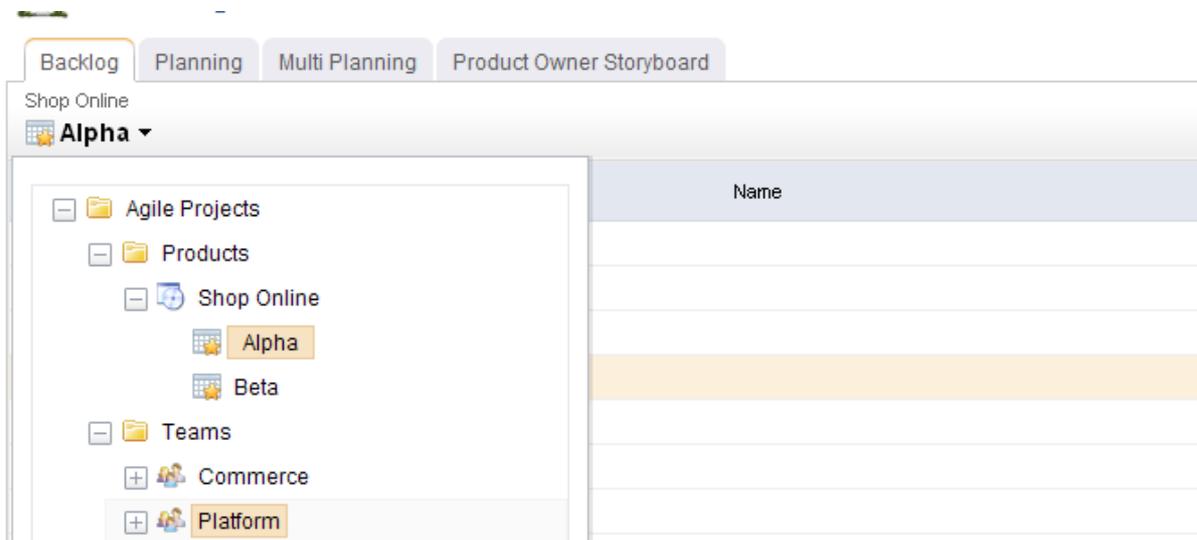
Widget Toolbar UI Improvements

We've improved the UI on our backlog widgets to more easily identify which backlog you're looking at, as well as what display-mode is currently enabled. Users can view their backlogs in a hierarchical tree-mode, a stack-rank backlog mode, or a table mode which supports filtering and grouping.



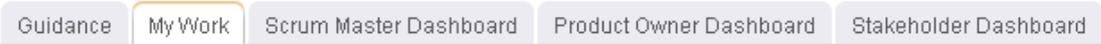
Improved Backlog Source Pickers

Agile On Demand provides flexible widgets for key Agile user interface elements such as burn-down charts, cardward, and backlogs. For those widgets, we have added a most recently used (MRU) list to the source pickers so that you can quickly switch to any recently used backlog. We have also made it possible to "link" source pickers on views that contain multiple widgets so that a single picker can act as source for all other pickers in the view. For example, when you change the source of the burn-down chart, the associated backlog widget will also change. Finally, we've made it possible to disable the picker on views where the source context is provided by the portfolio tree.



My Work

As a first step in displaying helpful information to developers, testers, and other team members, Agile On Demand now includes a backlog widget that displays work items assigned to the currently logged-in user, regardless of product, release, or sprint. This can provide a single location from which any team member can view all the work to which they have been assigned.

				
Name	Estimated Effort	Remaining Effort	Work State	Estimated Hours
 Add quantity of install licenses to cart for software	3	0	In Review	25
 Defect 10156				4
 Sign up for an Affiliate account	5	5	Not Started	0
 View Affiliate commission balance	8	8	Not Started	0

Total	16	13		29
--------------	-----------	-----------	--	-----------

JIRA Integration

Agile On Demand now supports a first-level integration with JIRA issue/defect tracking. This integration allows you to import JIRA objects into Agile On Demand or export Agile On Demand objects into JIRA as JIRA objects. bi-directional updates will also allow users to update JIRA objects from either JIRA or Agile On Demand and have the changes be reflected in real-time.

Defects Resolved

For a complete list of fixes in Serena Agile On Demand 2009 R3, consult the following query in the [Serena Support Knowledgebase](#).

Document Downloads

The following downloads are available for Serena Agile On Demand:



[Team Member's Guide](#)



[Documentation \(Full\)](#)

Guidance

The **Guidance** section describes scenarios and activities that are common within an Agile organization that is using Serena Agile On Demand. The sections are broken out by area, such as configuration (setting up projects and users), planning for releases and sprints, managing backlogs, and so on.

For more information, see the following topics:

- [Setup Projects and Users \[page 20\]](#)
- [Build a Backlog \[page 22\]](#)
- [Plan Releases \[page 26\]](#)
- [Allocate Work to Teams \[page 29\]](#)
- [Plan Sprints \[page 33\]](#)
- [Track Sprints \[page 35\]](#)

Setup Projects and Users

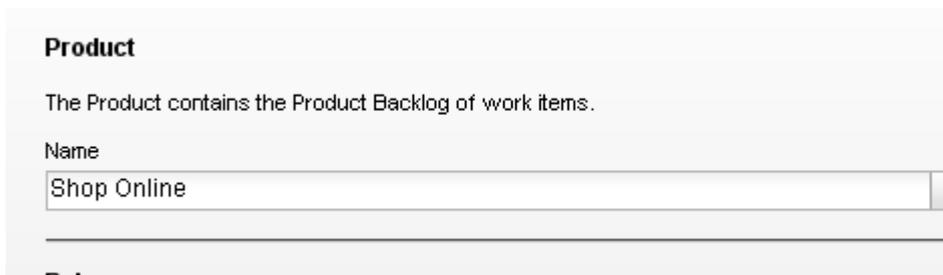
Before you can begin using Agile On Demand, you must first build out your portfolio and add team members. Once your portfolio has been created and team members have been added, you can then assign individual team members to any work item in a team backlog.

Add project

A simple way to begin using Agile On Demand is to create the products, releases, teams and sprints that will comprise your portfolio. Each of these items serves as an independent backlog to which work can added, moved, and tracked. The **New Projects Wizard** is the fastest and easiest way to set up a product, release, team, and sprint structure.

To create a project using the New Projects Wizard

1. Open the **Backlogs** module.
2. Click **More**, and then select **New Projects** to open the **New Projects Wizard**.
3. Enter the name of the project that you wish to add. Or select the name of an existing product.



The screenshot shows a web interface for the 'New Projects Wizard'. The 'Product' section is visible, with a description: 'The Product contains the Product Backlog of work items.' Below this, there is a 'Name' label and a text input field containing 'Shop Online'. A horizontal line separates the 'Product' section from the 'Release' section below it.

4. Enter the name of the release that you wish to add. Or select the name of an existing release. Define the length of the release.

Release

The Release contains the Release Backlog and is a time interval bounded by dates.

Starting Date: 10/26/2009

Ending Date: 3/29/2010

Sprints

5. Select the interval length for each sprint. The number of sprints created depends on the overall length of the release and the number of sprints each release will contain. For example, if you specify that each release is 9 weeks, and then you select a 3 week interval for each sprint, each release will then contain 3 sprints.

Each Sprint contains a Sprint Backlog and is a time interval of the length specified. Sprints to fill the Release interval will be created for each Team.

Interval Length

2 weeks

- 1 week
- 2 weeks
- 3 weeks

Team Backlog and Sprints will be created within them.

6. Enter the name of a new team or select the an existing team, and then click **Add**.

Each Team contains a Team Backlog and Sprints will be created within them.

New Team Name

Front End

Add

Selected Teams

Infrastructure

Help

7. After you have selected your products and teams and defined the length of a release and the number of sprint intervals each will contain, click **Next**.
8. Verify that the projects, resources, sprints, and teams are the actual work types you wish to create, and then click **Finish**.
9. Verify in the backlogs tree that you have created the correct projects, resources, sprints, and teams.

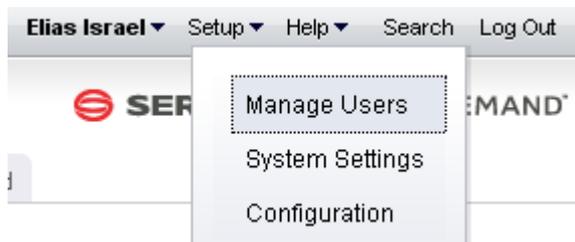
Add user

After you have finished using the **New Projects Wizard** to add products, releases, teams and sprints, the next step is to your team members into the system. Once added, you will

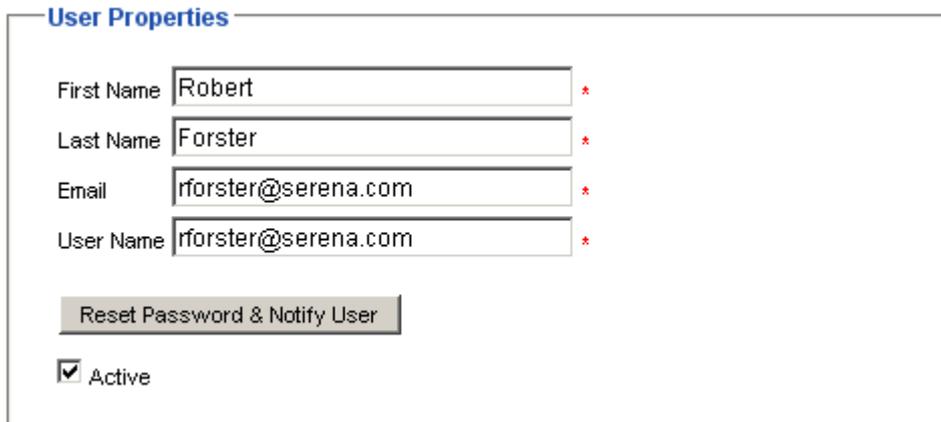
be able to assign team members to stories, tasks, and other work items. Team members will be sent an invitation (via email), from which they can log on and begin using Agile On Demand.

To add a user

1. From the application toolbar, click **Setup**, and then choose **Manage Users**.



2. Click **+** Add.
3. Under **User Properties**, enter the first name, last name, email address, and user name for the user.

A screenshot of the 'User Properties' form. The title 'User Properties' is in blue. There are four text input fields: 'First Name' (Robert), 'Last Name' (Forster), 'Email' (rforster@serena.com), and 'User Name' (rforster@serena.com). Each field has a red asterisk to its right. Below the fields is a button labeled 'Reset Password & Notify User'. At the bottom, there is a checked checkbox labeled 'Active'.

4. Click **Save**.

Build a Backlog

All work items are stored in a backlog. As you and your team make progress towards completing each work item, they will move to, from, and between the product backlog and any of its supporting release, sprint, and team backlogs. But before you can begin working on work items that are stored in a backlog, you must first create those work items.

Import work items

You can use the **Import Data** tab to download a template (a Microsoft Excel file) into which you can enter data about items, resources, resource roles, and resource teams, and then import that data into Agile On Demand.

In the template, there is a tab for each of the types of data that you can import: **Investments, Resource Roles, Resource Teams, Resources, and Agile Work Items**. On each tab, a single row represents a single item, resource role, resource team, resource, or work item that will be imported.

This is a feature that can be a useful way to add data, especially during the configuration phase of your deployment. However, this feature, when used carelessly, can add a lot of unnecessary data into your environment. Permission to use this feature should be granted carefully and only to people who are capable of removing unwanted data, should it get imported.

Some important things to remember:

- The **Import Data** feature should not be viewed as a way to manage data on a day-to-day basis.
- The tabs are imported in the following order: **Resource Teams, Resource Roles, Resources, and Investments**. It can be easier to import data one tab at a time; if you import data one tab at a time, you should use the same order for importing data as the tabs themselves (from left to right).
- Do not use characters in the template that are commonly used in Microsoft Excel as calculation indicators. For example, the ampersand symbol (&) may create a calculated cell and a calculated cell will fail upon import.
- You cannot have spaces in user names.
- Importing data should be done at times when there are no other users from your organization logged-in. The import process will fail when conflicts are caused by other work being done.
- There is no preview function.

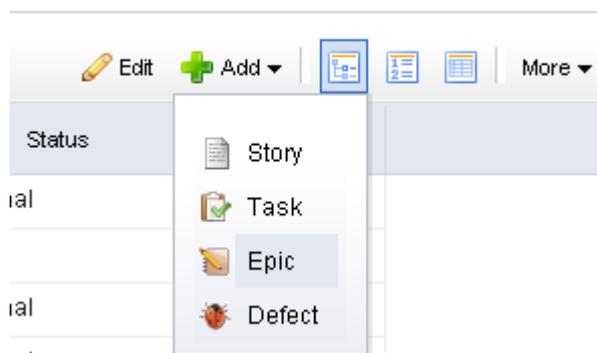
Depending on the amount of information you want to import, and the complexity of that information, you may need more detailed help, including descriptions of each tab in the template and a description of the messages you may encounter while importing information. You can get this information by clicking **Help** while working in the **Import Data** tab. Sometimes, access to attribute details within Agile On Demand may be necessary, and that access may require the assistance of your Administrator.

Author stories

Agile On Demand offers intuitive, fast, and robust story authoring capabilities. Simply navigate to a backlog and click "Add" to enter in a new Epic or Story. You can continue adding items quickly by clicking "Save and Add Another" after every item.

To author stories in a backlog

1. Select a backlog, choose  Add, and select the work item type you wish to add.



2. Enter the name and description for the work item.

Name

Description

B / **I** / **U** / **S** |    

Set the priority, business value, and theme.

1		
2		
3		
4		
5		
	Business Value	Theme
	8	Integration

3. Select the **Tracking** tab to assign an owner and to specify estimated and actual hours.

Product Owner	Estimated Effort
Elias Israel 	8
	Remaining Effort
	8

4. Select the **Notes** tab to enter any notes that may be needed for the work item or for the team member assigned to the work item.

Notes

B / **I** / **U** / **S** |    

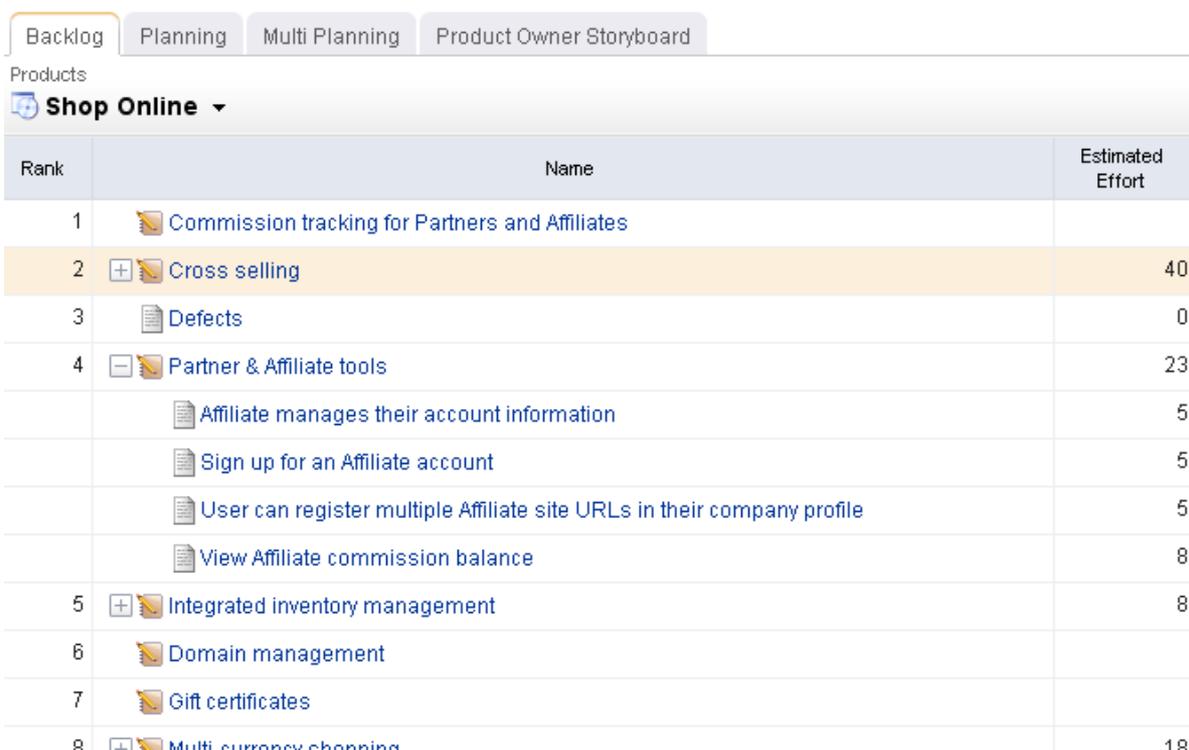
5. When you are finished, click **OK** to save this work item and close the dialog box. If you want to create another work item, click **Save & Add Another**.

Prioritize backlog

Before moving your stories between backlogs, such as from a release backlog to a sprint backlog, the work items in those backlogs should be prioritized. Prioritization (sometimes called stack-ranking) can be done in many ways, often depending on the phase of the process in which prioritization occurs.

- A product backlog often requires prioritization of major features (sometimes called epics) at a high level.
- A release backlog may require breakdown and elaboration of stories so that actual effort and dependencies may be factored in.
- A sprint backlog may need to be re-prioritized due to changes in staffing, the discovery of a defect that needs to be fixed, and so on.

Regardless of how or when a work item is prioritized, Agile On Demand makes it easy for you to move work items between backlogs, adjust priorities, change the ranking order, and so on, so that you are using the most effective method for your team. When you are working in a backlog, be sure to set the view mode to  List.



Rank	Name	Estimated Effort
1	 Commission tracking for Partners and Affiliates	
2	  Cross selling	40
3	 Defects	0
4	  Partner & Affiliate tools	23
	 Affiliate manages their account information	5
	 Sign up for an Affiliate account	5
	 User can register multiple Affiliate site URLs in their company profile	5
	 View Affiliate commission balance	8
5	  Integrated inventory management	8
6	 Domain management	
7	 Gift certificates	
8	  Multi currency shopping	18

Viewing a backlog in list view mode will ensure that you can view work items by relative priority (where a higher rank equals a higher priority). (By default, Agile On Demand shows backlogs in the  Tree view mode, which does not rank stories.)

To prioritize stories in a backlog

1. Select a backlog and click  List.
2. Choose the story you want to re-rank, select it (by holding down the mouse button), and then drag it to its new relative priority.

1	Commission tracking for Partners and Affiliates		
2	+	Cross selling	40
3		Defects	0
4	-	Partner & Affiliate tools	23
		Affiliate manages their account information	5
		Sign up for an Affiliate account	5
		User can register multiple Affiliate site URLs in their company profile	5

- When the work item is in the location you want it to be, de-select it (by releasing the mouse button). The backlog will refresh and the work items will have been re-ranked according to their new relative priority.

		Estimate	
1	Commission tracking for Partners and Affiliates		
2	+	Cross selling	40
3	-	Partner & Affiliate tools	23
		Affiliate manages their account information	5
		Sign up for an Affiliate account	5
		User can register multiple Affiliate site URLs in their company profile	5
		View Affiliate commission balance	8
4		Defects	0
5	-	Integrated inventory management	0

Plan Releases

Release planning is an exercise of finding out which features that are defined in the product backlog will help the team meet its current release objectives, as defined by the product roadmap. In general, product owners use this view to manage the epics--a collection of stories that are too big for a single sprint--that the development team will work on during the release. Epics (and their related stories) can be grouped by themes, priority, and so on.

Move stories into release backlog

Release planning involves moving stories from the product backlog to the release backlog. Which stories and how many stories should be moved into the release will depend on the following factors:

- **Release Capacity** How many story points worth of work can the teams deliver in a release timeframe?
- **Release Goals** The Release may be a 50% usability and 50% new feature-work release. You can use the "Theme" attribute or another custom attribute to "tag" stories within themes or categories. You can then display a product backlog view grouped by those themes to better visualize how stories fit into those categories.
- **Priority** You may choose to stack rank stories and move stories from the top of the list, or you may choose to assign a priority value (e.g. 1-5) to every story.

Moving stories can be done from the Planning view as well as the Multi-Planning view. The Planning view supports two backlogs in one screen, whereas the Multi Planning view

supports three backlogs in one screen. This is useful if you are moving items from two product backlogs into a single release, or a single product backlog into two releases, etc. Ultimately, which view you use is up to your preference. Use the one that your team finds most useful or create a custom planning view that maps to the way your team likes to do planning.

To move a work item to a new backlog

1. Select the work item you want to move, click and hold down the mouse button.

The screenshot shows the Jira backlog interface. On the left, the 'Beta' backlog is visible with a table of work items. The work item 'Defect 10156' is highlighted with a dashed orange border. A mouse cursor is hovering over the 'Defect 10156' row, and a red 'no' symbol (a circle with a diagonal line) is overlaid on the 'Total' row of the 'Platform - Sprint 1' backlog on the right, indicating that the item is being moved from this backlog to the 'Platform - Sprint 2' backlog below it.

Rank	Name	Priority	Estimated Effort	Remaining Effort
1	Access store branches via subdomains	1	3	3
2	Beta Defects		0	0
3	Defect 10156	2	13	13
4	View past order details	2	13	13
5	Send automatic notifications for out of	3	8	4
Total				

2. When you get the work item to the new backlog, release the mouse button.

The screenshot shows the Jira backlog interface after the work item has been moved. The 'Platform - Sprint 1' backlog now has a total remaining effort of 23. The 'Platform - Sprint 2' backlog now contains the work item 'View order status' with a remaining effort of 5. A mouse cursor is shown releasing the button on the 'View order status' row in the 'Platform - Sprint 2' backlog.

Remaining Effort	Name	Priority	Estimated Effort	Remaining Effort
3	Login using SSL	4	5	
	Manage inventory from in-house system	1	13	
0	View order status	3	5	
13				
4	Total		23	

3. The backlog will refresh with the updated work item list.

Platform				
Platform - Sprint 1				
Edit Add				
	Name	Priority	Estimated Effort	Remain Effort
3	Defect 10156	2		
	Login using SSL	4	5	
0	Manage inventory from in-house system	1	13	
	View order status	3	5	
3				
4				
	Total		23	0

Prioritize release backlog

Before moving your stories into sprints for execution, your backlogs should be prioritized. Prioritization (often stack-ranking) can be done at multiple planning levels. Prioritizing a release backlog requires a bit more precision than prioritizing the product backlog due to the closer delivery time-frame. Because of this, it is recommended that all prioritized release backlogs be stack-ranked in absolute order of priority. This provides clarity as to which stories should be moved into a sprint. Prioritizing a release may also require more break-down and elaboration of stories so that effort and dependencies may be factored into the prioritization. When you are in a backlog, make sure your view-mode is set to List mode, so that you can stack-rank stories in relative priority. By default, the Backlog view will display stories in Tree mode.

1	Integrated inventory management			
2	Multi-currency shopping			
3	Gift certificates			
4	Defects for Release: Alpha		0	0 Not Started
	Defect 11356			
5	Automated upsell recommendations			
6	Cross sell based on category		8	8 Not Started
7	Domain management		3	3
8	Customer writes a review for a product		8	8 Not Started

Allocate Work to Teams

A team should use its velocity to determine how many stories to which it can commit in an upcoming sprint.

- A sprint assignment is the process of moving a story into a sprint backlog from a release backlog or a team backlog.
- A team assignment is the process of moving a story into a team backlog from a release backlog.

Teams frequently commit to more than one story per sprint, but it is important to understand that the effort required to complete the work required by a single story (including all of its related tasks and dependencies) is done in a single sprint by a single Agile team. Some assignments (like tasks) are identified before the sprint begins, while others (like defects and impediments) are discovered during the sprint.

Move stories into team backlogs

Once your release backlog is defined and prioritized, you can assign (move) stories from the release backlog to a team backlog. Although this is an optional step, there are certain benefits to moving stories to teams before the sprint. In cases where the team may be working on stories from multiple products, they may need to organize or plan their work before the sprint to account for technical dependencies and other multi-product (or project) issues.

A highly self-organizing team can often add value by tasking out stories before they go into sprint planning, and estimating stories in their team backlog on a regular basis. It's important to note that all stories in a team backlog should be stories that are planned in a current or upcoming release. Because sprints are created as child-objects of teams, any story that is moved into a sprint is automatically moved into the team backlog by the system. As a rule of thumb, teams should become very familiar with stories in their team backlog before they get to Sprint planning. This not only helps their velocity over time, but ensures better stories are developed with a better understanding of business goals and quality.

You can drag-and-drop stories between backlogs. Use the CTRL key to select multiple stories before dropping them into a new backlog.

Name	Priority	Estimated Effort	Remaining Effort
Automated upsell recommendations	3		
Cross sell based on category	1	8	8
Defects for Release: Alpha		0	0
Defect 11356	1		
Domain management			
Gift certificates			
Integrated inventory management			
Multi-currency shopping			

Name	Priority	Estimated Effort	Remaining Effort
Customer writes a review for a product	3		
Set payout schedule	2		
View revenue source for commission sales	1		
Total			

To move a work item to a backlog

1. Select the work item you want to move, click and hold down the mouse button.

Rank	Name	Priority	Estimated Effort	Remaining Effort
1	Access store branches via subdomains	1	3	3
2	Beta Defects		0	0
	Defect 10156	2		
3	View past order details	2	13	13
4	Send automatic notifications for out of	3	8	4

Name	Priority	Estimated Effort	Remaining Effort
Login using SSL			
Manage inventory from in-house system			
View order status			
Total			

2. When you get the work item to the new backlog, release the mouse button.

Platform				
Platform - Sprint 1				
Remaining Effort	Name	Priority	Estimated Effort	Re
3	Login using SSL	4	5	
	Manage inventory from in-house system	1	13	
0	View order status	3	5	
13				
4	Total		23	

3. The backlog will refresh with the updated work item list.

Platform				
Platform - Sprint 1				
	Name	Priority	Estimated Effort	Remain Effor
3	Defect 10156	2		
	Login using SSL	4	5	
0	Manage inventory from in-house system	1	13	
	View order status	3	5	
3				
4				
	Total		23	0

Prioritize team backlog

Use release planning and sprint planning meetings to determine which stories should be moved into a specific Agile team's backlog. A team backlog should contain stories that will be committed to by a specific Agile team for an upcoming sprint. Stories in a team backlog should be well-written, have a high priority and a high business value. Stories in a

team backlog should have an accurate story point estimate before being moved into a specific sprint backlog.

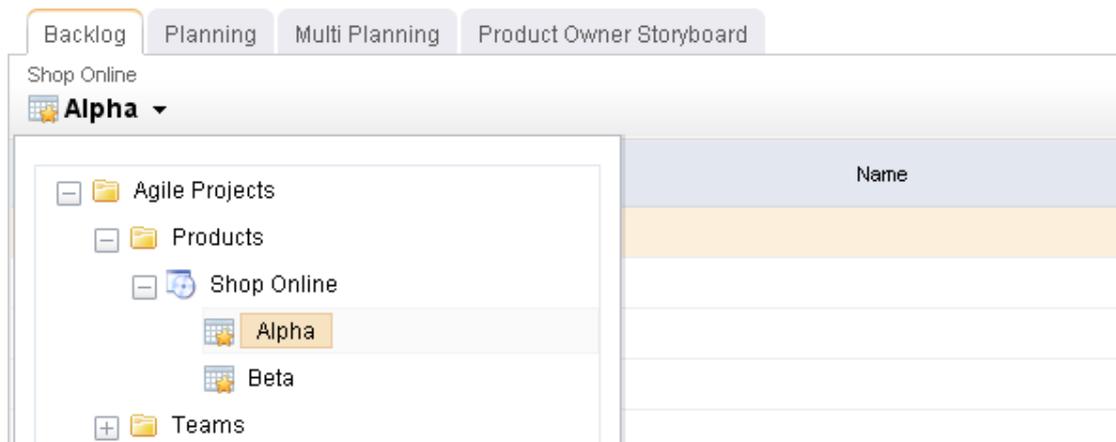
A work item in a team backlog can be moved to and from a release backlog (or another team's backlog) as needed, such as when business priorities change or when opportunities to create better business value arise. A work item in a team backlog can be added, edited, and removed as needed; however, any work item in a team backlog should have a high priority and a high business value.

Although managing team backlogs are optional, a team backlog may be prioritized by the team (with collaboration from the product owner) to account for technical dependencies and other factors that are unrelated to pure business priority. Note: When you are in the Backlog view, make sure your view-mode is set to  List, so that you can stack-rank stories in relative priority. By default, the Backlog view will display stories in  Tree mode.

You can prioritize a work item (sometimes called ranking a work item) in a backlog. Viewing a backlog in list view mode will ensure that you can view a work item by relative priority (where a higher rank equals a higher priority). (By default, Agile On Demand shows backlogs in the  Tree view mode, which does not rank stories.)

To prioritize stories in a backlog

1. Choose a backlog.



2. Click  List.
3. Choose the story you want to re-rank, select it (by holding down the mouse button), and then drag it to its new relative priority.

1	 Commission tracking for partners and affiliates	
2	 Cross selling	40
3	 Defects	0
4	 Partner & Affiliate tools	23
	 Affiliate manages their account information	5
	 Sign up for an Affiliate account	5
	 User can register multiple Affiliate site URLs in their company profile	5

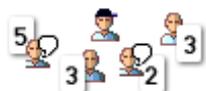
- When a work item is in the location you want it to be, de-select it (by releasing the mouse button). The backlog will refresh and the work item will have been re-ranked according to its new relative priority.

		Effort
1	Commission tracking for Partners and Affiliates	
2	Cross selling	40
3	Partner & Affiliate tools	23
	Affiliate manages their account information	5
	Sign up for an Affiliate account	5
	User can register multiple Affiliate site URLs in their company profile	5
	View Affiliate commission balance	8
4	Defects	0
5	Integrated inventory management	0

Estimate team backlog

Estimating a backlog is often done with the team during collaborative sessions where the team provides technical input on the stories. Agile On Demand ships with a standard SCRUM configuration which allows estimation of stories by relative effort using story points (Fibonacci series of numbers).

Planning poker is a method of estimating the sizes of user stories during sprint and release planning meetings. Team members discuss a user story for a short period of time, after which team members assign that user story a points estimate. This is often done using Fibonacci numbers (1, 2, 3, 5, 8, 13, and so on), where the lower numbers are easier to work on. The team members with the highest and lowest estimates defend their positions, after which team members re-assign that user story a points estimate.



Velocity is a method of determining how many story points of work a team can commit to in a future sprint based on how many story points of work a team was able to complete in previous sprints. As a safe, general rule, a team should never commit to more story points in a sprint than their average velocity over the 2-4 previous sprints.

Plan Sprints

A sprint is where all of the actual work happens. Because of the importance of each sprint in a release cycle, it is important to ensure that the right stories are being added to a sprint, that all aspects of a team's velocity is considered while adding stories, and that any impediments that might jeopardize getting these stories done during the sprint are identified and addressed.

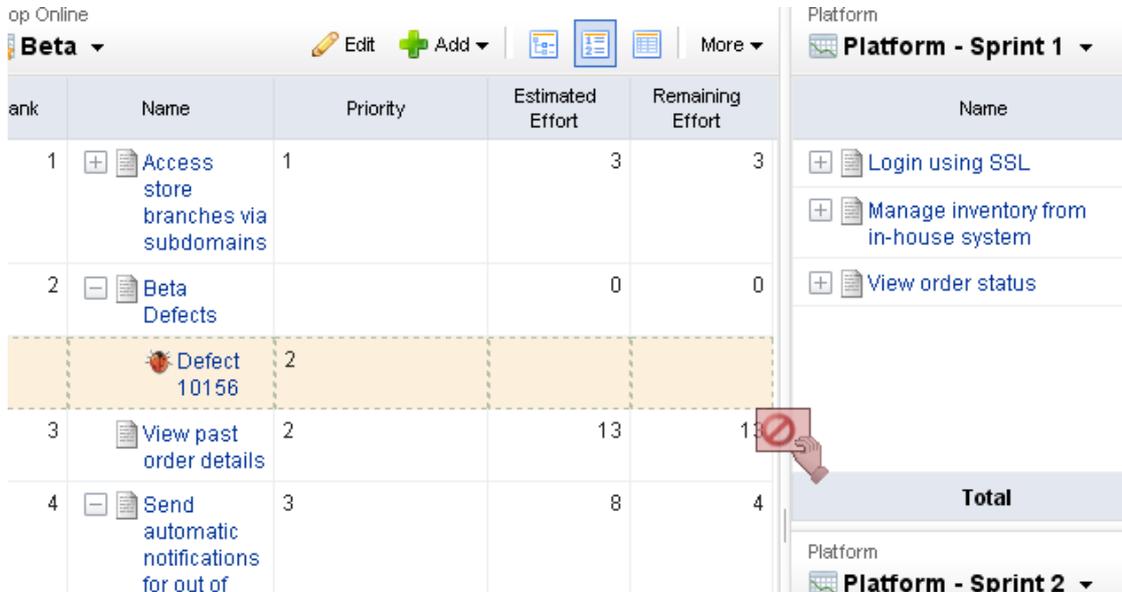
Plan sprint

Sprints can be planned after release backlogs have been defined, prioritized, and estimated. Moving stories from a release or team backlog into a team's sprint backlog is a simple matter of using drag-and-drop to move a work item from one backlog to another.

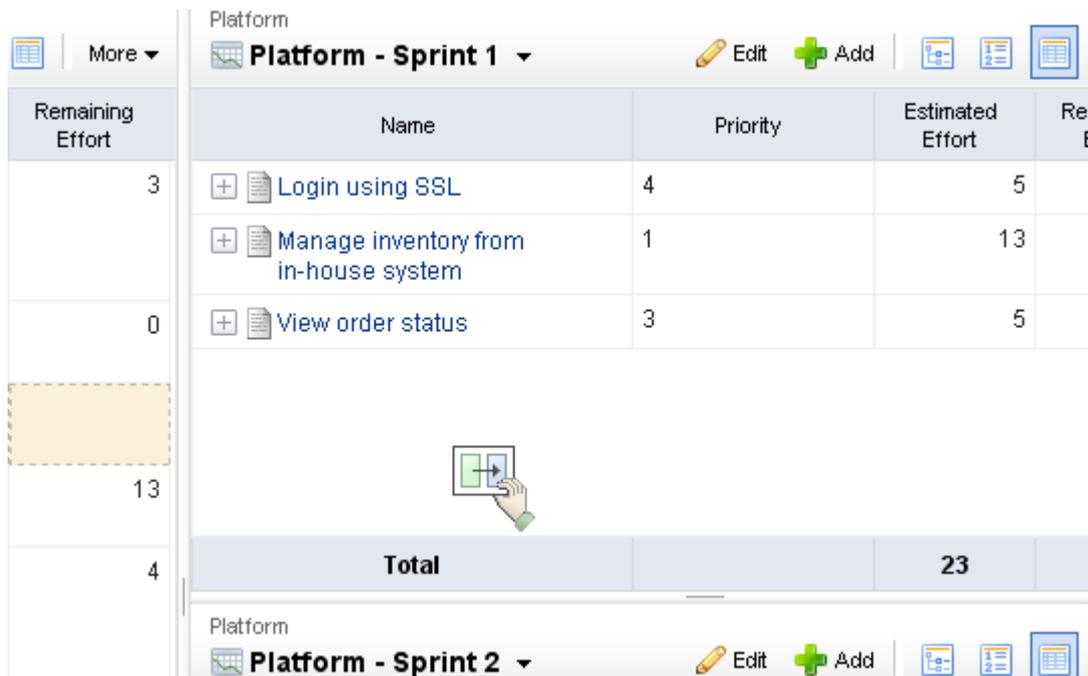
To move a work item into a sprint backlog, simply click the work item (and hold down the mouse button) while you drag it from one backlog to another.

To move a work item to a backlog

1. Select the work item you want to move, click and hold down the mouse button.



2. When you get the work item to the new backlog, release the mouse button.



3. The backlog will refresh with the updated work item list.

	Name	Priority	Estimated Effort	Remain Effort
3	Defect 10156	2		
	Login using SSL	4	5	
0	Manage inventory from in-house system	1	13	
3	View order status	3	5	
4				
	Total		23	0

Add tasks

User stories can be broken down into tasks by developers and testers to better track work after stories have been moved to the team backlog (for teams that plan ahead) or sprint backlog (for just-in-time planning). Tasks can be estimated via work-hours, to better reflect time spent by developers and testers. When you are working in a backlog, be sure your that the view mode is set to Tree so that the work hierarchy is visible (and so that a task shows as child work item of a story).

Track Sprints

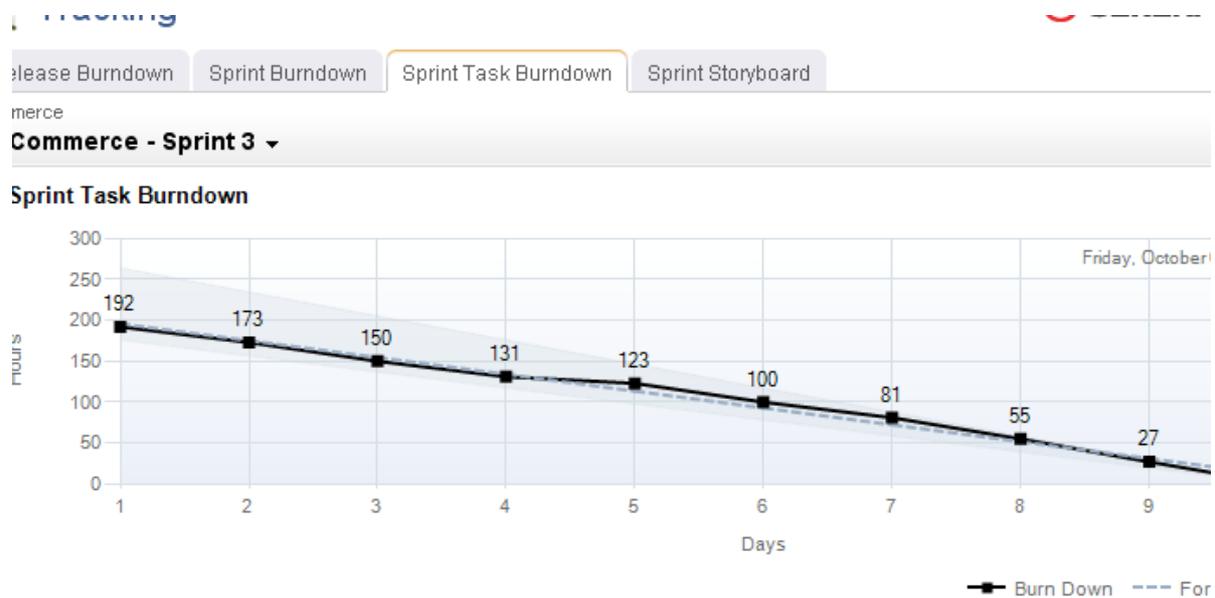
A sprint is where all of the actual work happens. Every day, team members gather in daily standup and quickly state what they have done, what they are going to do, and whether they have any impediments. Sprints rely on a team's velocity to determine how much work can be done in a future sprint and on a team's burndown chart to gauge how well a team is completing its work in a current sprint.

Daily standup

Daily standup occurs every day at a time that is convenient for all team members--usually in the morning--and often time-boxed at no more than 15 minutes. A burndown chart is used to view the team's overall status. The list of stories that are being worked on in the current sprint are viewed alongside a list of impediments (if there are any impediments). During standup, each team member addresses three key issues: what they have worked on since the previous daily standup, what they will work on today, and what impediments (if any) are present that could affect their current work item.

Because daily standup is a collaborative meeting, a given team may use multiple views to accomplish their daily standup goals. Many teams will choose to start by viewing their sprint burndown chart, from which the current health of a sprint can be viewed.

If your team has broken its stories down into tasks and is tracking task by hours, you may also want to review the sprint task burndown chart, which helps assess current progress by hours.



Commerce

Commerce - Sprint 3 ✎ Edit + Add

Name	Estimated Hours	Remaining Hours	Dev Owner	QA Owner	Task State
Parent = Add a specific configuration of a product to a cart	30	0			
📁 Acceptance Tests	10	0	Tara Team Member		Complete

A storyboard can be used to view all of the stories in the sprint, often organized by work status and grouped into the following phases: Not Started, In Development, In Test, In Review, and Accepted. A storyboard cleanly shows the stories that are being worked on, by whom, and where that story is in the development cycle.

Case Burndown Sprint Burndown Sprint Task Burndown **Sprint Storyboard**

Source

Commerce - Sprint 3 ▾

Not Started	In Development	In Test	In Review
<p>Software download [−]</p> <p>Estimated 8 Effort: Remaining 0 Effort: Dev Owner: Tara Team Member QA Owner: Status: Normal</p>	<p>Cross sell based on sales volume [−]</p> <p>Estimated 8 Effort: Remaining 0 Effort: Dev Owner: James Scott QA Owner: Status: Normal</p> <p>Updates to product prices adjust account-level pri ... [−]</p> <p>Estimated 13 Effort: Remaining 0 Effort: Dev Owner: Tom Team Member QA Owner: Status: Normal</p>	<p>Add a specific configuration of a product to a car ... [−]</p> <p>Estimated 5 Effort: Remaining 0 Effort: Dev Owner: Tara Team Member QA Owner: Status: Blocked</p> <p></p>	<p>Add quantity of instance licenses to cart for ...</p> <p>Estimated 3 Effort: Remaining 0 Effort: Dev Owner: Jan Sco QA Owner: Status: Blocked</p>

During standup, stories may be updated as information is shared among team members, stories may be transitioned from one phase to another, and so on.

Manage defects

A defect is a bug, an issue, or some problem with the quality of the product. Defects can be identified by customers, by members of your sales or support organizations, and (most often) by members of your own team (testers and engineers).

Serena Agile On Demand comes configured with a lightweight way to manage defects. Using this lightweight approach, any defect that is found during a sprint can be added as a defect, similar to how a task is added as a child to a story. If this approach is used, then that defect will need to be fixed before the parent story can be completed.

Platform

Platform - Sprint 3 Edit Add

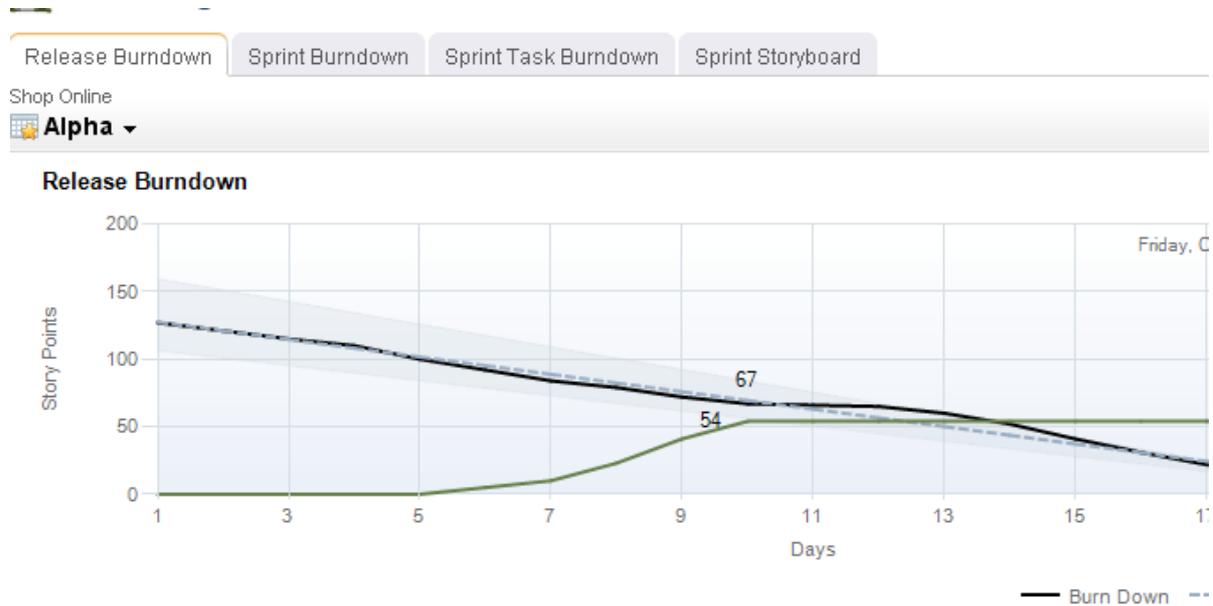
Name	Estimated Effort	Remaining Effort	Dev Owner	QA Owner
Customer support chat	29	0		
Product reviews	5	0		
Email request to review a purchased product	5	0	Tara Team Member	Ac
Acceptance Tests			Tara Team Member	

- Story
- Task
- Epic
- Defect

Another approach is to create defects independently. Using this approach, defects should be grouped under a generic story called Defects (or the name that is most meaningful to your team) that is used in the same manner for all products, releases, and sprints. All defects live under this story and can be moved among backlogs as long as they are being moved as part of the same parent container.

Track release status

A release status meeting gives all team members (and other stakeholders) visibility into the current status of any given release. You can use a release burndown chart to help show the progress of the release, view the distribution of work item objectives as they relate to story points, and view a team's historical velocity. Release status is typically monitored by a product owner or by a group of stakeholders. In SCRUM, a release burndown chart is used as the primary method of monitoring the release status.



Shop Online
Alpha Edit +

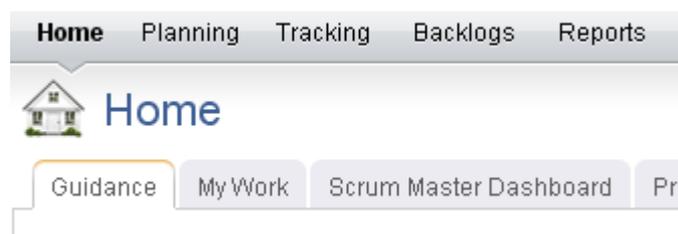
Name	Estimated Effort	Remaining Effort	Accepted Effort	
[-] Sprint Backlog = {BLANK}	16	12	0	
Cross sell based on category	8	8	0	Not E

Review sprints

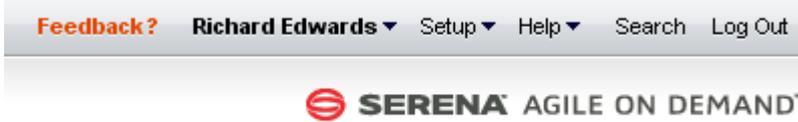
A sprint review meeting (or retrospective) should occur at the end of every sprint (and often at the end of every release too). A sprint review gives team members (and other stakeholders) to give each other honest feedback about how well the sprint or review was (or was not) executed. The purpose of the review is to identify areas of improvement, identify successes and failures, and to learn and grow as a team so that it can improve its performance in future sprints.

Application Toolbar

The application toolbar is the place around which most activities in Serena Agile On Demand are based. For example, the out-of-the-box configuration of Agile On Demand contains the following modules (from left-to-right: **Home**, **Planning**, **Tracking**, **Backlogs**, **Reports**, and **Tools**).



The application toolbar contains the following options and settings (from right-to-left: **Settings, Change Password, Setup, Help, and Search**).



To access any module, change settings, find the Serena Agile community, search within your portfolio, and so on, just click the application toolbar for the appropriate activity. Modules are configurable as well, so your administrator may have added custom elements to your application toolbar.

For more information, see the following topics:

- [Change Password \[page 40\]](#)
- [Help \[page 41\]](#)
- [Log Out / Log In \[page 44\]](#)
- [Print \[page 45\]](#)
- [Rich Text Editor \[page 47\]](#)
- [Search \[page 47\]](#)
- [Settings \[page 50\]](#)
- [Setup \[page 52\]](#)

Change Password

For each database to which you have been given access, your password is the same. Passwords are case-sensitive, and must be at least four characters long and must conform to the password policy settings for your organization. There are three password policy settings:

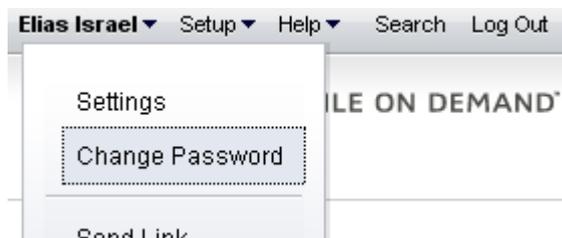
- **Strong** The password must be between 8-16 characters and must contain at least one number (0-9), one lowercase letter (a-z), one uppercase letter (A-Z), and one non-alphanumeric character (such as #, \$, !, or %).
- **Medium** The password must be between 8-16 characters and must contain at least one number (0-9), one lowercase letter (a-z), and one uppercase letter (A-Z). Default.
- **Weak** The password must be between 4-16 characters.

Change password

You can change your password at any time and as often as you want.

To change your password

1. From the application toolbar, select your name, and then choose **Change Password**.



2. In the **Change Password** dialog box, enter your current password, and then your new password (twice).

A screenshot of the 'Change Password' dialog box. It contains three input fields, each with a dotted mask for the password. The fields are labeled 'Old Password', 'New Password', and 'Confirm New Password'. The 'Old Password' field is the top one, followed by 'New Password', and 'Confirm New Password' at the bottom.

3. Click **OK**.

Help

Click **Help** to access the following additional resources: **Coach Live**, **Environment Info**, **Help**, **Product Blog**, **Support Forum**, **Tutorials**, and **What's New**. For more information about any of these additional resources, click one of the following tabs.

Coach Live

Valtech is a pioneer and a thought leader in the field of Agile software development. We have developed our own unique Agile adoption methodology built on the extensive experience of working in our own Agile environment for more than a decade. This approach provides the momentum and ready-to-use structure our clients need to "go Agile." We also provide accelerated knowledge transfer and just-in-time learning services to help with all phases of the Agile transformation.

Valtech is pleased to offer our Agile methodology expertise to the Serena Agile On Demand user community. Coach Live is your on-demand resource for Agile methodology coaching. With Coach Live, you can schedule time to talk with a Valtech Agile coach about any aspect of your Agile methodology. Valtech offers expertise to help companies of all sizes make the move to Agile and then to improve their Agile methodology and practices to achieve maximum performance.



Appointment times are
in central timezone

Coach Live Valtech

Dallas, Texas

1. Service & Staff

2. Date & time

3. Your details

4. Confirm

5. F

Service: *60 Minute Coaching Session* [Cl](#)

Staff: *Jan B.*

Select a Date & Time

October 2009

Monday, October 12

Su	M	T	W	Th	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17

Morning

Afternoon

[8:00 am](#)

[12:00 pm](#)

[8:30 am](#)

[12:30 pm](#)

To schedule a Coach Live session, simply click the choose **Help** from the application toolbar and then Coach Live. Once you have opened Coach Live, select an available time slot of the desired duration, and follow the step-by-step instructions to schedule a session. Your specific Agile methodology questions are a vital part of the scheduling process. We want your Coach Live session to be as productive and to the point as possible. When you submit your questions or issues during the scheduling process, it gives our coaches a chance to think about, research, and collaborate on advice tailored to your specific situation.

1. Service & Staff

2. Date & time

3. Your details

4. Confirm

5. Finish

Confirm your appointment



Your appointment is not quite locked in yet! Please review your details below and if they are correct click the confirm button. After confirming you should soon receive an email confirmation. This email may contain additional instructions so please review it.

Appointment: *60 Minute Coaching Session* [Chang](#)
with *Jan B.*
on *Monday, October 12, 2009* at *8:30 AM*

Your details: Robert Forster [Chang](#)
(650)-481-3400
rforster@serena.com

Additional info: Hi there. I would like to schedule a coaching session to

Coach Live is your on-demand resource for Agile methodology coaching. With Coach Live, you can schedule time to talk with a Valtech Agile coach about any aspect of your Agile methodology and practices. Valtech offers expertise to help companies of all sizes make

the move to Agile and then to improve their Agile methodology and practices to achieve maximum performance.

Coach Live provides your Agile On Demand account Named User the opportunity to schedule 30 - 60 minute sessions with a Valtech Agile coach. All team members who can benefit from a Coach Live session are invited to attend as well.

Environment Info

The **Environment Info** dialog box provides information about the connection type, database version, most recent update, and other information that may be helpful if you ever need to talk with Serena Support.

Current User	
Connection Name	QABVT01_AOD_SpudDB_20091007_02
Database Version	2009.04.00.0002
Last Database Update	Mariner_2009_04_Migration.sql
Last Updated On	10/7/2009

Help

The **Help** will open the documentation for the product. Most help links are context-sensitive; the topic that is opened usually depends on the location from which you clicked help.

nts

Agile on Demand

Release Notes

Guidance

Setup Projects and Users

Build a Backlog

Plan Sprints

Track Sprints

Allocate Work to Teams

Plan Releases

Application Toolbar

File

Reports

Resources

Workspace

Manage Users

System Settings

Configuration

Reference

[Agile on Demand](#) → [Guidance](#) → Setup Projects and Users

Setup Projects and Users

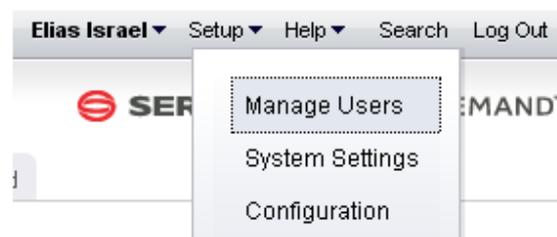
Before you can begin using Serena Agile On Demand, you must create team members. Once created, any individual team member can be assigned to stories.

Add project **Add user**

After you have finished using the **New Project Wizard** the next step is to add your team members into the system. Once created, any individual team member can be assigned to stories, tasks, and other work items. Team members can then log on from which they can log on and begin using Agile On Demand.

To add a user

1. From the application toolbar, click **Setup**, and then click **Manage Users**.



2. Click Add .
3. Under **User Properties**, enter the first name, last name, and email address.

[User Properties](#)

When you are viewing Help, you can navigate the full contents of the help using the left-side TOC. Click a topic that has an arrow next to it to view subtopics. You can use the breadcrumbs found across the top of many of the topics to navigate back up the hierarchy. Most topics that have child topics will have a mini TOC within the topic. Many topics also contain tabs, generally for task-based topics, but not always. Additional help can be found at the top in the tabs. For example, Agile On Demand has the Agile 101 tab, which contains methodology content from Valtech. There is also a simple search feature. Though it's not as powerful as Google, it should help you find the topics in the help collection that contain the words from your query. To return to the full help TOC (after viewing a topic you have searched for), simply click the Help tab at the top.

Support Forum

The Serena Support forum is a place where you can see highlights and questions that have been asked by other customers, including answers to issues other customers may have run into while using the product. There are two ways to find the support forum: from the application toolbar, click **Help** and then **Support** or click **Feedback**. They are different access points into the same support system.

Community / Overview

Ask a question Share an idea Report a problem Give praise

Ask a question. We'll look for answers. **Cor**

Highlights Recent Activity (5 new topics today) See tr

FREQUENTLY ASKED QUESTIONS

Log Out / Log In

Before you can access modules, views, and other features, you must first log on with your username and password. When you are finished, you should log out.

Log out

When you are finished working, you should log out.

To log off

1. From the application toolbar, click **Log Out**.

Log in

Before you can access modules, views, and other features, you must first log in with your user name and password.

To log on

1. Type your user name and password. Click **Log In**
2. Select your database. Click **Continue**.

Print

When you click the **Print** button on the application toolbar in the **Charts, Summary**, and **Timegrid** tabs in the **Reports** module, or in the **Financials** tab in the **Projects** module, the **Print** dialog box opens. When you print a datasheet, chart, or financials data using the **Print** dialog box, it is printed to a portable document format (PDF (.pdf)) file. The **Print** page contains two tabs, the **General** tab and the **Options** tab. The **General** tab is used to define the general and margin settings, including the font, paper size and orientation, and page numbering used for the PDF (.pdf) file. After filling out the **General** and **Options** tabs, click the **Print** button on the **Print** dialog box to print the datasheet or chart to the PDF (.pdf) file.

To print to a PDF (.pdf) file and view the PDF (.pdf) file, Adobe Acrobat Reader 6.02 or later must be installed on the machine from which you are printing.

- **Font** Select the font and font size to use from the **Font** lists.
- **Paper Size** Select the size of the paper you want to use.
- **Orientation** Select *Portrait* to print using the portrait orientation. Select *Landscape* to print using the landscape orientation.
- **Include page numbers** Select this option to include page numbers on each page.
- **Save Settings** Select this option to save your general and margin settings on the **General** tab. When **Save Settings** is selected, the settings on the **General** tab will be the default settings each time you open the **Print** dialog box. Selecting **Save Settings** does not save your settings on the **Options** tab.
- **Left** Type the left page margin you want to use for the pages of the PDF (.pdf) file in inches.
- **Right** Type the right page margin you want to use for the pages of the PDF (.pdf) file in inches.
- **Top** Type the top page margin you want to use for the pages of the PDF (.pdf) file in inches.
- **Bottom** Type the bottom page margin you want to use for the pages of the PDF (.pdf) file in inches.

The view you are currently in determines the boxes available on the **Options** tab. In the **Charts** tab, the **Options** tab is used to determine whether all of the selected datasheet's charts are printed or just the currently selected chart. In the **Summary** and **Timegrid** tabs, the **Options** tab is used to determine whether charts defined for the selected datasheet's dashboard are printed to the PDF (.pdf) file, whether text wraps when the datasheet is printed, and the column settings for the PDF (.pdf) file. In the **Financials** tab, the **Options** tab is used to determine whether the PDF (.pdf) includes the *Self*, *Roll-up*, and *External* values, entries from the **View** pane, and/or the Breakeven chart for the work item. The **Options** tab is also used to define the maximum number of columns allowed on a page.

After filling out the **General** and **Options** tabs, click the **Print** button on the **Print** dialog box to the PDF (.pdf) file.

When you print a chart to a PDF (.pdf) file, only the default attributes defined for the chart on the **Attributes** tab and the default datasheet snapshot defined on the **Chart Settings** tab on the **Chart Properties** dialog box are used for printing the chart. Default attributes are the first attribute listed in each parameter box on the **Attributes** tab. The default datasheet snapshot is the snapshot selected in the chart using this data list on the **Chart Settings** tab.

To print datasheets or charts to a PDF (.pdf) file and view the PDF (.pdf) file, Adobe Acrobat Reader 6.02 or later must be installed on the machine from which you are printing.

- **All Charts** Select this option to print all of the selected datasheet's charts.
- **Selected Chart** Select this option to only print the chart currently selected in the **Charts** tab.

For the **Options** tab in the **Reports** module, **Summary** tab:

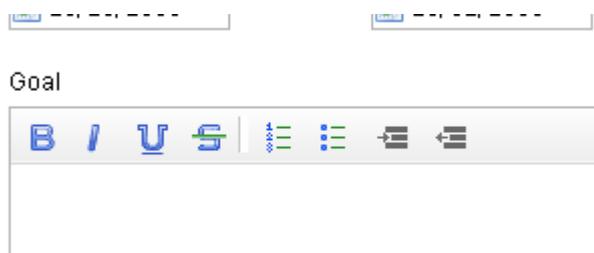
- **Include Dashboard Charts** Select this check box to print the charts defined for the selected datasheet's dashboard. When you print a chart to a PDF (.pdf) file, only the default attributes defined for the chart on the **Attributes** tab and the default datasheet snapshot defined on the **Chart Settings** tab on the **Chart Properties** dialog box are used for printing the chart. Default attributes are the first attribute listed in each parameter box on the **Attributes** tab. The default datasheet snapshot is the snapshot selected in the chart using this data list on the **Chart Settings** tab.
- **Include Summary** Select this check box to print the datasheet's summary information with the datasheet. The **Include Summary** check box is selected by default. Clear the check box to exclude the datasheet's summary information from the datasheet.
- **Maximum Columns Per Page Type** The maximum numbers of summary columns to print on a page for the selected datasheet.
- **Percentages** The **Percentages** box displays the current column width percentages for each column of the summary section on the selected datasheet.
- **Allow Cells to Wrap** Select the **Allow Cells to Wrap** check box to have the text in the datasheet's cells wrap when you print the datasheet. Clear the check box to turn off the text wrapping.
- **Include Timegrid** Select the **Include Timegrid** check box to print the datasheet's timegrid data with the datasheet. The **Include Timegrid** check box is selected by default when there is timegrid data on the selected datasheet. Clear the check box to exclude the datasheet's timegrid information from the datasheet. (This check box is only available in the **Timegrid** tab.)
- **Maximum Columns Per Page Type** The maximum numbers of timegrid columns to print on a page in the **Maximum Columns Per Page Type** box for the selected datasheet. (This box is only available in the **Timegrid** tab.)
- **Percentages** The **Percentages** box displays the current column width percentages for each column of the timegrid section on the selected datasheet. The percentages for each column of the timegrid section on the selected datasheet. The columns are listed from left to right. (This box is only available in the **Timegrid** tab.)

For the **Options** tab in the **Financials** tab:

- **Include Details** Select the **Include Details** option to include all *Self*, *Roll-up*, and *External* values, as well as any work item from the View pane for each tab in the **Financials** tab in the PDF (.pdf).
- **Include Breakeven Chart** Select this option to include the Breakeven chart for the work item in the PDF (.pdf).
- **Maximum Columns Per Page Type** The maximum numbers of columns to print on a page.

Rich Text Editor

The rich text editor is enabled for description fields. It allows simple formatting of contents within these description fields, such as bold, italics, underlines, or strikethroughs. You can add ordered or unordered lists. You can indent and outdent text.



Search

The **Search** dialog is used to search for a work item, log entry, resources, documents, and work item types. You can access the **Search** dialog from every view. The **Search** dialog consists of a standard search view and an advanced search view for refining your search. To open the advanced search view, click **Advanced**. To hide the advanced search view, click **Hide Advanced**.

Search

The search feature allows you to find any searchable attribute found in a work item, log types (such as issues, risks, or documents), or resources. In the default mode, you can specify the type of match you want (any or all words), a particular attribute to search in, and the object type. When searching against **All Investments**, a log item, any work item, and resources will not be included in the search results.

To search for attributes, log types, work items, and resources

1. In the application toolbar, click **Search**.
2. Enter the details for the search query you wish to make. Click **Advanced**

Search for	<input type="text" value="DEF287262"/>	<input type="button" value="Search"/>
In attribute	<input type="text" value="Description"/>	<input type="button" value="Advanced"/>
Match	<input checked="" type="radio"/> any word <input type="radio"/> all words	
Display	<input type="text" value="Defect"/>	

Name	Description
------	-------------

3. Click **Advanced** to add rules, rule details, search within documents stored in Agile On Demand, or search across all project types.

The screenshot shows a search configuration window with the following sections:

- Rules:** An empty list box.
- Rule Detail:**
 - Logic: And Or
 - Attribute: Description
 - Comparison: is equal to
 - Compare To: the specific value another attribute
- Documents:** Search In Keywords Title Description
- Extended Options:** All Project Types Selected item and descendants

4. Click **Search**.

Search criteria

When you are searching for documents, document file names are always searched, and can search document keywords, title, and/or description. Text within a document is not searched. When you are searching datasheets, the work item hierarchy for all portfolios is searched or the selected portfolios and its descendants in the **Reports** tab, it does not search a datasheet's resulting data.

- **Search for** Type the text you want to search for in this box. You can enter a any alpha-numeric value. To search for a specific string, enclose the text in quotation marks.
- **In Attribute** This drop-down list enables you to select a specific attribute to search. This can help refine your search and reduce false-positive returns. For example, if you want to find a work item and know that the work item name contains the term "router", you can search only for instances of the word "router" in the *Name* attribute. Your administrator determines which attributes are searchable. All searchable attributes are included in this drop down list.
- **Match: any word** Select this option to have the search results include any of the text you typed.

- **Match: all words** Select this option to have the search results include all of the text you typed. To search for a specific phrase, type quotation marks at the beginning and end of the phrase in the **Search for** box.
- **Display** To further refine your search, use this option to specify the object type against which your search executes. You can choose to search only work item types or a particular work item type, all logs or a particular log type, or only for a work item, resources, or documents. For example, if you are searching for the term "router" in the *Name* attribute, and you know that the work item for which you are searching is a project, specify *Project* in the display drop down.
- **Search** Click the **Search** button to start the search.
- **Advanced** When you click the **Advanced** link on the **Search** page, the following features are available for refining your search. You can hide the advanced search features by clicking the **Hide Advanced** link on the Search page.

Advanced Search criteria

The **Advanced Investment Criteria** section is used to search for specific work item data.

- **Rules** Lists all of the current rules set up for the work item search criteria.
- **Up** Moves the selected rule up in the **Rules** list.
- **Down** Moves the selected rule down in the **Rules** list.
- **Delete** Removes the selected rule from the **Rules** list.
- **And** Select this option to indicate that the work item you are searching for must meet the conditions of the selected rule and all other rules that do not begin with **Or**.
- **Or** Select this option to indicate that the work item you are searching for must meet the conditions of the selected rule, or all the rules that do not begin with **Or**, or another rule that begins with **Or**.
- **Attribute** Select the attribute you want to create a search rule for from this list. Only the attributes that have been marked as searchable in the **System Settings** module are displayed in the **Attribute** list.
- **Comparison** Select the test you want to apply to the attribute selected in the **Attribute** list.
- **Comments To** Select what the search criteria should compare the attribute to: This specific value. Select the this specific value option and type a value in the box below the options to only search for a work item with the **Comparison** relationship to the value you specified for the selected attribute. If you are searching for a percentage value, type the percentage decimal value in the **Comments To** box. For example, you would type .20 in the **Comments To** box for 20 percent. Select the another attribute option and select an attribute from the list below the options to only search for a work item with the **Comparison** relationship between the two selected attributes.
- **Update** Click this button to update the selected search rule.
- **Add** Click this button to add the rule to the search.

- **Documents** This section is used to determine whether to use document keywords, title, and/or description when searching for documents. Document file names are always searched.
- **Keywords** Select this check box to search document keywords when searching for documents.
- **Title** Select this check box to search document keywords when searching for documents.
- **Description** Select this check box to search document descriptions when searching for documents.
- **Extended Options** This section is used to determine whether any work item is searched or only the work item and its descendants currently selected in the Items pane.
- **All Investments** Select this option to search any work item.
- **Selected investments and descendants** Select this option to only search the work item currently selected in the **Portfolios** pane and any descendants.

Settings

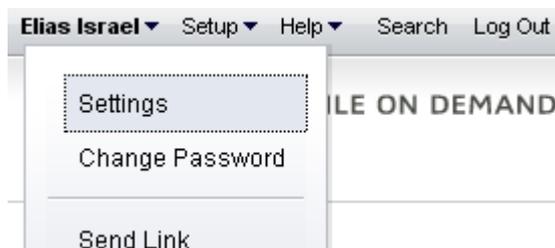
Use the **Settings** dialog box allows you to configure the tabs you want available from your homepage, whether you want to receive email notifications, and the sorting order for a work item.

Homepage

Your homepage is available from the application toolbar. You can choose which tabs you want to have on your homepage. In addition to the out-of-the-box homepages, such as **My Work** or a role-based dashboard, your administrator may have configured additional homepages.

To configure your homepage

1. From the application toolbar, select your name, and then choose **Settings**.



2. In the **Settings** dialog box, choose the tabs that you want to make available from your homepage. Move the homepages that you want to use to the right. The tabs will appear in your homepage from left-to-right based on the order (top-to-bottom) they appear in the **Settings** dialog box.

Homepage



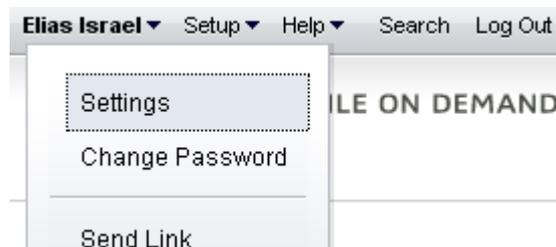
3. Click **OK**.

Notification Settings

You can choose to receive email notifications for any notification you have configured from the **Define Notifications** tab from the **Tools** module.

To configure notification settings

1. From the application toolbar, select your name, and then choose **Settings**.



2. In the **Settings** dialog box, indicate whether you want to receive email notifications, and then select the email locale you wish to use.

Notification Settings

Receive Notifications as Email

Email Locale

English - United States

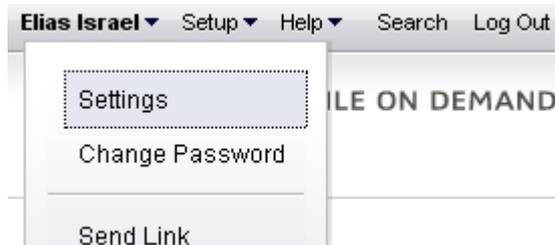
3. Click **OK**.

Sorting order

You can pick any work item attribute to use as the primary sorting preference for a work item, such as **Name**, **Estimated Hours**, or **Start Date**. This sort order preference is available from any backlog when that backlog is viewed using the **Tree** option.

To configure your work item sorting order preference

1. From the application toolbar, select your name, and then choose **Settings**.



2. In the **Settings** dialog box, select the work item attribute you wish to sort a work item by, and then choose **Ascending** or **Descending**.

Item Tree Sort Order

Sort By

- Ascending
 Descending

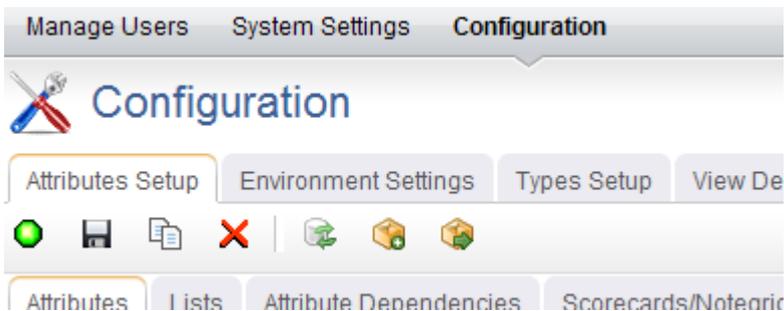
3. Click **OK**.

Setup

Click **Setup** to manage users, configure the application, and change settings.

Configuration

After you have created users, added licenses, defined security roles (and assigned users to them), you are ready to configure the application. The **Customization** module is used to manage the work item types, attributes, and views that your organization wants to use.



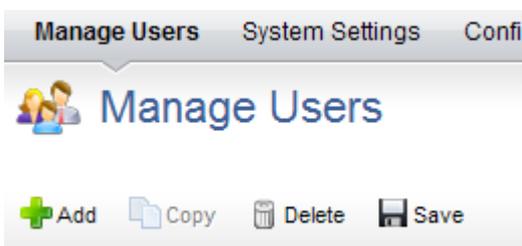
The **Configuration** module helps you configure the following:

- **Attributes Setup** You can use the **Attributes Setup** tab to create and manage work item type attributes.
- **Environment Settings** You can use the **Environment Settings** tab to manage system settings, such as documents management, workflow, and reporting server settings or to configure system notifications.
- **Module Designer** A module (sometimes called a homepage) can be used to provide a daily starting point for members of your organization, including individual contributors, project and resource managers, portfolio analysts, and so on. You can use the **Module Designer** tab to create and modify homepage layouts and to help provide a centralized view into the information that users in your organization need.

- **Types Setup** A work item is what users in your organization use to create, plan, manage, and analyze your projects. They can be assets, programs, projects, or portfolios. They can be the stages in a lifecycle, such as a request, an approval, or a rejection. They can be the phases in an Agile lifecycle, such as projects, releases, and sprints. They can have dependencies on another work item.
- **User Synchronization** You can use the **User Synchronization** tab to manage the XML configuration file that contains the field mappings between attributes and a directory service, such as Active Directory or Novell eDirectory. When you create a provider, you have the option of managing some aspects of that provider in the **User Synchronization** tab.
- **View Designer** You can use the **View Designer** tab to modify the layout of financials views and to create custom summary views for use in the **Projects** module. Custom summary views are also used to layout item request pages.
- **View Management** You can use the **View Management** tab to manage work item types, log views, and the order in which views appear in modules.

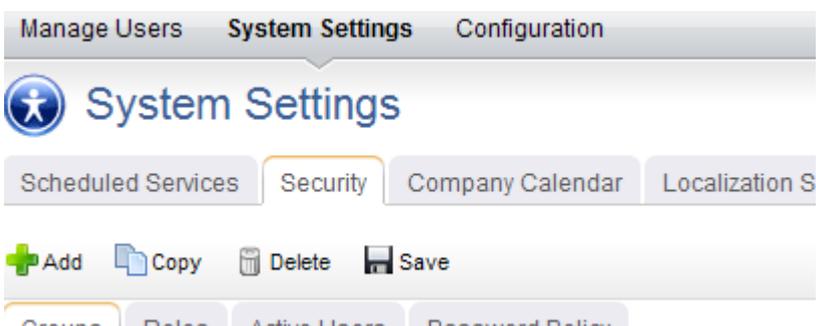
Manage Users

The **Manage Users** module helps you manage the users of your application. You can add, edit, and delete users, you can change the roles to which users belong, and you can reset passwords.



System Settings

The **System Settings** module is used to set up and configure financial settings, scheduled services, calendar settings, localization settings, system notifications, licenses, and security configuration for your organization.



The **System Settings** module helps you configure the following:

- **Company Calendar** You can use the **Company Calendar** tab to customize the calendar being used by your organization. You can define your organization's working and non-working days, you can define the days in your organization's working week, and you can define the number of hours in a day that makes up a full working day. These settings are used to determine resource capacity and scheduling

for resources that are used in task plans or for the number of days that can appear in a sprint burndown chart. Individual resources have their own calendars and they may override company calendar settings in their local calendar (if they are given permission to do so).

- **Localization Settings** You can use the **Localization Settings** tab to modify the strings that appear in the application's user interface. This can help your organization address any localized language requirements that you may have. If you add new elements, such as views, attributes, forms, or charts, you will be able to localize the strings associated with the new elements.
- **Scheduled Services** You can use the **Scheduled Services** tab to create and maintain scheduled jobs and plug-ins. Jobs that are in the queue are run sequentially, with the next job in the queue starting after the current one is finished. In general, most jobs should be scheduled to run at off-peak times.
- **Security** You can use the **Security** tab to manage the users and groups of users who will be working, and to define the security roles that allow them to access the **Projects, Reports, Resources, Tools, System Settings,** and **Customization** modules.
- **System Notifications** You can use the **System Notifications** tab to manage the notifications that will be available to all of the users in your organization. System notifications are available for many events associated with the lifecycle of a work item, such as adding resource allocations or assigning risks. The full list of system notifications is available in the **System Notifications** tab.

Agile

Agile software development is an approach to building software in a way that promotes short iterations that can be repeated throughout the entire lifecycle of a project. Although there isn't a single Agile method or methodology, they all do share a common approach, often using short 2- to 3-week sprints (sometimes called iterations) to build and then release features to customers. Agile teams are comprised of stakeholders from across the organization. Face-to-face is the preferred method of communication. It is important to note that Agile is not a methodology in which there are no rules. In fact, many Agile teams follow very disciplined and rigorous processes to achieve their goals, and much use is made of project management skills and tools.

For more information, see the following topics:

- [Overview \[page 55\]](#)
- [Actions \[page 74\]](#)
- [Widgets \[page 100\]](#)

Overview

The ideal Agile process is simple and repeatable. It's scope is high-level, but with specific goals. Scope is defined in a product roadmap. Goals are the features that add business value to the product. The process relies on similar patterns across levels, but with a greater focus on detail as a team gets closer to doing actual work. This does not mean that making that process work is easy. In fact, making an Agile process work can be hard, but the steps within the process itself are simple.

Every Agile process relies on basic framework:

- **Work Type** An Agile process has defined relationships between the types of work done during each stage in the process. For example, a project contains one or more releases, a release contains one or more sprints, and every working day in a sprint contains a daily standup.
- **Work Items** A work item is an epic, story, or a task. An epic can contain one or more stories, a story can contain one or more tasks. A work item is always stored in a backlog and should be discussed in planning meetings. During daily standup, every team member answers the same questions about any work item to which they have been assigned.
- **Backlogs** An Agile process has a common backlog, from which any specific work item is associated to a release backlog or to a sprint backlog. In general, as the work type gets smaller, two things should happen: the size of a work item that is associated with it should get smaller and the amount of information contained within that work item (description, acceptance criteria, technical notes, story sizing estimates, and so on) should get larger.
- **Teams** Every Agile process is highly dependent on the quality of its team members. Product owners. Scrum masters. And individual team members.

The relative simplicity of an Agile process helps your organization move past the traditional project management focus on process and helps to put more emphasis on the interactions between team members towards deliverables and towards customer's needs and requests. After you have completed each step in the Agile process (such as

completing a sprint, release, or product), your team should have a retrospective, discussing what went well and identifying areas of improvement.

The following diagram shows the relationships between all of the elements in the Agile lifecycle, including a work type (product, release, sprint, and team), any work item types (epic, story, task, impediment, and defect), planning (product, release, and sprint), and backlogs (product, release, sprint, and team).

Even though the basic structure of Agile is used by most organizations that use Agile, their approach to the details is rarely the same. There will be different names for a work item, work type, or backlog. There will be different relationships and orders of any work type. There will be different lengths of each phase within the lifecycle. There will be different approaches for how a work item is managed and defined in the backlog.

In order to make Agile work well in your organization, you need to constantly refine it and sometimes re-define it. The relationships of the a work type, a work item, and a backlog is (in part) defined by your organization's work breakdown structure and (in part) defined by how your organization chooses to measure business value. In other words, the success of any Agile process has as much to do with an organization's commitment to Agile as it does to how an organization chooses the actual steps within the process.

For more information, see the following topics:

- [Team Roles \[page 56\]](#)
- [Intervals \[page 56\]](#)
- [Storyboard \[page 68\]](#)
- [Backlogs \[page 69\]](#)
- [Work Items \[page 72\]](#)

Team Roles

Many Agile organizations are comprised of the following roles:

Role	Description
Product Owner	An individual who represents the voice of the customer and manages what is in (or not in) a backlog (product, release, and sprint).
Scrum Master	An individual who leads the team during a sprint, including running daily standup, tracking velocity, and dealing with impediments that may have been identified by team members.
Team Member	A team member is a member of a team. A team comprises all of the team members who commit to all of the work required to complete a single story during a single sprint, including all tasks and dependencies that are related to that story.

Intervals

There are four primary intervals (also called a work type) in the Agile process:

Interval	Description
Products	Products contain one or more releases, into which any high priority and high business value work item can be moved. A product roadmap is used to outline what will be done over the next 2-4 releases and it helps drive all work item movement into a release backlog.
Releases	Releases contain one or more sprints. As each upcoming sprint is planned for, well-written stories will be moved into the sprint backlog. As each sprint is completed, a review meeting is held where the successes and failures of the current sprint are openly discussed among team members and the new and/or improved features are demonstrated to the team and other product stakeholders. After all sprints in a release are completed, actual progress is compared to expected progress (as outlined in the product roadmap).
Sprints	A sprint is where all of the actual work happens. Every day, team members gather in daily standup and quickly state what they have done, what they are going to do, and whether they have any impediments. Sprints rely on a team's velocity to determine how much work can be done in a future sprint and on a team's burndown chart to gauge how well a team is completing its work in a current sprint.
Teams	Teams contain all of the individual team members who belong to a single SCRUM team.

In the Agile process, in addition to a primary work type, there are also teams. At minimum, every organization has at least one team and every team has its own sprint (in which progress against any work item is tracked). Some Agile organizations prefer to map multiple teams to a single release, which means that each team would have its own series of sprints in which progress against any work item that is tracked.

For more information, see the following topics:

- [Planning \[page 57\]](#)
- [Products \[page 58\]](#)
- [Releases \[page 59\]](#)
- [Sprints \[page 62\]](#)
- [Teams \[page 67\]](#)

Planning

Planning is all about getting ready for the next step in the Agile process. Product planning identifies the features needed for upcoming releases and helps determine what is in (or not in) the product roadmap. Release planning prepares the Agile team (or a group of Agile teams) for a series of upcoming sprints. Sprint planning prepares an Agile team for the work that is to be done by them during each day in an upcoming sprint. Backlogs are the location where a work item is tracked and managed during every phase of the Agile process.

Serena Agile On Demand includes two out-of-the-box views that can be used for planning. The **Planning** tab features two side-by-side backlogs, while the **Multi Planning** tab

features a primary backlog side-by-side with two backlogs. These backlogs can be used for product, release, and sprint planning. Once a specific backlog has been chosen, the same basic collection of actions are available: add a work item, edit a work item, edit a work item (directly in the grid), view as table, list, or tree, and viewing work item properties. A work item can be selected, and then moved to other backlogs using drag-and-drop.

The screenshot displays the Product Owner Storyboard interface. At the top, there are tabs for 'Multi Planning' and 'Product Owner Storyboard'. Below the tabs, there are icons for 'Edit', 'Add', and 'More'. The main area is divided into three columns: a primary backlog on the left and two side-by-side backlogs on the right.

Primary Backlog Table:

Item	Priority	Estimated Effort	Remaining Effort
ory management		13	0
story from tem	1	13	0
ie Tests			
ient			
urance			
ent		5	0
atus	3	5	0
ie Tests			
ient			
urance			
g		5	0
SSL	4	5	0

Commerce Team Backlog Table:

Name	Priority
Commission tracking for Partners and Affiliates	
Set payout schedule	2
View revenue source for commission sales	1
Product reviews	
Customer writes a review for a product	3
Total	

Platform Team Backlog Table:

Name	Priority
Commission tracking for Partners and Affiliates	
View commissions on	2

Products

Products contain one or more releases, into which a work item with high priority and high business value is moved. A product roadmap is used to outline what will be done over the next 2-4 releases and it helps determine what will be moved into the release backlog.

For more information, see the following topics:

- [Product Planning \[page 58\]](#)
- [Roadmap Planning \[page 59\]](#)

Product Planning

Product planning is a way to help your team (and other stakeholders) determine what will be included in future releases. Product planning should identify key business goals, should outline the high-level features that provide the most business value and have the highest priority, and should provide visibility into the project for all stakeholders, including executive sponsors, external teams (such as support, sales, or marketing), and team members.

Product planning is not meant to be exhaustive. Nor is it meant to be anti-Agile (by preventing team members from making the right decisions at the release and sprint levels). Some organizations need to be able to place the value of a product into other contexts, such as a budget or in comparison to other Agile teams within the organization.

The screenshot shows a Jira Planning board for 'Platform - Sprint 1'. The board has columns for Name, Priority, Estimated Effort, and Remaining Effort. The tasks listed are:

Name	Priority	Estimated Effort	Remaining Effort
Integrated inventory management		13	0
Manage inventory from in-house system	1	13	0
Acceptance Tests			
Development			
Quality Assurance			
Order management		5	0
View order status	3	5	0
Secure shopping		5	0
Login using SSL	4	5	0

The right-hand sidebar shows a list of tasks for the 'Commerce' team:

- Commission tracking for Partners and Affiliates
- Set payout schedule
- View revenue source commission sales
- Product reviews
- Customer writes a review for a product

Roadmap Planning

A product roadmap is a forward-looking overview of a product backlog. The purpose of a product roadmap is to describe the features that will be delivered in the next 2-4 releases. Use product roadmap planning to help determine which releases to target for specific feature enhancements.

Releases

Releases contain one or more sprints. As each upcoming sprint is planned for, well-written stories will be moved into the sprint backlog. As each sprint is completed, a review meeting is held where the successes and failures of the current sprint are openly discussed among team members and the new and/or improved features are demonstrated to the team and other product stakeholders. After all sprints in a release are completed, actual progress is compared to expected progress (as outlined in the product roadmap).

For more information, see the following topics:

- [Release Planning \[page 60\]](#)
- [Release Status \[page 60\]](#)
- [Release Burndown \[page 61\]](#)

Release Planning

Release planning is an exercise of finding out which features that are defined in the product backlog will help the team meet its current release objectives, as defined by the product roadmap. In general, product owners use this view to manage the epics--a collection of stories that are too big for a single sprint--that the development team will work on during the release. Epics (and their related stories) can be grouped by themes, priority, and so on.

Product owners should work to ensure that a release aligns with the overall project's goals and business value. They will determine the release schedule (the number and frequency of releases), themes for the release, epics that support the themes, and the length of the sprints contained with the releases. In general, shorter releases require shorter sprints. Sprint lengths range from 1-4 weeks, and are usually on the smaller end of that range. A release plan should always be visible to team members.

The screenshot shows a 'Product Owner Storyboard' with two main columns: 'Elaborating' and 'Pre-Planning'. On the left, there are two items: 'Multiple Affiliate site' and 'account', both with a 'Normal' status. The 'Elaborating' column contains two items: 'View Affiliate commission balance' (Priority: 4, Business Value: 15, Estimated Effort: 8, Status: Normal) and 'Defects' (Priority: 0, Business Value: 0, Estimated Effort: 0, Status: Normal). The 'Pre-Planning' column contains one item: 'View past order details' (Priority: 2, Business Value: 15, Estimated Effort: 13, Status: Normal). The interface includes tabs for 'Multi Planning' and 'Product Owner Storyboard'.

Release Status

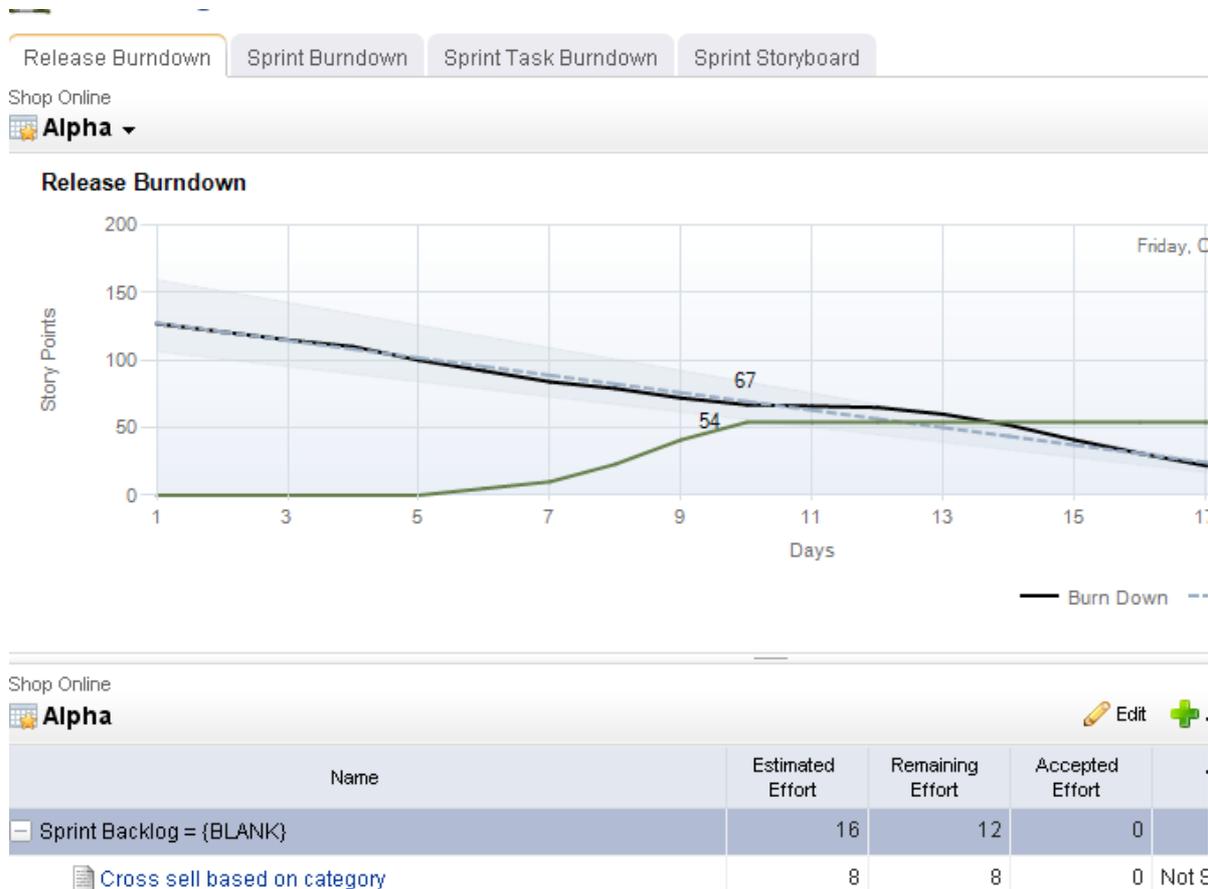
A release status meeting gives all team members (and other stakeholders) visibility into the current status of any given release. You can use a release burndown chart to help show the progress of the release, view the distribution of work item objectives as they relate to story points, and view a team's historical velocity.

Release Burndown

A burndown chart is a simple way of measuring a team's progress during a sprint by comparing the working days in the sprint to the total number of story points to which the team committed. A story is considered complete when it has zero story points remaining and has been accepted by the product owner. A sprint can be considered complete when the total story points to which the team committed reaches zero. Ideally, this occurs on the last working day of the sprint. Working days in a sprint are defined by the working days in your organization's company calendar.

A burndown chart can be useful at several points within the Agile lifecycle: during a release, during a sprint, and for a specific task. A release burndown chart is useful for tracking the progress of a release by using a single metric (such as total story points remaining or total work hours remaining) and comparing it against the original total toward which the team has made a commitment. As team members update this metric for any individual work item they are assigned, the release burndown chart is updated to show the overall progress of the team.

Serena Agile On Demand includes an out-of-the-box release burndown chart as part of the **Tracking** module. The release burndown chart is used to view the current status of the release, sorted by sprint in the related backlog pane. An out-of-the-box burndown chart will show the backlog from which the burndown chart is based as part of the release, sprint, and task burndown chart views.



Sprints

A sprint is where all of the actual work happens. Every day, team members gather in daily standup and quickly state what they have done, what they are going to do, and whether they have any impediments. Sprints rely on a team's velocity to determine how much work can be done in a future sprint and on a team's burndown chart to gauge how well a team is completing its work in a current sprint.

The primary goal of a sprint is to add a new piece of shipping software to an application. This could be one or more new features, a small collection of improvements (fixed defects), and so on, as long as the completed (and accepted) work results in something of actual value for a customer.

For more information, see the following topics:

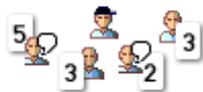
- [Sprint Planning \[page 62\]](#)
- [Sprint Burndown \[page 64\]](#)
- [Daily Standup \[page 65\]](#)
- [Sprint Review \[page 67\]](#)

Sprint Planning

Sprint planning is used to define the list of stories that a team will commit to building during a single sprint for a given release. Story points are assigned using the team's velocity as a guideline for determining how many story points can be committed to for a single sprint. This view is similar to the release planning view, but is targeted at the sprint level.

Planning Poker

Planning poker is a method of estimating the sizes of user stories during sprint and release planning meetings. Team members discuss a user story for a short period of time, after which team members assign that user story a points estimate. This is often done using Fibonacci numbers (1, 2, 3, 5, 8, 13, and so on), where the lower numbers are easier to work on. The team members with the highest and lowest estimates defend their positions, after which team members re-assign that user story a points estimate.



The purpose of planning poker is to achieve a consensus among the team as to the relative sizing for all user stories that are candidates to be moved into a sprint backlog or to be worked on during any single sprint. The user story sizing estimates help product owners select the user stories with the highest business value.

User story size estimates are intended to show how much effort is required in order to complete the work on an individual user story. In general, user stories assigned a 1, 2, or 3 are user stories that can be completed in a single two week sprint by two or fewer team members. User stories assigned a 5 or an 8 are more difficult, may require many team members, may have dependencies on other user stories, or may be too big to complete during a single sprint. Some user stories with a 5 or an 8 sizing estimate should be broken down into smaller user stories. User stories assigned a 13 (or greater) are almost always

too large to be worked on during a single sprint and should be broken down by product owners into smaller user stories.

That said, there should be no literal meaning associated with any particular number in the Fibonacci sequence other than the meaning your team learns to associate with them over time. Some teams use standard playing cards, with an Ace representing a 1 and a King representing a 13.

Velocity

Velocity is a method of determining how many story points of work a team can commit to in a future sprint based on how many story points of work a team was able to complete in previous sprints. As a safe, general rule, a team should never commit to more story points in a sprint than their average velocity over the 2-4 previous sprints.

But velocity is more than a simple math exercise. There are good velocities. And there are bad velocities. How do you know one from the other? Some characteristics of a good velocity:

- Story points are measured independently of the size of the team.
- Story points are sized to include all of the business priorities and goals of the Agile project.
- Story points are sized to include dependencies on all team members.
- Story points are sized to account for dependencies on external teams, such as support, sales, or training.

Most characteristics of a bad velocity are simply the opposite of a good velocity, such as committing to a number of story points that is only based on the number of team members available during the sprint. Or not factoring the potential complexity of a new series of features as they relate to the amount of time your support organization will need to be ready for the upcoming product release, the amount of time it will take your sales team to learn how to successfully engage potential customers, or by not accounting for the amount of time it may take a training team (or a documentation team) to produce customer-facing material.

Good velocity? Bad velocity? The reality is that most Agile teams consistently live somewhere in-between. Business priorities change. Challenging defects are discovered. Team members get sick. External dependencies can be hard to predict. But a little strategy can go a long way. Your team's velocity is important. So it's equally important to consider your velocity within the context of the work that your team is doing and how it relates to your product's release cycle, your team's relationship to other teams, and so on. For example, a bad idea might be to switch your automated testing platform four times in one calendar year. Every time you change platforms, you may be removing valuable points from your velocity. Another way a little strategy can help is for the product owner to have a good idea of what the product roadmap looks like in relation to the work the team will be asked to do during the upcoming release. For example, if one feature enhancement requires your engineering team to reconfigure the back-end, it's probably better to do that work earlier in the release cycle rather than later.

A good velocity helps your team deliver as much value as possible. A good velocity is what your team wants. Your team will need to work hard to learn what its good velocity looks like. Sometimes the old adage "do less to do more" can help a team understand what their velocity should be. If your team finds itself consistently underperforming its story point commitments (even by a point or two, per sprint), or if your team finds itself consistently finishing stories on the very last day of the sprint, right before the sprint

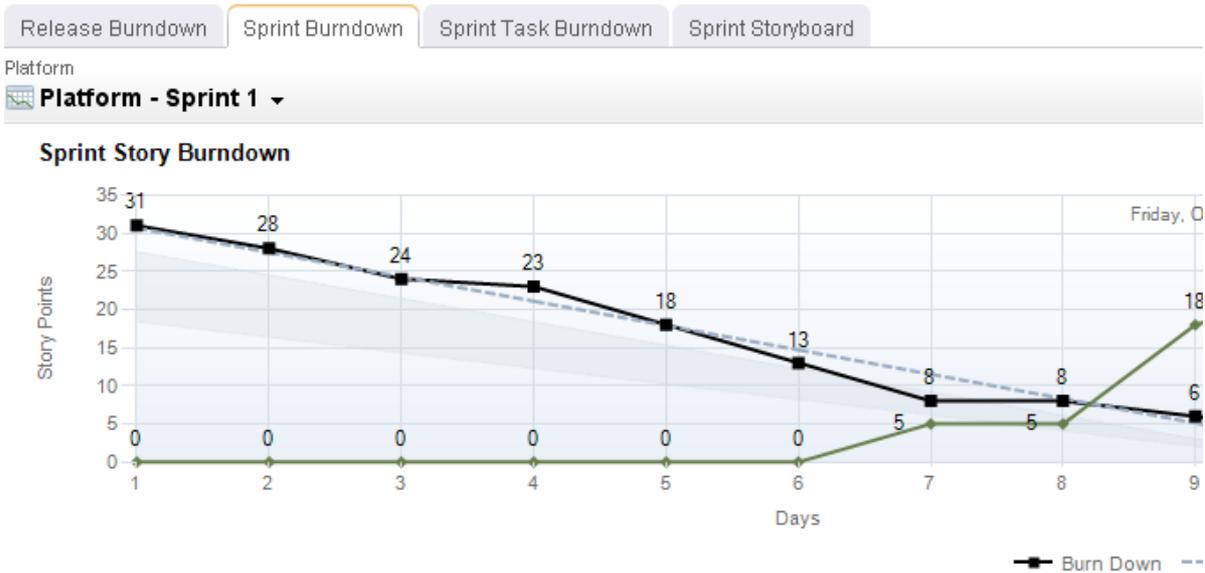
review, then your team should consider committing to fewer story points. Over the next 2-4 sprints, this will lower your team's velocity, but it will also give your team a chance to see if a smaller commitment translates into a more successful sprint.

Sprint Burndown

A burndown chart is a simple way of measuring a team's progress during a sprint by comparing the working days in the sprint to the total number of story points to which the team committed.

A story is considered complete when it does not have any remaining story points and after it has been accepted by a product owner. A sprint can be considered complete when the total story points to which the team committed reaches zero or when the time allotted to the sprint (1-4 weeks) runs out. Ideally, this occurs on the last working day of the sprint. Stories not completed in time are not accepted by the product owner and are moved to a subsequent sprint. Working days in a sprint are defined by the working days in your organization's company calendar.

Serena Agile On Demand includes an out-of-the-box sprint burndown chart as part of the **Tracking** module. The sprint burndown chart is used to view the current status of the sprint. The list of stories, sorted by work state will appear in the related backlog pane. An out-of-the-box burndown chart will show the backlog from which the burndown chart is based as part of the release, sprint, and task burndown chart views.



Platform

Platform - Sprint 1 ✎ Edit +

Name	Estimated Effort	Remaining Effort	Dev Owner	QA Owner	Work St
[-] Work State = Accepted	5	0			Accepted
[-] View order status	5	0	Tara Team Member		Accepted
[-] Work State = In Review	13	0			In Review

Daily Standup

Daily standup occurs every day at a time that is convenient for all team members--usually in the morning--and often time-boxed at no more than 15 minutes. A burndown chart is used to view the team's overall status. The list of stories that are being worked on in the current sprint are viewed alongside a list of impediments (if there are any impediments). During standup, each team member addresses three key issues: what they have worked on since the previous daily standup, what they will work on today, and what impediments (if any) are present that could affect their current work item.

Before arriving at standup, team members should update any user stories with current points remaining. This will ensure that the burndown chart used in the daily standup accurately reflects the current status of the team.

Daily standup is intended to be a quick meeting that benefits the entire team. If design discussions or other issues are raised that cannot be handled during standup, many Agile teams quickly take those conversations offline.

For more information, see the following topics:

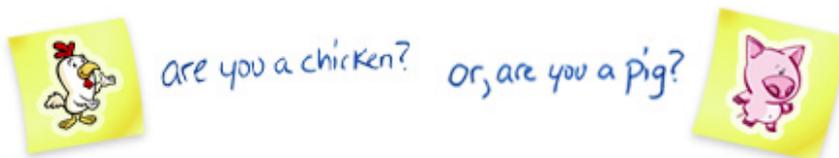
- [Chickens and Pigs \[page 65\]](#)
- [Task Burndown \[page 66\]](#)

Chickens and Pigs

There is a useful parable from the early days of SCRUM ([credited to Ken Schwaber](#)) that organizes the people involved in Agile software development into two roles: chickens and pigs. It goes like this:

A pig and a chicken are walking down a road. The chicken looks at the pig and says, "Hey, why don't we open a restaurant?" The pig looks back at the chicken and says, "Good idea, what do you want to call it?" The chicken thinks about it and says, "Why don't we call it 'Ham and Eggs'?" "I don't think so," says the pig, "I'd be committed but you'd only be involved."

The point is that pigs are the ones involved who write, deliver, test, and document software, while the chickens are interested in the outcome but aren't directly doing the same things as pigs. The needs, desires, ideas and influences of the chickens are important and taken into account, but not in a way that would prevent the completion of the project by the pigs.



Pigs are the ones committed to the project, the ones with "their bacon on the line." They comprise the Agile or SCRUM team. They have the responsibility to deliver the product and may consist of any number of members with cross-functional skills to do the actual work. pigs on the team include: developers, designers, quality assurance, testers, product owners and facilitators or scrum masters.

Chicken roles are those roles in the project that are not part of the actual Agile development process, but must be taken into account. An important aspect of an Agile approach is the practice of involving users, business and stakeholders into part of the process. It is important for these people to be engaged and provide feedback to the team

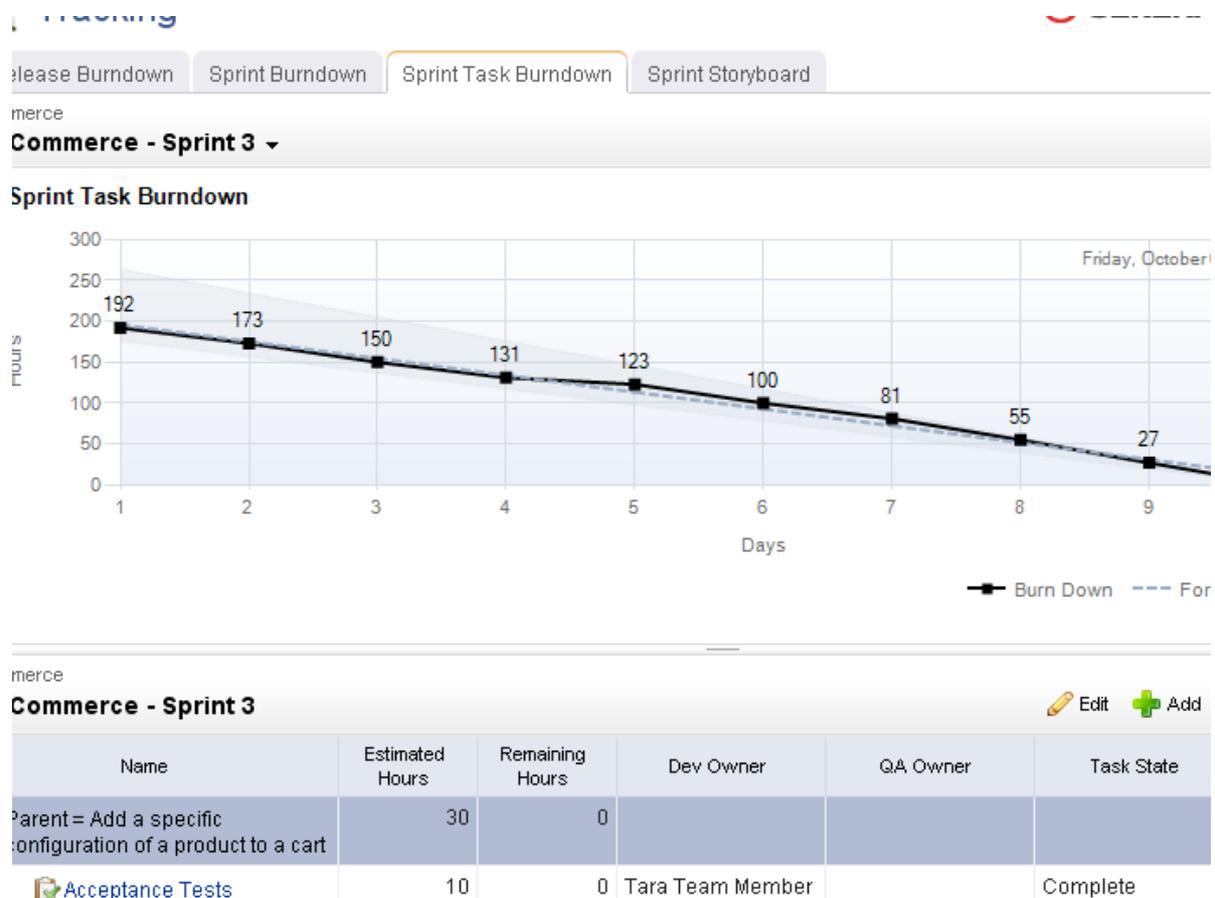
to assist in reviewing and planning the work. Those people are termed chickens and represent users, stakeholders, managers, operations, customers and vendors of the software that's produced at the end of the project.

Task Burndown

A burndown chart is a simple way of measuring a team's progress during a sprint by comparing the working days in the sprint to the total number of story points to which the team committed.

A story is considered complete when it does not have any remaining story points and after it has been accepted by a product owner. A sprint can be considered complete when the total story points to which the team committed reaches zero or when the time allotted to the sprint (1-4 weeks) runs out. Ideally, this occurs on the last working day of the sprint. Stories not completed in time are not accepted by the product owner and are moved to a subsequent sprint. Working days in a sprint are defined by the working days in your organization's company calendar.

Serena Agile On Demand includes an out-of-the-box task burndown chart as part of the **Tracking** module. The task burndown chart is used to view the daily progress of a team while the sprint progresses. The list of tasks, sorted by parent story will appear in the related backlog pane. An out-of-the-box burndown chart will show the backlog from which the burndown chart is based as part of the release, sprint, and task burndown chart views.



Sprint Review

A review meeting (or retrospective) should occur at the end of every sprint and at the end of every release. A review gives team members (and other stakeholders) to give each other honest feedback about how well the sprint or review was (or was not) executed. The purpose of the review is to identify areas of improvement, identify successes and failures, and to learn and grow as a team so that it can improve its performance in future sprints.

Sprint reviews are often paired with a sprint demo, where individual team members show what was done during the sprint to other team members and external stakeholders. The usually occurs immediately before or after the review meeting.

Teams

In an Agile environment, resource management concepts--demand, velocity, commitment, and acceptance--are focused more on teams than on individuals. An Agile team is defined as "all of the team members who commit to all of the work required to complete a single story during a single sprint, including all tasks and dependencies that are related to that story." A team should only commit to working on stories that have a high priority and a high business value. And a team should use its velocity to determine how many stories to which it can commit in an upcoming sprint.

- A sprint assignment is the process of moving a story into a sprint backlog from a release backlog or a team backlog.
- A team assignment is the process of moving a story into a team backlog from a release backlog.

Teams frequently commit to more than one story per sprint, but it is important to understand that the effort required to complete the work required by a single story (including all of its related tasks and dependencies) is done in a single sprint by a single Agile team. Some assignments (like tasks) are identified before the sprint begins, while others (like defects and impediments) are discovered during the sprint. Assignments, once completed, are submitted to the team (for review) and to the product owner (for acceptance).

An Agile team is supposed to be small. This is by design. Good Agile teams share many of the following traits:

- Have 7 or fewer team members
- Are self-organizing
- Have complimentary skills
- Have collective knowledge
- Work well together
- Are cross-functional
- Are co-located (as much as possible)
- Frequently stay together in subsequent sprints

At a minimum, the relationships between product owners, product backlogs, and teams is 1:1 (meaning there is a single product owner who manages a single product backlog; the single product owner assigns a work item from the single product backlog to a single Agile team. There can, of course, be many more combinations than that.

Storyboard

A storyboard (or card wall) can be used to help track the work item status during a sprint. For example, a storyboard could have the following phases:

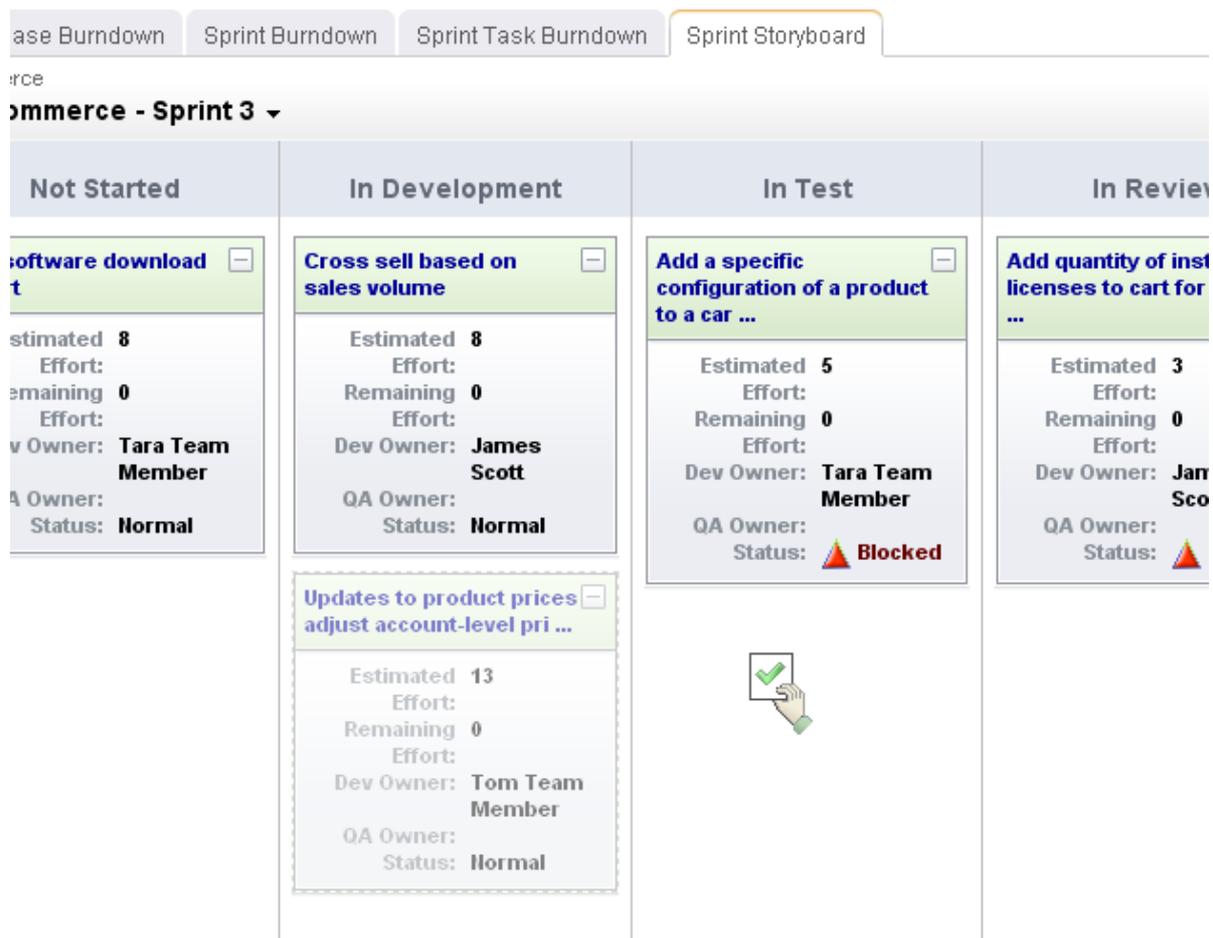
- **Not Started** A work item that is ready to be worked on by a team member.
- **In Development** A work item that is being worked on by a team member.
- **In Testing** A work item that is ready to be tested by a team member.
- **Testing** A work item that is being tested by a team member.
- **Ready for Review** A work item that is considered done by the team, but is not yet approved by the product owner.
- **Accepted** A work item that is accepted by the product owner and is considered complete.

While working in a storyboard, you can drag any work item from one column to another. Click the plus symbol to view quick details, such as name, work (estimated and remaining), and status. Click the name of any story to view its details, such as its name, description, acceptance criteria, work (estimated and remaining), status, priority, owners (development, test, and product), notes, and so on.

Serena Agile On Demand includes two out-of-the-box storyboards, one for use by product owners as part of their planning activities, and one for use by teams as part of their sprint activities.

- **Product Owner Storyboard** This storyboard has phases for **New, Elaborating, Pre-Planning,** and **Sprint Ready.**
- **Sprint Storyboard** This storyboard has phases for **Not Started, In Development, In Test, In Review,** and **Accepted.**

Once a specific backlog has been chosen, the same basic collection of actions are available: edit a work item and view a work item. A work item can be selected, and then moved to other phases in the storyboard using drag-and-drop.



Backlogs

A backlog is a queue that contains all of the potential work item that could be built, including actual work, proposed features, good ideas, or discovered defects. The work item in a backlog should cover the entire product's lifecycle, from the current release (and the current sprint) to future releases (and future sprints). All work item in a backlog can be viewed as an ordered list (sorted by rank), in a table, or by in a tree (grouped as a parent or child work item, as defined by your organization's work breakdown structure).

In terms of the overall scope of work, a release backlog should contain a more defined amount of work than a product backlog (usually most of the work that is believed to be necessary for a specific release) and a sprint backlog should only the work that will be done during the sprint. As work item is moved into a smaller backlog it should decrease in size (for example, story point sizes should decrease), but they should also increase in detail (for example, better acceptance criteria and/or technical notes provided in the stories and/or clear tasks defined).

Any team member may add a work item to the product backlog; however, only product owners should remove a work item (from any backlog) or move a work item into a release or a sprint backlog. This determination may be based on what is outlined in the product roadmap, comparing the priorities of one work item to another, the business value each work item will provide, a team's velocity, and so on. It is important for team members to have visibility into what is contained in a release or a sprint backlog. Therefore, a work

item should not be added to a release or a sprint backlog until after it has been discussed with team members during a release or a sprint planning meeting.

Serena Agile On Demand includes several out-of-the-box backlogs, one for use by team members to view any work item to which they have been assigned, one for use by product owners as part of their planning activities, and the entire backlog hierarchy.

- **My Work** This backlog is used primarily by team members to view any work item that has been assigned to them for work during the current sprint.
- **Planning** This backlog contains every work item that is in the current product backlog, current release backlog, or current sprint backlog.
- **Backlogs** The Backlogs module provides access to the entire work hierarchy, including past, present, and future products, releases, sprints, and teams.

An out-of-the-box burndown chart will show the backlog from which the burndown chart is based as part of the release, sprint, and task burndown chart views.

Backlog Planning Multi Planning Product Owner Storyboard

products

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Name	Estimated Effort	Remaining Effort	Work State	
Commission tracking for Partners and Affiliates				Norm
Cross selling			Not Started	▲
Defects	0	0	Not Started	Norm
Defect 10156				Norm
Order management	13	13		Norm
View past order details	13	13	Not Started	Norm
Partner & Affiliate tools	23	23		Norm
Affiliate manages their account information	5	5	Not Started	Norm
Sign up for an Affiliate account	5	5	Not Started	Norm
User can register multiple Affiliate site URLs in their company profile	5	5	Not Started	Norm
View Affiliate commission balance	8	8	Not Started	Norm

For more information, see the following topics:

- [Product Backlog \[page 71\]](#)
- [Release Backlog \[page 71\]](#)
- [Sprint Backlog \[page 71\]](#)
- [Team Backlog \[page 71\]](#)

Product Backlog

A work item is added to the product backlog by product owners and team members. A work item is moved into a release backlog (from the product backlog) to support the goals outlined in the product roadmap. A work item in a product backlog should be estimated (at a very high-level), broken down into a smaller work item (with some detail), and so on, before the beginning of the next release.

Product planning meetings may include team members, but they often include high-level stakeholders who are not team members, such as executive sponsors, members of other teams within your organization (support, documentation, marketing, and so on), as needed. The goal of product planning is to make sure that your product roadmap contains only a work item with the highest business value and priority for the upcoming 2-4 releases.

Release Backlog

A release backlog should only contain a work item that could be committed to by a team for work in a sprint. A work item can be added to the release backlog from the product backlog. A work item in a release backlog should be discussed with team members during release planning meetings. A work item should be estimated, broken down into a smaller work item, become more detailed, and so on, before the beginning of the next sprint.

A work item can be moved between a product and a release backlog as needed, such as when business priorities change or when opportunities to create better business value arise. A work item in a release backlog can be added, edited, and removed; however, any work item in a release backlog should have a high priority and a high business value. In general, only well-defined stories should be moved into a sprint backlog from a release backlog.

Sprint Backlog

Use a sprint planning meeting to determine which stories will be committed to during a given sprint. A sprint backlog should only contain stories that the development team has committed to for that sprint. Stories in a sprint backlog should be well-written, have a high priority and a high business value, and should have an accurate story point estimate.

Unlike a product or a release backlog, a sprint backlog should not change once it has been committed to by a development team. A product owner should not add or delete any stories and should only edit a user story after discussing the proposed changes with any affected team members. Any work item in a sprint backlog should have assigned owners.

Team Backlog

Use release planning and sprint planning meetings to determine which stories should be moved into a specific Agile team's backlog. A team backlog should contain stories that will be committed to by a specific Agile team for an upcoming sprint. Stories in a team backlog should be well-written, have a high priority and a high business value. Stories in a team backlog should have an accurate story point estimate before being moved into a specific sprint backlog.

A work item in a team backlog can be moved to and from a release backlog (or another team's backlog) as needed, such as when business priorities change or when opportunities to create better business value arise. A work item in a team backlog can be added, edited, and removed as needed; however, any work item in a team backlog should have a high priority and a high business value.

Work Items

A work item is anything that is used to build and track work during any phase of a product's lifecycle, including high-level features (epics), a more detailed work item (such as a story and its individual tasks), issues raised by customers or members of your test team (defects), and issues that prevent team members from completing their assignments (impediments).

In general, a work item lives in backlogs (product, release, and sprint). As a work item move into a smaller backlogs they should decrease in size, but also increase in detail. A work item is configurable and can have many different names. Their relationships (to each other) are defined by your organization's work breakdown structure.

Serena Agile On Demand uses epics, stories, tasks, and defects. In general, an epic is the largest work item. Epics should broken down into well-defined stories (which then contain specific tasks). Defects are like stories (in that they should be well-defined and that they may contain specific tasks). An impediment is the final work type. In general, impediments can be resolved quickly; should your organization need to create impediments that require actual work by actual team members, you should add a user story into a backlog that is used by the team that will do the work that is needed before the impediment can be removed.

For more information, see the following topics:

- [Epics \[page 72\]](#)
- [Stories \[page 72\]](#)
- [Tasks \[page 73\]](#)
- [Defects \[page 73\]](#)
- [Impediments \[page 73\]](#)

Epics

An epic is a very large work item that cannot be worked on by the team during any single sprint. It must be broken down into a smaller work item (stories) before it can be discussed in a planning meeting and before any related work is moved into a release or sprint backlog.

Epics represent how your organization plans to deliver business value at the product level. Epics often map to key features outlined in the product roadmap (what your team plans to deliver over the next 2-4 releases). Sometimes an epic itself is used to represent a feature that is worked on during a single release. Epics are discussed during product planning and are broken down into smaller collections before being moved into release planning. In the product backlog, epics can be grouped by major themes, such as automation, user interface, documentation, and so on.

Stories

A well-written story is one of the most critical elements of Agile. A well-written story has the following traits:

- It has high business value
- It is specific and of a small size; sizing takes into account all work related to that story done by all team members

- It can be discussed by team members during planning meetings clearly, succinctly, and independently of other user stories
- Test cases can be easily defined and the story can be tested thoroughly (and fixed, if required) during the same sprint

So what about a story with those traits? What does it mean to have a high business value? What does it mean to be "of a small size?" How do you know if you can actually talk about a story during a planning meeting when it's time boxed at 5 minutes of discussion? Can every team/person test the same-sized user story in the same way?

The fact is that even when a group of stories have similar traits, no story is the same. In general, your team should only work on stories that have high business value, which means that your team should only work on the stories that are the most requested by your customers, the most needed to improve your application's front-end and back-end performance, the ones that make your application's user interface more usable, and the ones that can be delivered with high quality in a reasonable amount of time.

Your team should apply what you learned while working on stories in previous sprints-- success and failure--to the stories your team is working on now. Some examples. If your team is spending too much time discussing stories in planning meetings, the stories need to be more specific and smaller. If your team cannot complete testing user stories thoroughly during the same sprint, the stories need to be more specific and smaller. If your training team's velocity cannot keep up with the engineering team's velocity, you should re-size your stories so that the training team's velocity is factored in better with the rest of the team's velocity, you could minimize the overall scope of training so that the amount of training produced is time-boxed by the length of the sprint, or you could track the training team's velocity separately from the team (or not track it at all).

Tasks

A task is any work item that has a single objective and resolution.

Most well-defined Agile stories are simply a collection of tasks.

Defects

A defect is a bug, an issue, or some problem with the quality of the product. Defects can be identified by customers, by members of your sales or support organizations, and (most often) by members of your own team (testers and engineers).

Many defects can be fixed easily (often during the same sprint in which they were discovered) and do not need to be tracked as a work item. Some defects require visibility (such as ones raised by customers or support) and need to be tracked as a work item (for visibility). Some defects are complex and may require research by team members or significant work by engineering (and follow-up testing to ensure the defect is fixed) or work by an external team. Any work item that affects a team's overall velocity should be tracked as a work item so that fixing those kinds of defects is factored into the team's overall velocity.

Impediments

An impediment is an issue, a problem, or anything that is preventing a team member from being able to complete work on a story and/or task. Impediments are often discussed during standup by team members.

It's often helpful to think of impediments in relation to business value. For example, your team only commits to a work item with the highest business value. Anything that is

blocking the completion of a work item may prevent your team from delivering business value. It is the job of the scrum master to help facilitate a resolution to the impediment. Some impediments are solved quickly and easily, while others may require the creation of new work item as part of the resolution.

Actions

Working in an Agile project requires working in backlogs, updating a work item, managing collections of projects, resources, sprints, and teams, and so on.

For more information, see the following topics:

- [Backlogs \[page 74\]](#)
- [Guidance \[page 82\]](#)
- [Projects \[page 83\]](#)
- [Work Items \[page 85\]](#)
- [Work Types \[page 92\]](#)

Backlogs

A backlog is a queue that contains all of the potential work item that could be built, including actual work, proposed features, good ideas, or discovered defects. The work item in a backlog should cover the entire product's lifecycle, from the current release (and the current sprint) to future releases (and future sprints). All work item in a backlog can be viewed as an ordered list (sorted by rank), in a table, or by in a tree (grouped as a parent or child work item, as defined by your organization's work breakdown structure).

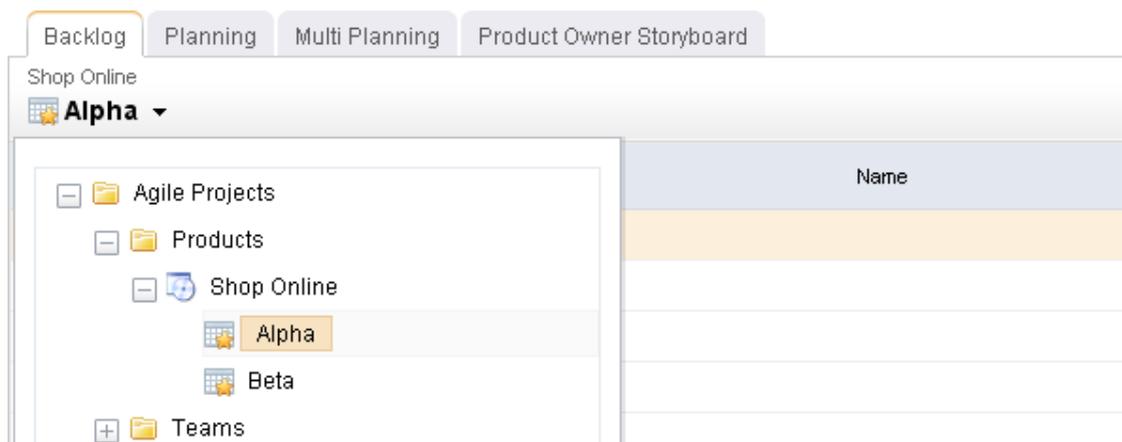
A backlogs is the places in which a work item is managed, be it an epic, a story, a defect, a task, or a custom work item.

Edit work item

You can edit a work item directly in a backlog. Click  Edit, make your changes, and then click  Save.

To edit work a work item directly in a backlog

1. Choose a backlog.



2. From the backlog toolbar, select  Edit.

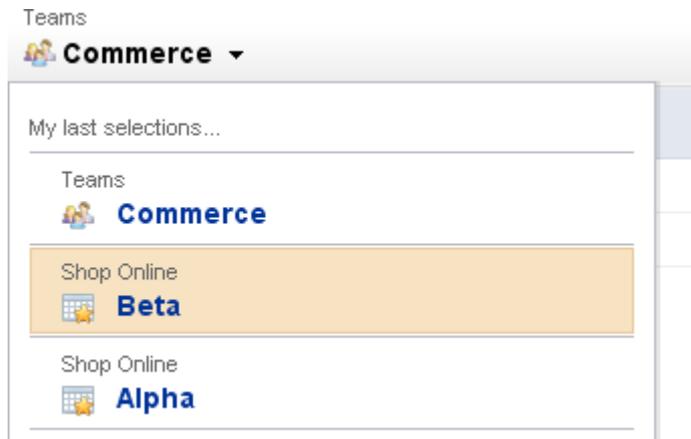
3. Make your changes.
4. Click  Save. (To exit without saving changes, click  Edit.)

Hide

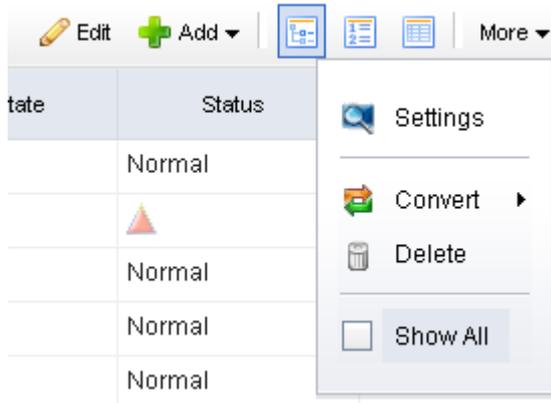
You can hide any work item that is not included in the backlog in which you are currently working.

To hide a work item

1. Choose a backlog.



2. From the backlog toolbar, select **More**.



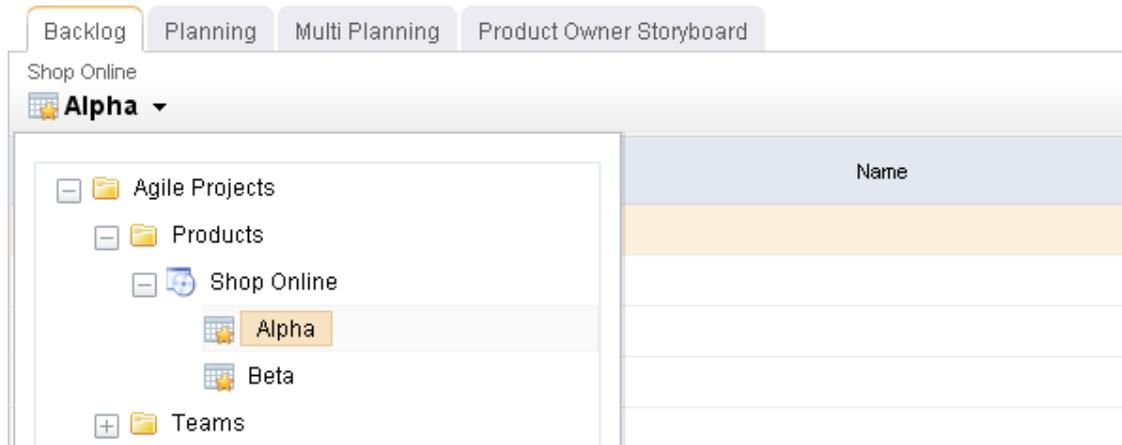
3. De-select **Show All**.

Prioritize

You can prioritize a work item (sometimes called ranking a work item) in a backlog. Viewing a backlog in list view mode will ensure that you can view a work item by relative priority (where a higher rank equals a higher priority). (By default, Agile On Demand shows backlogs in the  Tree view mode, which does not rank stories.)

To prioritize stories in a backlog

1. Choose a backlog.



2. Click  List.
3. Choose the story you want to re-rank, select it (by holding down the mouse button), and then drag it to its new relative priority.

2	 Cross selling	40
3	 Defects	0
4	 Partner & Affiliate tools	23
	 Affiliate manages their account information	5
	 Sign up for an Affiliate account	5
	 User can register multiple Affiliate site URLs in their company profile	5

4. When a work item is in the location you want it to be, de-select it (by releasing the mouse button). The backlog will refresh and the work item will have been re-ranked according to its new relative priority.

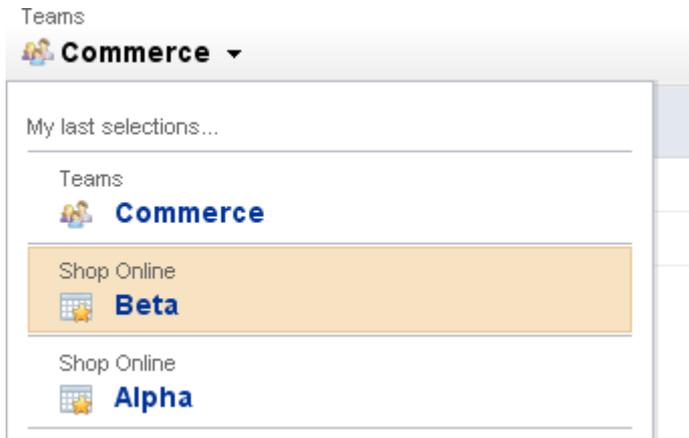
1	 Commission tracking for Partners and Affiliates	
2	 Cross selling	40
3	 Partner & Affiliate tools	23
	 Affiliate manages their account information	5
	 Sign up for an Affiliate account	5
	 User can register multiple Affiliate site URLs in their company profile	5
	 View Affiliate commission balance	8
4	 Defects	0
5	 Integrated inventory management	0

Select backlog

You can move between backlogs by selecting a new backlog while working in any backlog.

To select a different backlog

1. Choose a backlog.

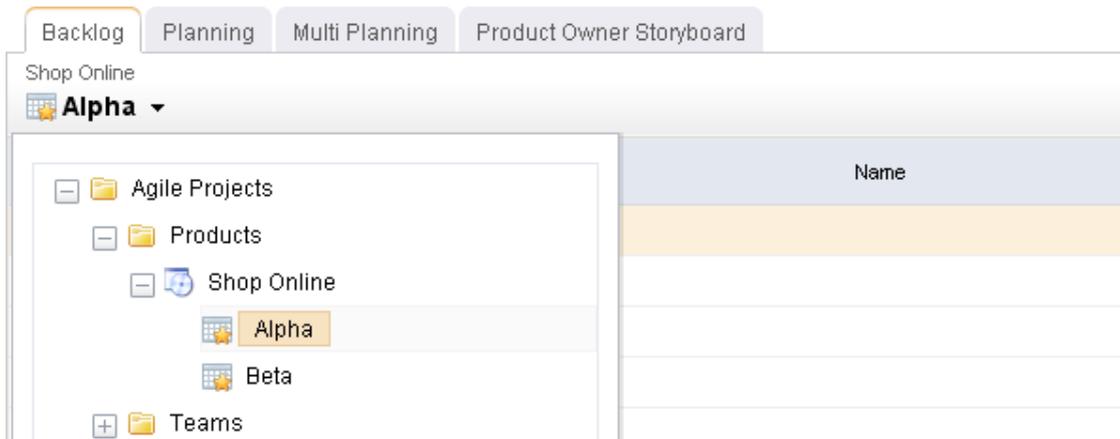


Show

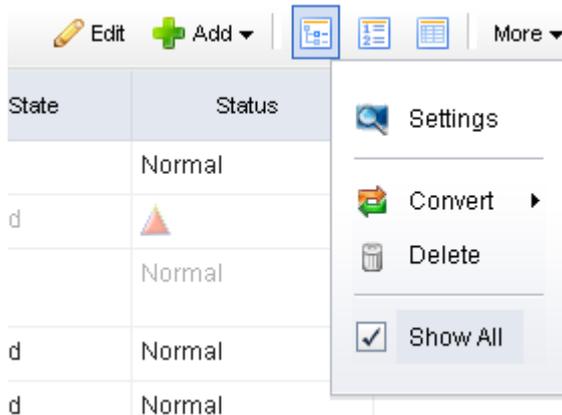
You can show every work item in the work hierarchy, including parents and children of any work item that is not being worked on in the sprint or release in which you are currently working.

To show every work item

1. Choose a backlog.



2. From the backlog toolbar, select **More**.
3. Select **Show All**.

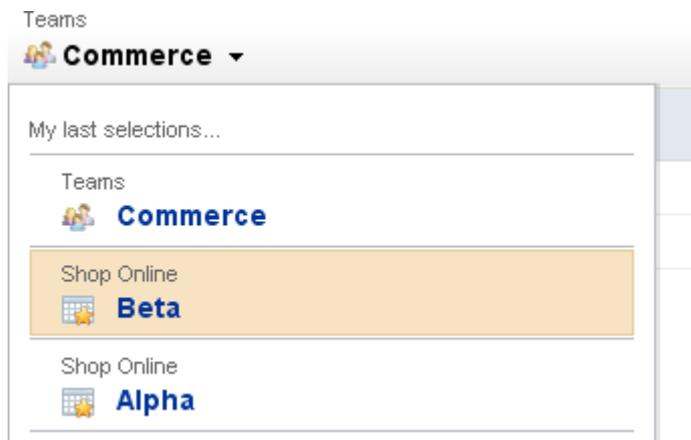


View

You can view every work item in a backlog. There are three layout options: **Table**, **List**, and **Tree**. The **Table** and **Tree** options use your organization's work breakdown structure to display the order of every work item. The **List** option displays a work item by priority.

To view a backlog

1. Choose a backlog.



2. From the backlog toolbar, select **More**, and then  Table,  List, or  Tree.

Settings

Depending on the backlog in which you are working, the **Settings** dialog box may have one or more of the following sections.

Columns

This tab is used to define which columns appear on the datasheet, and in what order they are displayed. If you are creating or editing a datasheet that is assigned to a datasheet type, you cannot edit any of the datasheet properties on the Columns, Filters, Organize, Time Views, or Dashboard tabs:

Fields	Description
Add	Click this button to move the selected attributes from the Available Attributes box to the Selected Attributes box.
Available Attributes	The attributes that have been assigned to the work item types listed on the General tab.
Custom Header	The custom display name for the attribute, as it will appear in the datasheet. If this field is empty, the Default Header will be used.
Datasheet Name	The name of the datasheet.
Default Header	The default display name for the attribute, as it will appear in the datasheet.
Move Down	Columns are displayed from left to right in a datasheet. Click this button to move the column for this attribute to the right in the datasheet.
Move Up	Columns are displayed from left to right in a datasheet. Click this button to move the column for this attribute to the left in the datasheet.
Remove	Click this button to move the selected attributes from the Selected Attributes box to the Available Attributes box.
Selected Attributes	The attributes that are displayed as columns in the datasheet. Columns are displayed from left to right in the order listed here.

Filters

This tab is used to define which columns appear on the datasheet, and in what order they are displayed. If you are creating or editing a datasheet that is assigned to a datasheet type, you cannot edit any of the datasheet properties on the Columns, Filters, Organize, Time Views, or Dashboard tabs:

Fields	Description
Add	Click this button to move the selected attributes from the Available Attributes box to the Selected Attributes box.
And	Select this option to indicate that the work item on the datasheet must meet the conditions of the selected filter rule and all other filter rules that do not begin with Or . For example, if multiple rules use the And option, and one rule uses the Or option, the rules containing the And option are grouped together, and the rule containing the Or option is considered separately. The work item on the datasheet must either meet all of the And conditions, or at least the Or condition.

Fields	Description
Attribute	Select the datasheet column that you are building a filter rule around from this list.
Compare To	Select what the filter rule should compare the attribute to. Select the this specific value option and type a value in the box below the options to filter the datasheet so that only work item with the Comparison relationship with the value you specified for the selected attribute are displayed. Select the another attribute option and select an attribute from the list below the options to filter the datasheet so that only work item with the Comparison relationship between the two selected attributes are displayed.
Comparison	Select the test you want to apply to the column selected in the Attribute list.
Datasheet Name	The name of the datasheet.
Delete	Removes the selected rule from the Filter Rules box.
Down	Moves the selected rule down in the list.
Filter Rules	Lists all of the current rules set up to filter the datasheet.
Or	Select this option to indicate that the work item on the datasheet must meet the conditions of the selected filter rule, or all the filter rules that do not begin with Or , or another filter rule that begins with Or .
Up	Moves the selected rule up in the list.
Update	Click this button to update the selected filter rule.

General

This tab is used to identify the basic information about a datasheet. If you are creating or editing a datasheet that is assigned to a datasheet type, you cannot edit the work item types included on the datasheet type on the **General** tab. You cannot edit any of the datasheet properties on the **Columns, Filters, Organize, Time Views, or Dashboard** tabs:

Fields	Description
Associate With	You can associate the datasheet with a specific location in the work item hierarchy. This enables you to define the root work item for the datasheet; the work item you select is the top-level work item in the datasheet. By default, datasheets are associated with the enterprise portfolio.

Fields	Description
Created By	Displays the user name of the person who initially created the datasheet, and the date and time it was created. This box is read-only.
Default Expansion Level	Select the default expansion level for the datasheet from the Default Expansion Level list. The Default Expansion Level list determines how many levels of the datasheet are opened on the datasheet by default.
Description	Type a brief description of what the datasheet can be used for, or what data it includes.
Last Modified By	Displays the user name of the person who made the most recent changes to the datasheet, and the date and time they modified it. This box is read-only.
Location	Displays the location of the datasheet within your organization's portfolios.
Private	Select this check box if you want the datasheet to only be available to you. Clear the check box if you want the datasheet to be available to all users that have access to datasheets for the portfolio. When the Private check box is selected, only the user that created the datasheet can view and modify the datasheet, unless you are sharing the datasheet.
Share	This button is only available if the Private check box is selected on a datasheet that you created. If you selected the Private check box, but would like to share the datasheet with specific users and/or security groups, you can share the datasheet. When you share a datasheet, the users and/or members of the security groups you assigned to the datasheet can also view and modify the datasheet. Click the Share button on the General tab on the New Datasheet, Datasheet Properties, or Datasheet Type Properties page to assign users and/or security groups to the datasheet on the Datasheet Shared Access page.
Show All Roles	Select this check box check box to display excluded rows on the datasheet. A row is excluded on a datasheet when the check box to the left of the row is cleared. Excluded rows are displayed in gray on the datasheet. If the Show All Roles check box is cleared, the excluded rows are not displayed on the datasheet.
Show Unallocated	Select the Show Unallocated check box to display the differences between a parent work item and its child work item for roll-up attributes in non-roll-up dimensions, such as the target dimension.

Fields	Description
Work Items	Select the Include All Types option to include all work item types on the datasheet. Select the Include Only These Types option and select the work item types you want to include on the datasheet. To select more than one work item type from the list, press CTRL while selecting each work item type.

Guidance

A guidance page is a place from which you can find a small collection of quick details about important areas of the application, such as adding users or managing a work item list, viewing tasks, and so on. Links to additional help, videos, specific areas in the application, and other sources of information are provided.

Disable

If you feel like you don't need the guidance page, you can hide it.

To disable a guidance page

1. From the application toolbar, select the drop-down associated with your name.
2. Chose **Settings**.
3. Under **Selected Homepage Tabs**, select **Guidance**, and then click the left-facing arrow.

Homepage



4. Click **OK**.

Enable

If you would like to view a page that provides some guidance about how to use Serena Agile On Demand, you can enable it.

To enable a guidance page

1. From the application toolbar, select the drop-down associated with your name.
2. Chose **Settings**.
3. Under **Available Homepage Tabs**, select **Guidance**, and then click the right-facing arrow.

Homepage

Available Homepage Tabs

Product Owner Dashboard
Scrum Master Dashboard
Stakeholder Dashboard



Selected Homepage Tabs

My Work
Guidance



- Click **OK**.

Projects

You can create new collections of projects, release, sprints, and teams by using the **New Projects Wizard**.

New Projects Wizard

The **New Projects Wizard** can be used to create new (and manage existing) collections of projects, resources, sprints, and teams.

New Project Wizard

Product

The Product contains the Product Backlog of work items.

Name

Release

The Release contains the Release Backlog and is a time interval bounded by dates.

Starting Date Ending Date

Sprints

Each Sprint contains a Sprint Backlog and is a time interval of the length specified here. Enough Sprints to fill the Release interval will be created for each Team.

Interval Length

Teams

Each Team contains a Team Backlog and Sprints will be created within them.

New Team Name

Add Project

A simple way to begin using Agile On Demand is to create the products, releases, teams and sprints that will comprise your Agile portfolio. Each work item serves as an independent backlog to which any work item can added, moved, and tracked. The **New Project Wizard** is the fastest and easiest way to set up a product, release, team, and sprint structure.

To create a project using the New Projects Wizard

1. Open the **Backlogs** module.
2. Click **More**, and then select **New Projects** to open the **New Projects Wizard**.
3. Enter the name of the project that you wish to add. Or select the name of an existing product.

Product

The Product contains the Product Backlog of work items.

Name

Shop Online

4. Enter the name of the release that you wish to add. Or select the name of an existing release. Define the length of the release.

Release

The Release contains the Release Backlog and is a time interval bounded by dates.

Starting Date

Ending Date

10/26/2009

3/29/2010

5. Select the interval length for each sprint. The number of sprints created depends on the overall length of the release and the number of sprints each release will contain. For example, if you specify that each release is 9 weeks, and then you select a 3 week interval for each sprint, each release will then contain 3 sprints.

Sprints

Each Sprint contains a Sprint Backlog and is a time interval of the length specified. Sprints to fill the Release interval will be created for each Team.

Interval Length

2 weeks

1 week

2 weeks

3 weeks

6. Enter the name of a new team or select the an existing team, and then click **Add**.

Each Team contains a Team Backlog and Sprints will be created within them.

New Team Name

Front End

Selected Teams

Infrastructure

Help

- After you have selected your products and teams and defined the length of a release and the number of sprint intervals each will contain, click **Next**.
- Verify that the projects, resources, sprints, and teams are what you wish to create, and then click **Finish**.
- Verify in the backlogs tree that you have created the correct projects, resources, sprints, and teams.

Work Items

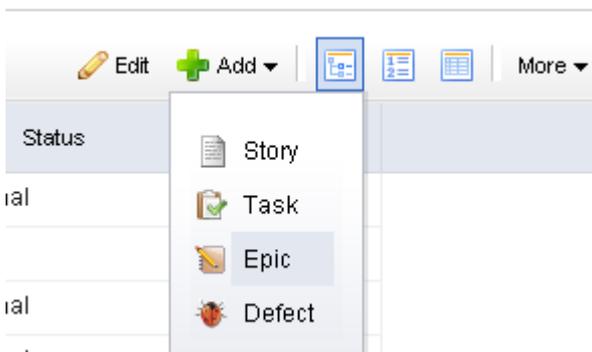
A work item is anything that is used to build and track work during any phase of a product's lifecycle, including high-level features (epics), a more detailed work item (such as a story and its individual tasks), issues raised by customers or members of your test team (defects), and issues that prevent team members from completing their assignments (impediments).

Add

You can add a work item to a backlog.

To add a work item

- Select a backlog, choose  Add, and select the work item type you wish to add.



- Enter the name and description for the work item.

Name

Description

B / **I** / **U** / **S** |    

3. Set the priority, business value, and theme.

1

2

3

4

5

Business Value

8

Theme

Integration

4. Select the **Tracking** tab to assign an owner and to specify estimated and actual hours.

Product Owner

Elias Israel

Estimated Effort

8

Remaining Effort

8

5. Select the **Notes** tab to enter any notes that may be needed for the work item or for the team member assigned to the work item.

Notes

B / **I** / **U** / **S** |    

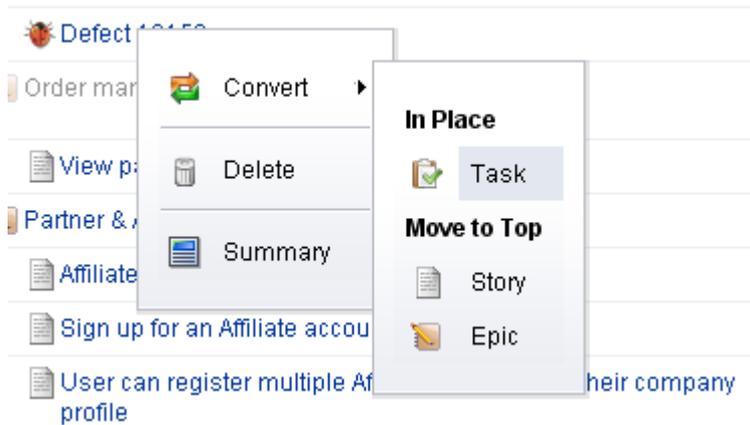
6. When you are finished, click **OK** to save this work item and close the dialog box. If you want to create another work item, click **Save & Add Another**.

Convert

A work item, once created, can be converted to another work item (if that becomes necessary).

To convert a work item

1. Select a backlog, choose  Convert, and select the work item to which the current work item will be converted.



2. Verify.

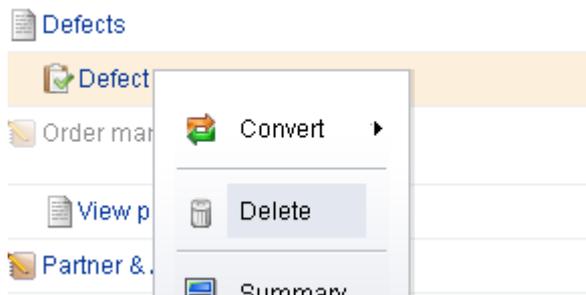


Delete

You can delete a work item from a backlog.

To delete a work item

1. Select a backlog, choose  Delete, and select the work item you want to delete.



2. Confirm.

Edit details

You can edit the details of any work item to which you have access or details which cannot be edited directly in the backlog itself. Click the name of the work item directly in the backlog to open its summary details.

To edit the details of a work item

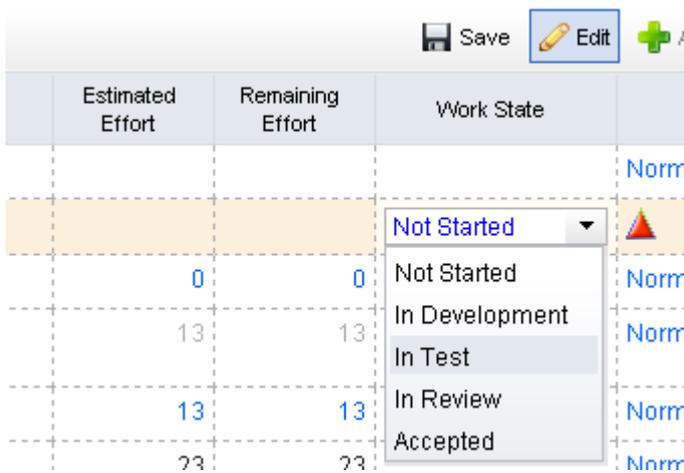
1. Select a backlog, choose a work item and click its name.
2. Make any changes you need to make.
3. Click **OK**.

Edit inline

You can edit the details of any work item directly in a backlog.

To edit a work item inline

1. Select a backlog.
2. In the backlog toolbar, click  Edit.
3. Select the work item. Select a column. Double-click. Make your changes.



Estimated Effort	Remaining Effort	Work State	
			Norm
0	0	Not Started	Norm
13	13	In Development	Norm
13	13	In Review	Norm
23	23	Accepted	Norm

4. Click  Save. (To exit without saving changes, click  Edit.)

Move

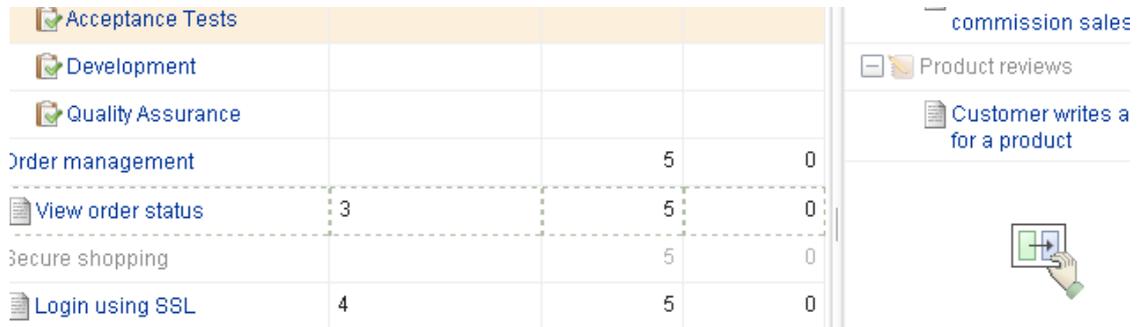
You can move a work item from one backlog into another. When backlogs are side-by-side in the same view, you can select a work item in one backlog and drag it into the other.

Icon	Description
	New backlog. This will drop the work item into the new backlog. The backlog will refresh and the work item will appear in the new backlog (and disappear from the old backlog).
	Re-rank. This will drop the work item into the selected location; the backlog will refresh and the work items will be in the new order.
	Re-parent. This will drop the work item into the selected location; the backlog will refresh and the work items will be in the new order.

Icon	Description
	New phase. This will drop the work item into a new phase in a storyboard (or card wall). The storyboard will refresh and the work item will be moved to the new phase.
	Invalid. You cannot drag-and-drop a work item into a backlog when this icon appears.

To move a work item between backlogs

1. Select the backlogs to and from which a work item will be moved, and then select the work item you wish to move.
2. Click and hold down the work item, and then drag it to its new backlog.



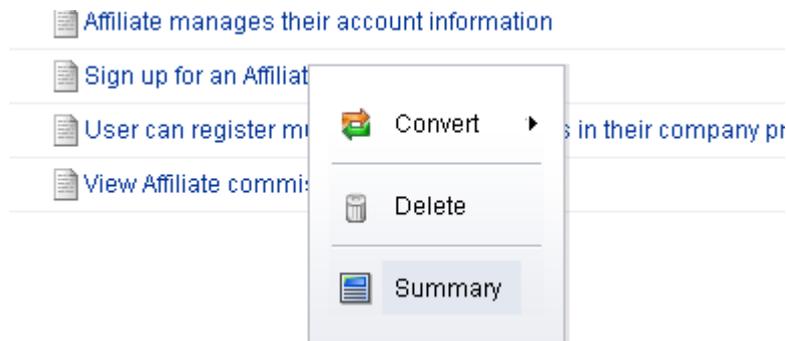
3. Verify.

View summary

There are two ways to view the details of a work item. Select the name of the work item in a backlog, right-click, and select **Summary**. Or just click the name of the work item in the backlog.

To view a work item

1. Select a backlog.
2. Select a work item in the backlog.
3. Right-click and select  Summary.



Summary

You can use the work item properties dialog box to manage data about the work item, including data that is specific to the work item type (such as epics, stories, or tasks), data that is used for tracking progress against that work item, notes that may have been entered by team members, and a history of changes that have been made to the various settings related to the work item.

Work Item Type

This tab in the **Work Item Properties** dialog box is used to view and update certain properties which relate to the work item, such as (for a story) **Acceptance Criteria**, **Business Value**, and **Story State**. The name of the tab is determined by the work item for which you are currently viewing properties. Depending on the work type, the following fields may be available from this tab:

Fields	Description
Acceptance Criteria	The criteria to be completed before a work item can be accepted.
Business Value	The business value for a work item.
Description	The description of a work item in the application, such as a task, work item, summary, and so on.
Development Owner	The name of the resource who has been assigned to do the actual work related to the work item.
Estimated Effort	The amount of effort, measured in story points, required to complete all of the work associated with a work item.
Name	The name of a task (or a task plan).
Priority	Indicates the importance of the task in relation to other tasks. 500 is the default value; 1000 is the highest priority and 0 is the lowest priority. The higher the number, the higher the priority.
Quality Assurance Owner	The name of the tester who has been assigned to do validate the quality of the work related to the work item.
Remaining Effort	The amount of effort, measured in story points, required to finish all of the remaining work associated with a work item.
State	The state of a task.
Status	The current status of a work item, task, or project.
Story State	The current state of a work item, such as Not Started , In Development , In Testing , Ready for Review , and Accepted .

Fields	Description
Task Hours Actual	The actual hours required to complete actual work.
Task Hours Estimated	The amount of effort, measured in actual hours, that are required to complete all of the work that is associated with a work item.
Task Hours Remaining	The amount of effort, measured in actual hours, that are required to finish all of the remaining work that is associated with a work item.
Theme	The name of the theme that is associated with a work item.

Tracking

The **Tracking** tab in the **Work Item Properties** dialog box is used to show tracking details about how the work being done against a work item is progressing. Depending on the work type, the following fields may be available from this tab:

Fields	Description
Created By	The name of the resource who initially created the task, task plan, work item, and so on.
Created Date	The date on which a task, task plan, work item, and so on, was created.
Dev Owner	The name of the resource who has been assigned to do the actual work related to the work item.
Estimated Effort	The amount of effort, measured in story points, required to complete all of the work associated with a work item.
Item ID	The unique ID for the work item.
Last Modified By	The user name of the person who made the most recent changes to the task, task plan, or work item.
Last Modified Date	The date on which the most recent changes were made to the task, task plan, or work item.
Parent Item	The unique ID for the parent task.
Product	The name of the product.
Product Owner	The name of the product owner who has been assigned to approve the work related to the work item.

Fields	Description
QA Owner	The name of the tester who has been assigned to do validate the quality of the work related to the work item.
Release	The name of the release.
Remaining Effort	The amount of effort, measured in story points, required to finish all of the remaining work associated with a work item.
Sprint	The name of the sprint.
Task Hours Actual	The actual hours required to complete actual work.
Task Hours Estimated	The amount of effort, measured in acutal hours, that are required to complete all of the work that is associated with a work item.
Task Hours Remaining	The amount of effort, measured in acutal hours, that are required to finish all of the remaining work that is associated with a work item.
Team	The group of individual resources who comprise a SCRUM team, typically a single product owner, several engineers and testers, and (occasionally) other resources, such as support, documentation, and sales.
Work State	The current state of a work item, such as Not Started, In Development, In Testing, Ready for Review, and Accepted.

Notes

The **Notes** tab in the **Work Item Properties** dialog box is used to capture comments, notes, and other non-work related data about the task.

History

The **History** tab in the **Work Item Properties** dialog box is used to show the update history of the work item, including what changed, the date it was changed, what the new value is, what the old value was, and who made the change.

Work Types

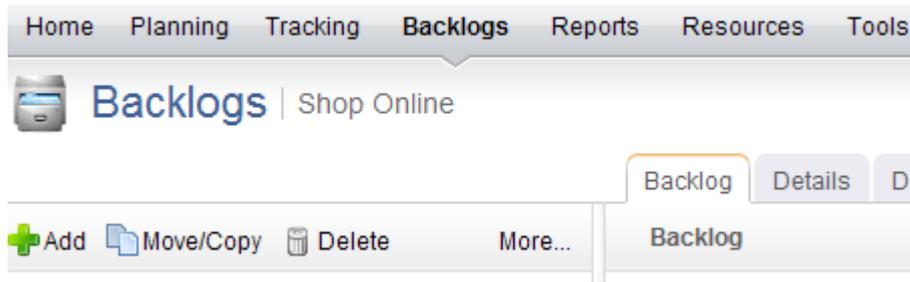
A work type is defined as a project, release, sprint, or team. Every work type is placed in a hierarchical structure called the work tree that orders each work type in relation to its parent work type, any peer work type, and any child work type.

Add

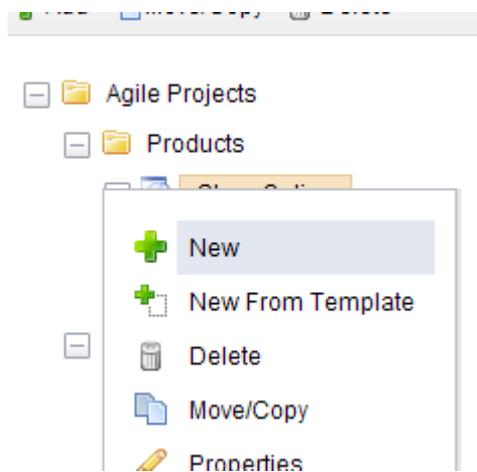
When creating a work type, identify the work type you want to create, and define the summary data for the work type.

To add a new work type

1. Open the **Backlogs** module.



2. Select a work type in the work tree under which you want to add a work type. Right-click and select **New**.



3. In the **New Investment** dialog box, select the work type. The work type list that is available from the drop-down will depend on the location in which you are adding a work type and the work breakdown structure your organization has created.

Select the Item Type

Release

Release

Name

Release 0

Completed No

Start Date

10/19/2009

End Date

2/16/2010

Health Status

Yellow

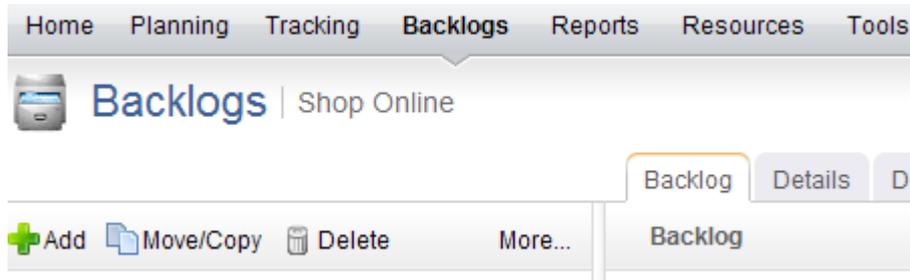
4. Click **OK**.

Copy

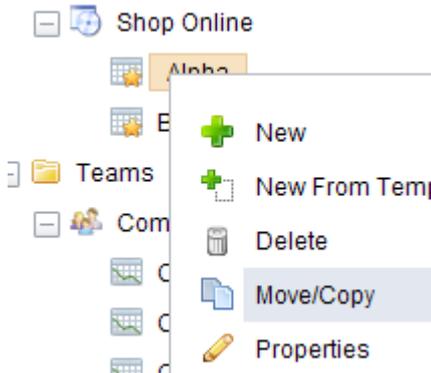
You can copy an existing work type, modify its summary data and properties, create a new work type, and then place it anywhere in your portfolio.

To copy a work type

1. Open the **Backlogs** module.



- In the work tree, select the work type you want to copy, right-click and select  Copy.



- In the **Move/Copy** dialog box, under **Options**, select **Make a copy** and choose whether you want to also copy any related documents, a child work type, or tasks.

Options

- Make a copy of 'Commerce - Sprint 2'
- Include Documents
- Include Children

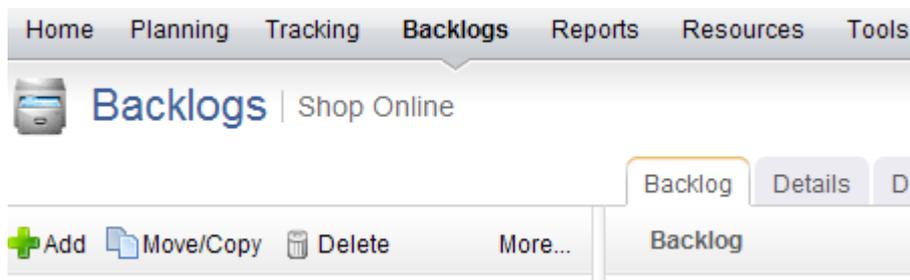
- Select the location in the work tree into which a copy of the work type will be added.
- Click **OK**.

Delete

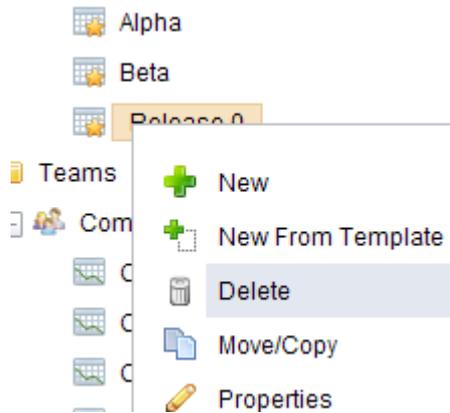
If you no longer need a work type, you can delete it.

To delete a work type

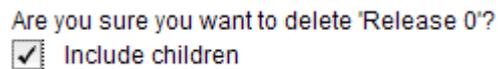
- Open the **Backlogs** module.



2. Right-click the work tree, select a work type, and click  Delete.



3. In the **Delete** dialog box, select the **Include Children** check box if you would like to delete the selected work type and any work type indented below it.



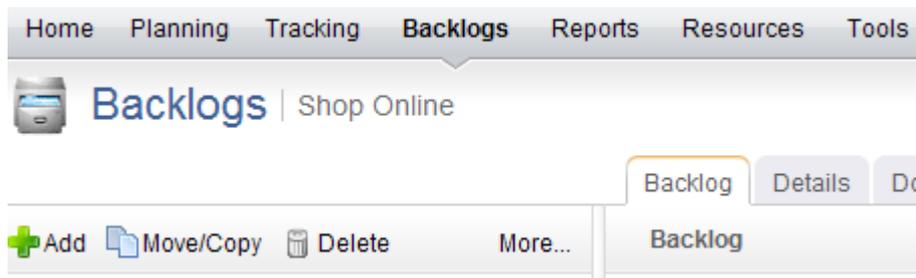
4. Click **OK**.

Edit

You can edit the details of any work type.

To edit a work type

1. Open the **Backlogs** module.



2. In the work tree, select a work type.
3. Make your changes from the **Details** tab.

Backlog Burndown **Details** Documents History

Details

Name Corr

Alpha

Start Date End Date Hea

10/6/2008 10/31/2008 G

4. Click **OK**.

Move

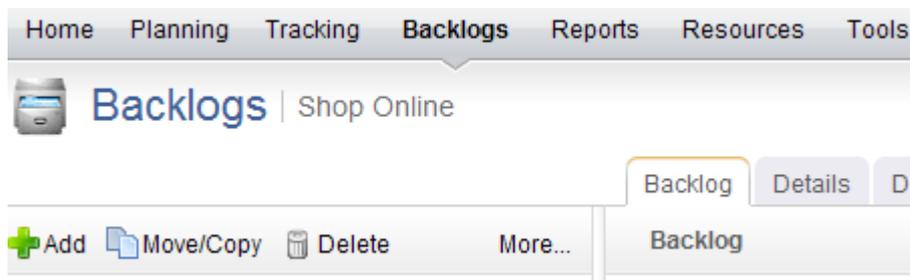
You can move a work type around in the work hierarchy. The simplest way to move a single work type is to drag-and-drop it into the location in the hierarchy that you want it to be.

The **Move Investment** dialog lists any work type that you are authorized to view. A work type is displayed by default in a tree view that you can navigate just like the navigation pane in the **Backlogs** module. When you select a work type for a report or a notification, the selection applies to that work type and any work type below it in that branch of the tree view. When you select a work type for include/exclude or self-allocating activities, the selection applies only to that work type.

You can also enter in a word or phrase and click **Search** to display a list of any work type that matches your search criteria. You can easily alternate between the tree view and the search results by clicking the **Show Tree** or **Show Search Results**, depending on the current view.

To move a work type

1. Open the **Backlogs** module.



2. In the work tree, select the work type you want to move, right-click and select **Move/Copy**.
3. In the **Move/Copy** dialog box, select the location in the work tree under which the work type will be moved.
4. Click **OK**.

Properties

Use the **Properties** dialog box to view the properties for a project, release, sprint, task plan, or any other work item or work type that is currently in the application.

View

Use the **Investment Properties** dialog to view and modify the properties of a work type.

To view work type properties

1. Open the **Projects** module.
2. Select the work type in the navigation tree.
3. Select **More**, and then choose **Properties**.

Attribute History

The **Attribute History** tab in the **Properties** dialog box is used to view the history of changes made to an attribute.

Connector

The **Connector** tab in the **Properties** dialog box is used to view connector details.

The following fields are available from the **Connector** tab in the **Properties** dialog box:

Fields	Description
Connector Name	The names of the connections that are used to provide data for this work item. A connection is made using a recurring tasks, configured from the Jobs tab in the Scheduled Services view.
Last Refreshed	The date and time when a work item was last updated. The frequency of updates is determined by the connection properties that have been configured for the recurring task.

General

The **General** tab in the **Properties** dialog box is used to general information about a project, release, task, task plan, or any other work item or work type in the application.

The following fields are available from the **General** tab in the **Properties** dialog box:

Fields	Description
Created By	The name of the resource who initially created the task, task plan, work item, and so on.
Created Date	The date on which a task, task plan, work item, and so on, was created.
Hide On Timesheet	Indicates whether tasks related to this work item will appear in a resource's timesheet. If selected, then the task will not appear in a resource's timesheet.

Fields	Description
Item Name	The name of the work item.
Item Type	The the type of work item. If the work item is task-based, then the list will contain task-based work item types. If the work item is activity-based, then the list will contain activity-based work item types.
Last Modified By	The user name of the person who made the most recent changes to the task, task plan, or work item.
Last Modified Date	The date on which the most recent changes were made to the task, task plan, or work item.
Lock Completed Assignments	Indicates whether resources are prevented from submitting time against a task or work item that has been marked as complete.
Self Allocation Allowed	Indicates whether a resource is allowed to allocate themselves to a task or work item, and any activities associated with them. The default setting for this option is inherited from the work item type, but the setting can be configured on a per-work item basis. If self-allocation is allowed, then self-assignment is also allowed. Select this option when you want resources to be able to self-allocate to this work item.
Self Assignment Allowed	Indicates whether a resource is allowed to assign themselves to a task or work item, and any activities associated with them. The default setting for this option is inherited from the work item type, but the setting can be configured on a per-work item basis. If you want to allow self-assignment, but disallow self-allocation, then select this option and de-select Self Allocation Allowed.

Role Assignments, Advanced

The **Role Assignments, Advanced** tab in the **Properties** dialog box is used to advanced role assignment details.

The following fields are available from the **Role Assignments, Advanced** tab in the **Properties** dialog box:

Fields	Description
Add	Click this button to add a selected user and/or security group to the role assignment for this work item. This will add the Is Assigned To Role icon in the Assignment column.

Fields	Description
Assignments	Indicates whether a user and/or a security group has a role assignment to the selected work item. If the column shows Is Assigned To Role, the user and/or security group has been given a role assignment to the selected work item. If the column shows Inherits Assignment To Role, the user and/or security group is inheriting its role assignment from a role assignment made to a parent work item. If the column shows Does Not Inherit Assignment To Role, the user and/or security group is not inheriting its role assignment from a parent work item
Clear	Click to clear a selected user and/or security group from the role assignment for this work item. This will remove the Is Assigned To Role or the Does Not Inherit Assignment To Role icons from the Assignment column.
Group / User	The users and/or security groups that are available for role assignments to this work item.
Manage By	Indicates how role assignments are managed. Select Role to manage role assignments by security role. Select Group / User to manage role assignments by user and/or security group.
Parent Groups	The security group(s) to which a user and/or security group belongs. This column is only visible when the Role option is selected for the Manage By option.
Remove	Click to remove a selected user and/or security group from the role assignment for this work item. This will add the Does Not Inherit Assignment To Role icon in the Assignment column.
Role	The security role(s) from which users and/or security groups can be given role assignments.
Show Unassigned	Click to show role assignments by security roles or by users and/or security groups. Only roles, users, and groups without a role assignment will be shown.
Show Users	Click to show the users and security groups that are available for role assignments.
Simple	Click to view the Role Assignments tab using the Simple layout.

Role Assignments, Simple

The **Role Assignments, Simple** tab in the **Properties** dialog box is used to view role assignment details.

The following fields are available from the **Role Assignments, Simple** tab in the **Properties** dialog box:

Fields	Description
Add	Click this button to add a selected user and/or security group to the role assignment for this work item. This will add the Is Assigned To Role icon in the Assignment column.
Advanced	Click to view the Role Assignments tab using the Advanced layout.
Assignments	Indicates whether a user and/or a security group has a role assignment to the selected work item. If the column shows Is Assigned To Role, the user and/or security group has been given a role assignment to the selected work item. If the column shows Inherits Assignment To Role, the user and/or security group is inheriting its role assignment from a role assignment made to a parent work item. If the column shows Does Not Inherit Assignment To Role, the user and/or security group is not inheriting its role assignment from a parent work item
Clear	Click to clear a selected user and/or security group from the role assignment for this work item. This will remove the Is Assigned To Role or the Does Not Inherit Assignment To Role icons from the Assignment column.
Group / User	The users and/or security groups that are available for role assignments to this work item.
Remove	Click to remove a selected user and/or security group from the role assignment for this work item. This will add the Does Not Inherit Assignment To Role icon in the Assignment column.
Show Users	Click to show the users and security groups that are available for role assignments.

Widgets

Serena Agile On Demand ships with an out-of-the-box configuration that is based on the SCRUM methodology. The individual components of the configuration are based on widgets, such as a work item list, document stores, a burndown chart, storyboards, and so on. If your organization uses Agile differently, or would prefer to customize your Agile On Demand configuration, you can add (or remove) individual widgets, entire tabs, and modules. No matter what configuration and methodology your organization uses, how your organization uses Agile On Demand stays the same, with the basic core elements giving you consistent functionality wherever you decide to use them.

Sometimes widgets will appear together on as a homepage, which may contain information that is targeted at specific user roles such as scrum master or team member. A user homepage is often customized to meet the specific needs of your organization, project management style, and individual team structures. Depending on your homepage, the following widgets may be available.

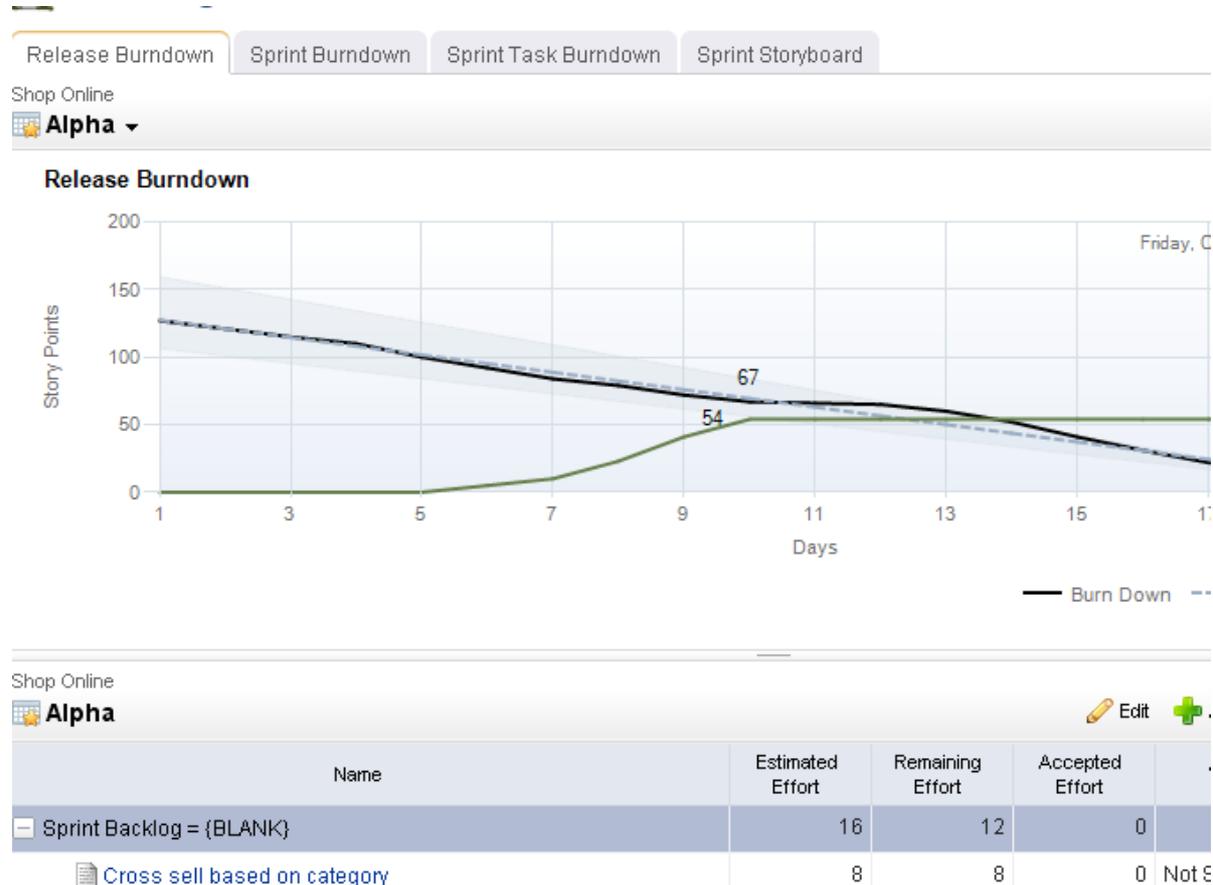
For more information, see the following topics:

- [Burndown Chart \[page 101\]](#)

- Card Wall [page 101]
- List [page 102]
- My Work [page 103]
- Summary View [page 104]
- URL Container [page 104]
- Widget Wireup [page 104]

Burndown Chart

A **Burndown Chart** is used to add a burndown chart to a page in the application.



Card Wall

A **Card Wall** is used to add a card wall (also known as a storyboard) to a page in the application.

Base Burndown Sprint Burndown Sprint Task Burndown **Sprint Storyboard**

Source

Commerce - Sprint 3 ▾

Not Started	In Development	In Test	In Review
<p>Software download [-]</p> <p>Estimated 8 Effort: Remaining 0 Effort: Dev Owner: Tara Team Member QA Owner: Status: Normal</p>	<p>Cross sell based on sales volume [-]</p> <p>Estimated 8 Effort: Remaining 0 Effort: Dev Owner: James Scott QA Owner: Status: Normal</p> <p>Updates to product prices adjust account-level pri ... [-]</p> <p>Estimated 13 Effort: Remaining 0 Effort: Dev Owner: Tom Team Member QA Owner: Status: Normal</p>	<p>Add a specific configuration of a product to a car ... [-]</p> <p>Estimated 5 Effort: Remaining 0 Effort: Dev Owner: Tara Team Member QA Owner: Status: Blocked</p>	<p>Add quantity of installed licenses to cart for ...</p> <p>Estimated 3 Effort: Remaining 0 Effort: Dev Owner: Jan Sco QA Owner: Status: Blocked</p>

List

A **List** is used to add a work item grid to a page in the application.

Backlog Planning Multi Planning Product Owner Storyboard

products

Shop Online Save Edit +

Name	Estimated Effort	Remaining Effort	Work State	
Commission tracking for Partners and Affiliates				Norm
Cross selling			Not Started	▲
Defects	0	0	Not Started	Norm
Defect 10156				Norm
Order management	13	13		Norm
View past order details	13	13	Not Started	Norm
Partner & Affiliate tools	23	23		Norm
Affiliate manages their account information	5	5	Not Started	Norm
Sign up for an Affiliate account	5	5	Not Started	Norm
User can register multiple Affiliate site URLs in their company profile	5	5	Not Started	Norm
View Affiliate commission balance	8	8	Not Started	Norm

My Work

The **My Work List** control is used to provide team members with a location from which they can view and access all of any work item to which they are currently assigned.

Name	Estimated Effort	Remaining Effort	Work State	Estimated Hours
 Add quantity of install licenses to cart for software	3	0	In Review	25
 Defect 10156				4
 Sign up for an Affiliate account	5	5	Not Started	0
 View Affiliate commission balance	8	8	Not Started	0
Total	16	13		29

Summary View

A **Summary View** is used to add summary information to a page in the application. Summary information can be associated with other information, such as lists or backlogs. Summary information can be configured so that changes made to summary data updates any lists to which that summary is associated.

URL Container

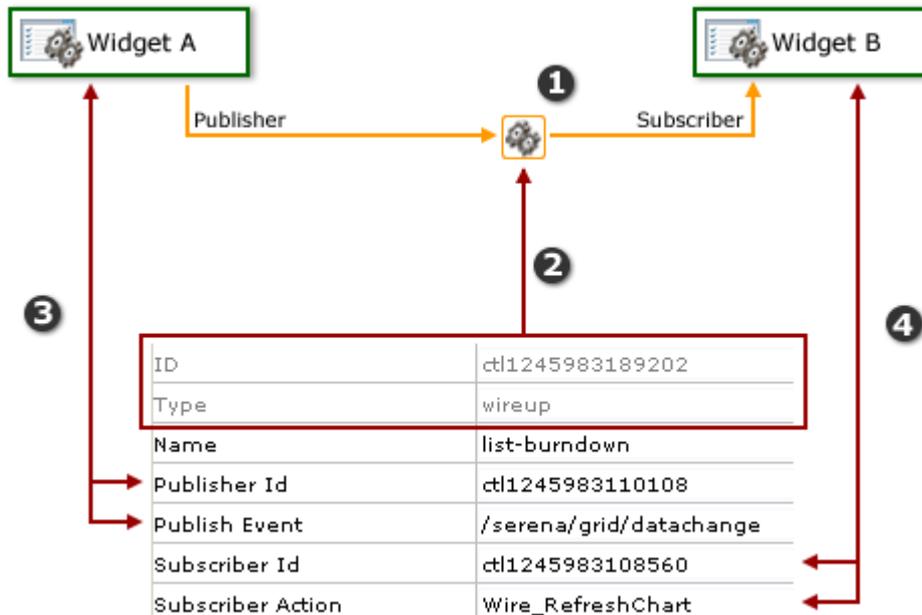
A **URL Container** is used to display information that resides elsewhere inside of your project workspace. A **URL Container** can point to any URL-addressible content, including reports on other internal systems, such as those generated by SAP or by Serena Business Mashups, or to content located on external systems, or to a location on the Internet.

Widget Wireup

A **Widget Wireup** is used to make associations between widgets. For example, you could use a wireup to associate a **List** widget and a **Summary View** widget so that work item details are opened in a **Summary View** when that work item is selected in a **List**. And then when updated information is saved in the **Summary View**, that data will then be refreshed in the **List**.

Overview

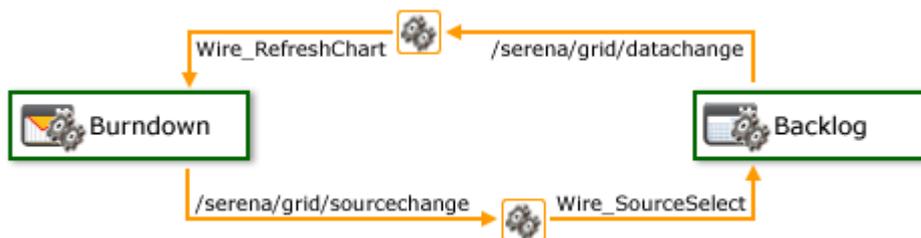
Each widget wireup is configured as a one-way relationship between two widgets, where the publish event in one widget determines the subscriber action in another.



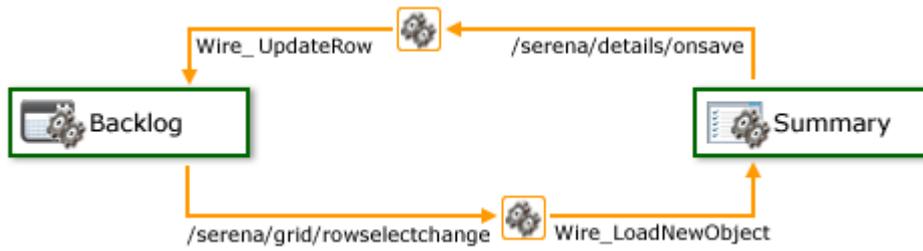
In the diagram above, the numbers correspond to the following:

1. The wireup itself, and the relationship that will be configured.
2. The ID and type of widget.
3. The publisher settings for the wireup. A wireup listens for a specific event (**Publish Event**) that is being broadcast by a specific widget (**Publisher ID**).
4. The subscriber settings for the wireup. A wireup takes a specific action (**Subscriber Action**) on a specific widget (**Subscriber ID**).

Many wireup relationships can be configured as pairs, such as the release, sprint, and task burndown charts that are included in the out-of-the-box configuration of Agile On Demand. In these cases, the wireup relationships are configured to show the backlog associated with the selected burndown chart.



For example, a wireup could be added to a **Backlog** widget that is configured to listen for the **onsave** event to be triggered from a **Summary View** widget. When a team member clicks  Save in the **Summary View** widget, the wireup will then tell the **Backlog** widget to update the work item (using the **Wire_UpdateRow** publish event).



You can also create multiple wireup relationships between widgets, as long as there isn't more than one configured relationship between widgets for each publish event or subscriber action.



Reports

The **Reports** module enables you to view and analyze work item data at the portfolio level. This high-level view helps provide your organization both portfolio planning and portfolio monitoring capabilities. Portfolio managers and analysts can perform "what-if" analysis and comparisons, aggregate data across a portfolio to facilitate better decision-making, as well as track portfolio performance over time. This allows you to analyze and monitor your organization's portfolio data using datasheets. Datasheets are read-only spreadsheets in the **Reports** module that display data about any work item in the associated portfolio.

Portfolio managers arrange columns on datasheets to provide logical data calculations, comparisons, and roll-ups. A datasheet can be used to analyze entire portfolios, or any work item in a similar grouping, and can display different dimensions, units, and periods of data. Portfolios can have more than one datasheet, and any datasheet can be copied or moved to another portfolio.

You can use the **Datasheets**, **Timegrid**, and **Timeline** tabs to build and work with datasheets that illustrate the performance of your organization's portfolios at various levels.

For more information, see the following topics:

- [Charts \[page 107\]](#)
- [Datasheets \[page 113\]](#)
- [Timeline \[page 118\]](#)
- [Datasheet Options \[page 119\]](#)

Charts

You can use the **Charts** tab to create and maintain charts for datasheets. You can add new charts, edit charts, move or copy charts, remove charts, and view chart properties. Charts can be saved as datasheet types, printed, or sent via email. Charts belonging to a datasheet type cannot be edited in the **Charts** tab, even if you have permissions for editing charts in the **Charts** tab.

The view toolbar in the **Charts** tab contains a datasheet snapshot list, and displays the name of the snapshot you are viewing. If you are viewing the current datasheet data or snapshots are not enabled, **Live** is displayed on the toolbar.

The **Charts** tab helps you view portfolio data visually by using the following chart types:

- Advanced Bubble
- Bar
- Bubble
- Burndown
- Column
- Gauge
- Pie
- Range Column

- Stacked Bar
- Stacked Column
- Timephased Area
- Timephased Stacked Column

Add

Create a chart to view data for any datasheet that has been saved and to which you have access.

To add a chart

1. Open the **Reports** module.
2. Select a datasheet.
3. Select the **Charts** tab.
4. Click **New Chart**.
5. In the **New Chart** dialog box, select a chart.
6. In the **New Chart** dialog box, choose a chart: **Advanced Bubble, Bar, Bubble, Burndown, Column, Gauge, Pie, Range Column, Stacked Bar, Stacked Column, Timephased Area, or Timephased Stacked Column**.
7. Enter a name and a description.
8. On the **Attributes** tab, specify what you want to compare.
9. On the **Chart Settings** tab, select how you want to view data in the chart.
10. On the **Gauge Settings** tab, define the gauge properties and the scale with which you want to present data. This tab is only available for the **Gauge** chart type.
11. On the **Timephase Settings** tab, choose from start and end dates, time periods, or if you want to sync the chart with a datasheet. This tab is only available for the **Burndown, Timephased Area, and Timephased Stacked Column** chart types.
12. On the **Axis Settings** tab, choose major and minor grid lines. This tab is available for all of the chart types except **Gauge** and **Pie**.
13. Click **Save**.

Copy

You can create new charts based on charts that are already there.

To copy a chart

1. Open the **Reports** module.
2. Select an datasheet.
3. Select the **Charts** tab.
4. Click **Copy** to copy a chart.
5. In the **Move/Copy Chart** dialog box, select **Make a copy**.
6. In **Destination**, choose the destination datasheet for the new chart.
7. Click **Save**.

Delete

If you don't need a chart, you can delete it.

To delete a chart

1. Open the **Reports** module.
2. Select an datasheet.
3. Select the **Charts** tab.
4. Click **Copy** to copy a chart.
5. In the **Move/Copy Chart** dialog box, select **Make a copy**.
6. In **Destination**, choose the destination datasheet for the new chart.
7. Click **Save**.

Edit

Make changes to a chart. Change the axis options or the properties. A datasheet type chart can only be edited by a user with specific permission to do so.

To edit a chart

1. Open the **Reports** module.
2. Select a datasheet.
3. Select the **Charts** tab.
4. Select a chart and click **Edit Chart**.
5. In the **Chart Properties** dialog box, make your changes.
6. Click **Save**.

Move

If you want to associate a chart with another datasheet, you can move it.

To move a chart

1. Open the **Reports** module.
2. Select a datasheet.
3. Select the **Charts** tab.
4. Select a chart and click **Edit Chart**.
5. In the **Chart Properties** dialog box, make your changes.
6. Click **Save**.

Save

You can save any chart.

To save a chart

1. Open the **Reports** module.
2. Select a datasheet.
3. Select the **Charts** tab.

4. Select a chart.
5. Click **View** to view the chart.
6. Click **Save** to save the picture.
7. Select a file format, a location to which the chart will be saved, and click **OK**.

View properties

Charts belonging to a datasheet type cannot be created or edited in the **Charts** tab, even if you have permissions for editing charts in the **Charts** view. When you select a datasheet type chart in the **Charts** tab, the only actions available for the chart is view, regardless of your security role permissions. Users with the appropriate permissions can create and edit charts for datasheet types from the Datasheet Type Charts page.

The Chart Properties dialog describes information about a chart. This dialog appears when creating a new chart or when modifying the properties for an existing chart. Depending on the chart you are creating or have selected, different options will be available.

The following types of charts are available:

- Advanced Bubble
- Bar
- Bubble
- Burndown
- Column
- Gauge
- Pie
- Range Column
- Stacked Bar
- Stacked Column
- Timephased Area
- Timephased Stacked Column

Chart properties vary from chart to chart. Every chart has a name (required) and a description (optional). Depending on the chart, the following tabs may be available:

- **Attributes** This tab allows you to define the attributes that display in the chart.
- **Axis** This tab is used to determine whether major and minor grid lines are displayed on a chart for both the X axis and the Y axis.
- **Chart** This tab is used to define general settings for the chart.
- **Timephase** This tab is used to define a chart's timephase settings.
- **Gauge** This tab enables you to set the properties for the attributes selected on the Attributes tab.

To view chart properties

1. Open the **Reports** module.
2. Select a datasheet.

3. Select the **Charts** tab.
4. Right-click the datasheet and select **Chart Properties**.

Datasheet Type Charts

When you select a datasheet type chart in the **Charts** tab, the only actions available for the chart is view, regardless of your security role permissions. Users with the appropriate permissions can create and edit charts for datasheet types from the **Datasheet Type Charts** dialog. The **Datasheet Type Charts** dialog has the same functionality as the **Charts** tab, except that it is only used for managing datasheet type charts, and you cannot view charts from the **Datasheet Type Charts** dialog.

The **Manage Datasheet Types** dialog is used to edit, copy, and delete datasheet types, as well as create and manage datasheet type charts. When you click **Promote to Datasheet Type** in the **Reports** module, the **Promote to Datasheet Type** dialog opens, offering the same functionality as the **Manage Datasheet Types** dialog.

- **Datasheet Types** This list displays all of the datasheet types.
- **Edit** Select a datasheet type from the **Datasheet Types** list and click the **Edit** button to open the **Datasheet Type Properties** dialog box for the selected datasheet type.
- **Charts** Select a datasheet type from the **Datasheet Types** list and click the **Charts** button to open the **Datasheet Type Charts** dialog box for the selected datasheet type. Datasheet type charts cannot be created or edited from the **Charts** tab. Datasheet type charts must be created and edited from the **Datasheet Type Charts** dialog box.
- **Copy** Select a datasheet type from the **Datasheet Types** list and click the **Copy** button to copy the selected datasheet type. The copy of the datasheet type appears in the **Datasheet Types** list on the **Manage Datasheet Types** dialog box and the **Datasheet Types** list on the **New Datasheet, Datasheet Properties**, and the **Datasheet Type Properties** pages.
- **Deleting a datasheet type** Any datasheet type that is no longer needed can be deleted. When you delete only a datasheet type, any datasheets that were assigned to the datasheet type become standard datasheets, and can be edited. The datasheet will retain the datasheet properties and charts defined for the datasheet type.

Add

Create a a datasheet type chart based on a datasheet type. When a chart is created for a datasheet type, the chart is automatically added to all of the datasheets assigned to the datasheet type.

To add a datasheet type chart

1. Open the **Reports** module.
2. Select a datasheet.
3. Select the **Charts** tab.
4. Select a chart.
5. Right-click the navigation tree and select **Promote to Datasheet Type Chart** to promote that chart to a datasheet type chart.

Copy

You can create new datasheet type charts based on datasheet type charts that are already there. A datasheet type chart can only be copied to datasheets that are not assigned to a datasheet type. A datasheet type chart cannot be copied to other datasheet types.

To copy a datasheet type chart

1. Open the **Reports** module.
2. Select a datasheet.
3. Select the **Charts** tab.
4. Right-click and select **Manage Datasheet Types**.
5. In the **Manage Datasheet Types** dialog box, select a datasheet type from the **Datasheet Types** list, and click **Charts**.
6. In the **Datasheet Type Charts** dialog box, select a chart.
7. Click **Copy**.
8. In the **Move/Copy Chart** dialog box, select **Make a copy**.
9. In **Destination**, choose the destination datasheet for the new chart.
10. Click **OK**.

Delete

If you don't need a datasheet type chart, you can delete it.

To delete a datasheet type chart

1. Open the **Reports** module.
2. Right-click the datasheet and select **Manage Datasheet Types**.
3. In the **Manage Datasheet Types** dialog box, select a datasheet type from the **Datasheet Types** list, and click **Delete**.
4. In the **Datasheet Type Charts** dialog box, select a chart and click **Charts**.
5. Click **OK**.

Edit

Make changes to a datasheet type chart. Change the axis options or the properties. When a datasheet type chart is edited, the chart is automatically edited on any datasheet to which the datasheet type is associated.

To edit a datasheet type chart

1. Open the **Reports** module.
2. In the datasheets tree, right-click a datasheet and select **Manage Datasheets**.
3. In the **Manage Datasheet Types** dialog box, select a datasheet type and then select **Edit Datasheet Type Chart**.
4. In the **Datasheet Properties** dialog box, make your changes. Click **OK**.
5. Click **Save**.

Move

While working with a dashesheet type chart, you may determine that it belongs in a dashesheet. A dashesheet type chart can be moved to another dashesheet within the same portfolio or to a dashesheet in another portfolio. A dashesheet type chart can only be moved to a dashesheet that is not assigned to a dashesheet type. A dashesheet type chart cannot be moved to another dashesheet type, and a standard dashesheet type chart cannot be moved to a dashesheet type.

To move a dashesheet type chart

1. Open the **Reports** module.
2. In the dashesheets tree, select a dashesheet, right-click and select **Move/Copy Dashesheet**.
3. In the **Move/Copy Dashesheet** dialog box, select the location in the dashesheets tree under which you want to move the dashesheet.
4. Click **OK**.

View

A dashesheet type chart can be viewed from **Charts** tab.

To view a dashesheet type chart

1. Open the **Reports** module.
2. Right-click the navigation tree and select **Manage Dashesheet Types** to view dashesheet types.

Dashesheets

You can use the **Dashesheets** tab to track and manage rolled-up values that reflect the current display of the view. Data can be displayed with the portfolio hierarchy, or it can be grouped by a specific box:

- When displaying data using the portfolio hierarchy, rolled up data on a parent row reflects the values of all child data indented below the parent row. Data for a portfolio row is rolled up from any work item within the portfolio.
- When displaying data grouped by a specific box, the parent row represents the value that all of the child rows indented below the parent row have in common. Data for a parent row displaying a grouped value is rolled up from any work item that contains that value.

Dashesheet rows can be excluded from the roll-up values by clearing the check box to the left of the row.

You can create dashesheets in two ways: from scratch or basing one on a dashesheet type. When you assign a dashesheet to a dashesheet type, all of the dashesheet's properties and charts are defined for the dashesheet by the dashesheet type you select.

You can make any dashesheet or dashesheet type that you create a private dashesheet, and you have the option of sharing your private dashesheet with other users and/or members of a security group. When a dashesheet is private, only the user that created the dashesheet can view and modify the dashesheet, unless you are sharing the dashesheet. When you share a dashesheet, the users and/or members of the security groups you assigned to the dashesheet can also view and modify the dashesheet.

For more information, see the following topics:

- [Define Datasheets \[page 114\]](#)
- [Define Snapshots \[page 116\]](#)

Define Datasheets

Portfolio managers can define which columns are displayed in a datasheet from the Columns tab of the New Datasheet, Datasheet Properties, and Datasheet Type Properties dialog boxes.

You can set up a datasheet to group data by a specific box's values, and sort data by each value in a specific column on the Organize tab of the New Datasheet, Datasheet Properties, and Datasheet Type Properties dialog boxes. For example, you select *Status* from the **Group By** list, **Start** from the **Sort By** list, and then select the *Descending* option.

The groups specified on the Organize tab of the New Datasheet, Datasheet Properties, and New Datasheet dialog boxes are used to create the layers of drill-down on charts in the **Charts** tab.

If you are creating or editing a datasheet that is assigned to a datasheet type, you cannot edit any of the datasheet properties on the Columns, Filters, Organize, Time Views, or Dashboard tabs on the New Datasheet or Datasheet Properties dialog boxes.

Add

Add a datasheet for most work item types.

To add a datasheet

1. Open the **Reports** module.
2. Select the **Datasheets** tab.
3. Right-click the navigation tree and click **New Datasheet**.
4. Enter a name and select the datasheet type from which this datasheet will be based.
5. On the **General** tab, define general datasheet properties.
6. On the **Columns** tab, identify datasheet columns and column order.
7. On the **Filters** tab, set up a filter for focusing the information displayed on a datasheet.
8. On the **Organize** tab, determine how data is grouped and sorted on the datasheet.
9. On the **Time Views** tab, define the properties for the **Timeline** and **Timegrid** tabs.
10. On the **Demand vs Capacity Filters** tab, define the resource-based filters for the datasheet.
11. On the **Dashboard** tab, set up the dashboard for the datasheet.
12. Click **Save**.

Copy

As you review a datasheet that displays data in a portfolio, you may decide that you want to see the same datasheet columns, but with different data, in a different portfolio. Copying a datasheet will also copy any charts associated with that datasheet.

To copy a datasheet

1. Open the **Reports** module.
2. Select an datasheet.
3. Select the **Charts** tab.
4. Click **Copy** to copy a datasheet.
5. In the **Move/Copy** dialog box, select **Make a copy**.
6. In the **Destination** box, choose the destination datasheet for the new chart.
7. Click **Save**.

Delete

When a datasheet is no longer useful for portfolio data analysis, delete it.

To delete a datasheet

1. Open the **Reports** module.
2. In the navigation tree, right-click the datasheet you want to delete and click **Delete**.
3. Click **Save**.

Move

You can move a datasheet between portfolios. Moving a datasheet will also move any charts that are associated with that datasheet.

To move a datasheet

1. Open the **Reports** module.
2. Select a datasheet.
3. Select the **Datasheets** tab.
4. Click **Move/Copy Datasheet** to move a datasheet.
5. In the **Move/Copy Datasheet** dialog box, select the location to which you are moving the datasheet.
6. Click **OK**.

Share

Use the Datasheet Shared Access dialog box to share a private datasheet with a specific user and/or security group. When a datasheet is private, it is not viewable by anyone except the owner of the datasheet. You can create exceptions and allow some users in your organization to view a private datasheet. On the General tab of the Datasheet Properties dialog box, click **Share** to open the Datasheet Shared Access dialog box. You can filter the users that are available in the Datasheet Shared Access dialog box by selecting or de-selecting the **Users**, **Groups**, and **Unselected** check boxes under **Show**. Click **Add** to share the datasheet. Click **Clear** to stop sharing the datasheet. Only selected users and/or groups will be able to view the datasheet.

To share a datasheet

1. Open the **Reports** module.
2. Select a datasheet.

3. Right-click and select **Datasheet Properties**.
4. On the **General** tab, enable the **Private** check box and click **Share**.
5. Select the users and/or security groups to whom you want to grant access.
6. Click **Save**.

View

A datasheet can be viewed from the **Datasheets** tab in the **Reports** module.

To view a datasheet

1. Open the **Reports** module.
2. Select a datasheet.
3. In the action pane, select a snapshot from the **Data** drop-down.

Define Snapshots

Datasheet snapshots are used in each of the **Reports** module views. **Datasheets**, **Timegrid**, **Timeline**, and **Charts** tabs contain a datasheet snapshot list on the view toolbar.

Selecting a snapshot from the list on the view toolbar displays the data from the snapshot of the datasheet selected in the view and on the datasheet's dashboard (if the dashboard is set up to synchronize with the current datasheet selection). A datasheet snapshot list is available in three places: the navigation bar, the History list on generated charts, and the Chart Settings tab.

Add

Datasheet snapshots capture the data on a datasheet from a specific time period. Datasheet snapshots allow you to analyze and compare portfolio data on a datasheet from different moments in the portfolio's lifecycle to help determine its progress and health. When you schedule a datasheet snapshot, snapshots will be automatically created at the scheduled time.

To add a datasheet snapshot

1. Open the **Reports** module.
2. In the navigation tree, right-click a datasheet and click **Snapshots** to open the **Snapshots** dialog box.
3. In the **Snapshots** dialog box, select a datasheet snapshot and click **New Datasheet Snapshot**.
4. In the **New Snapshot** dialog box, name the snapshot.
5. Select **Include Timegrid Data** to include timephased data from the **Timegrid** tab in the datasheet snapshot.
6. Select **Include Timeline Data** to include milestone data from the **Timeline** tab in the datasheet snapshot.
7. Select **Include Demand vs Capacity Data** to include resource-based data from the **Demand vs Capacity** tab.
8. Under **Schedule**, select **Schedule Snapshot** to create recurring updates to the snapshot. They can be updated on a daily, weekly, or monthly basis.

9. Click **Save**.

Add w/current data

You can create datasheet snapshots that contain data that is current to the datasheet for which you want to create a datasheet snapshot.

To add a datasheet snapshot that contains current data

1. Open the **Reports** module.
2. In the navigation tree, right-click a datasheet and click **Snapshots** to open the **Snapshots** dialog box.
3. In the **Snapshots** dialog box, select a datasheet snapshot and click **Snapshot Now**.

Delete snapshot

You can remove any datasheet snapshot that is no longer needed. Once a snapshot is removed, the snapshot (and its history) will no longer be available in the snapshot list on the view toolbar throughout the **Reports** module or the **Charts** tab.

To delete a datasheet snapshot

1. Open the **Reports** module.
2. In the navigation tree, right-click a datasheet and click **Manage Snapshots** to open the **Snapshots** dialog box.
3. In the **Snapshots** dialog box, select a datasheet snapshot and click **Delete**.
4. Click **OK**.

Delete history

You can remove the snapshot history for any datasheet.

To delete a datasheet snapshot history

1. Open the **Reports** module.
2. In the navigation tree, right-click a datasheet and click to open the **Snapshots** dialog box.
3. In the **Snapshots** dialog box, select a datasheet snapshot and then select the **History** tab.
4. Click **Remove** to delete the selected snapshot or click **Remove All** to delete all snapshots. Confirm.

Schedule

You can create a schedule for capturing snapshots on an on-going basis, or capture a single snapshot of a datasheet's current data. A datasheet snapshot captures the data on a datasheet from a specific time period.

To schedule a datasheet snapshot

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Scheduled Services** tab.
3. Select the **Jobs** tab.

4. Click **New** to add a new attribute.
5. In the **Scheduled Job Properties** section, enter a name and description for the job.
6. Select *Datasheet History* from the **Job Type** list.
7. Set the frequency, date, and time options.
8. Click **Save**.

View

Select a datasheet that contains the snapshot you want to view and click **Snapshots**.

To view a datasheet snapshot

1. Open the **Reports** module.
2. Select a datasheet.
3. In the action pane, select a snapshot from the **Data** drop-down.

Timeline

You can use the **Timeline** tab to view datasheet summary information (in the left pane) and timeline details for a datasheet (in the right pane). Milestones are displayed as diamonds in the timeline. You can change the information available in the **Timeline** tab by changing the starting or ending dates, by adjusting the timescale, or by changing the dimension upon which the analysis is based. Click **Apply** to recalculate the information.

Users who have access to the **Timeline** tab can select and clear the check box to the left of each row to include and exclude the corresponding row from the rollup data. By excluding rows, you can determine impact throughout the organization, including costs, benefits, and resources. The **Show All Roles** check box on the General tab of the **New Datasheet** and **Datasheet Properties** dialog box determines whether all rows, including excluded rows, are displayed on the datasheet.

The view toolbar in the **Timeline** tab contains a datasheet snapshot list. Select a snapshot from the list to display the data from the snapshot in the view. The navigation toolbar also displays the name of the snapshot you are viewing. If you are viewing the current datasheet data or snapshots are not enabled, **Live** is displayed on the toolbar.

When you are viewing live data in the **Timeline** tab, you can drill down to the **Projects** module views for a work item on a datasheet. When you click on a work item name in the **Timeline** tab, a drop-down list of the **Projects** module views opens. Select a view from the list to open the **Projects** module's view for the selected work item on a datasheet. The drill-down feature is not available when viewing data from a datasheet snapshot.

View

A timeline can be viewed from the **Timeline** tab in the **Reports** module.

To view a timeline for a datasheet

1. Open the **Reports** module.
2. Select a datasheet.
3. Select the **Timeline** tab.
4. Select starting and ending date for the timeline you want to view.

5. Select a dimension.
6. Select a major and a minor timescale.
7. Click **Apply**. This will recalculate the roll-up and calculated values in the timeline.

Datsheet Options

You can right-click any resource in the resource tree for additional options:

- **Move/Copy Datsheet**
- **Delete Datsheet**
- **Datsheet Properties**
- **Export Datsheet**
- **Manage Snapshots**
- **Manage Datsheet Types**
- **Promote to Datsheet Type**

For more information, see the following topics:

- [Manage Datsheets \[page 119\]](#)
- [Manage Snapshots \[page 122\]](#)
- [Manage Types \[page 124\]](#)
- [Properties \[page 124\]](#)

Manage Datsheets

As progress is made on a work item, users with appropriate permissions can create datsheets in the **Reports** module to analyze work item data.

There are two kinds of datsheets you can create, you can create a datsheet from scratch, or you can create a datsheet that is based on a datsheet type. When you assign a datsheet to a datsheet type, all of the datsheet's properties and charts are defined for the datsheet by the datsheet type you select.

You can make any datsheet or datsheet type that you create a private datsheet, and you have the option of sharing your private datsheet with other users and/or members of a security group. When a datsheet is private, only the user that created the datsheet can view and modify the datsheet, unless you are sharing the datsheet. When you share a datsheet, the users and/or members of the security groups you assigned to the datsheet can also view and modify the datsheet.

To make your datsheet private, select the **Private** check box on the **General** tab. To share your private datsheet, select the **Share** button next to the **Private** check box.

Use the **Add**, **Delete**, **Edit**, and **More** options in the navigation pane (or use the right-click options in the work item heirarchy) to manage datsheets.

Add

Add a datsheet for most work item types.

To add a datsheet

1. Open the **Reports** module.

2. Select the **Datasheets** tab.
3. Right-click the navigation tree and click **New Datasheet**.
4. Enter a name and select the datasheet type from which this datasheet will be based.
5. On the **General** tab, define general datasheet properties.
6. On the **Columns** tab, identify datasheet columns and column order.
7. On the **Filters** tab, set up a filter for focusing the information displayed on a datasheet.
8. On the **Organize** tab, determine how data is grouped and sorted on the datasheet.
9. On the **Time Views** tab, define the properties for the **Timeline** and **Timegrid** tabs.
10. On the **Demand vs Capacity Filters** tab, define the resource-based filters for the datasheet.
11. On the **Dashboard** tab, set up the dashboard for the datasheet.
12. Click **Save**.

Copy

As you review a datasheet that displays data in a portfolio, you may decide that you want to see the same datasheet columns, but with different data, in a different portfolio. Copying a datasheet will also copy any charts associated with that datasheet.

To copy a datasheet

1. Open the **Reports** module.
2. Select an datasheet.
3. Select the **Charts** tab.
4. Click **Copy** to copy a datasheet.
5. In the **Move/Copy** dialog box, select **Make a copy**.
6. In the **Destination** box, choose the destination datasheet for the new chart.
7. Click **Save**.

Delete

When a datasheet is no longer useful for portfolio data analysis, delete it.

To delete a datasheet

1. Open the **Reports** module.
2. In the navigation tree, right-click the datasheet you want to delete and click **Delete**.
3. Click **Save**.

Move

You can move a datasheet between portfolios. Moving a datasheet will also move any charts that are associated with that datasheet.

To move a datasheet

1. Open the **Reports** module.

2. Select a datasheet.
3. Select the **Datasheets** tab.
4. Click **Move/Copy Datasheet** to move a datasheet.
5. In the **Move/Copy Datasheet** dialog box, select the location to which you are moving the datasheet.
6. Click **OK**.

Export

You can export the information in a datasheet as a comma separated values (.csv) file.

To export a datasheet

1. Open the **Reports** module.
2. In the datasheet tree, select the datasheet you want to export, right-click and choose **Export Datasheet**.
3. Save the datasheet as a comma separated values (.csv) file type and select the location you want to save it.
4. Click **Save**.

Share

Use the **Datasheet Shared Access** dialog box to share a private datasheet with a specific user and/or security group. When a datasheet is private, it is not viewable by anyone except the owner of the datasheet. You can create exceptions and allow some users in your organization to view a private datasheet. On the **General** tab of the **Datasheet Properties** dialog box, click **Share** to open the **Datasheet Shared Access** dialog box. You can filter the users that are available in the **Datasheet Shared Access** dialog box by selecting or de-selecting the **Users**, **Groups**, and **Unselected** check boxes under **Show**. Click **Add** to share the datasheet. Click **Clear** to stop sharing the datasheet. Only selected users and/or groups will be able to view the datasheet.

To share a datasheet

1. Open the **Reports** module.
2. Select a datasheet.
3. Right-click and select **Datasheet Properties**.
4. On the **General** tab, enable the **Private** check box and click **Share**.
5. Select the users and/or security groups to whom you want to grant access.
6. Click **Save**.

View

Datasheets can be viewed from the **Datasheets** tab in the **Reports** module.

To view a datasheet

1. Open the **Reports** module.
2. Select a datasheet.

Manage Snapshots

The **Snapshots** dialog displays the existing datasheet snapshots for the datasheet selected in the portfolios pane. Use the Snapshots page to create new snapshots, edit existing snapshots, or delete snapshot you no longer need. If you want to delete snapshot history, snapshot history is deleted on the History tab on the **Edit Snapshots** page.

- **Snapshot Now** Select a snapshot from the snapshot list and click this button to create a snapshot of current data displayed on the selected datasheet.
- **New** Click this button to open the **New Snapshot** page and add a new snapshot to the datasheet.
- **Edit** Select a snapshot from the snapshot list and click this button to open the **Edit Snapshots** page and edit the selected snapshot.
- **Delete** Select a snapshot from the snapshot list and click **Delete**, to delete the selected snapshot.

Add

Datasheet snapshots capture the data on a datasheet from a specific time period. Datasheet snapshots allow you to analyze and compare portfolio data on a datasheet from different moments in the portfolio's lifecycle to help determine its progress and health. When you schedule a datasheet snapshot, snapshots will be automatically created at the scheduled time.

To add a datasheet snapshot

1. Open the **Reports** module.
2. In the navigation tree, right-click a datasheet and click **Snapshots** to open the **Snapshots** dialog box.
3. In the **Snapshots** dialog box, select a datasheet snapshot and click **New Datasheet Snapshot**.
4. In the **New Snapshot** dialog box, name the snapshot.
5. Select **Include Timegrid Data** to include timephased data from the **Timegrid** tab in the datasheet snapshot.
6. Select **Include Timeline Data** to include milestone data from the **Timeline** tab in the datasheet snapshot.
7. Select **Include Demand vs Capacity Data** to include resource-based data from the **Demand vs Capacity** tab.
8. Under **Schedule**, select **Schedule Snapshot** to create recurring updates to the snapshot. They can be updated on a daily, weekly, or monthly basis.
9. Click **Save**.

Add w/current data

You can create datasheet snapshots that contain data that is current to the datasheet for which you want to create a datasheet snapshot.

To add a datasheet snapshot that contains current data

1. Open the **Reports** module.

2. In the navigation tree, right-click a datasheet and click **Snapshots** to open the **Snapshots** dialog box.
3. In the **Snapshots** dialog box, select a datasheet snapshot and click **Snapshot Now**.

Delete snapshot

You can remove any datasheet snapshot that is no longer needed. Once a snapshot is removed, the snapshot (and its history) will no longer be available in the snapshot list on the view toolbar throughout the **Reports** module or the **Charts** tab.

To delete a datasheet snapshot

1. Open the **Reports** module.
2. In the navigation tree, right-click a datasheet and click **Manage Snapshots** to open the **Snapshots** dialog box.
3. In the **Snapshots** dialog box, select a datasheet snapshot and click **Delete**.
4. Click **OK**.

Delete history

You can remove the snapshot history for any datasheet.

To delete a datasheet snapshot history

1. Open the **Reports** module.
2. In the navigation tree, right-click a datasheet and click to open the **Snapshots** dialog box.
3. In the **Snapshots** dialog box, select a datasheet snapshot and then select the **History** tab.
4. Click **Remove** to delete the selected snapshot or click **Remove All** to delete all snapshots. Confirm.

Edit

A datasheet snapshot is a collection of saved parameters from which you can take real-time snapshots of data for a datasheet. Save them over time to compare snapshots. If the snapshot doesn't contain the data you want it to, edit it.

To edit a datasheet snapshot

1. Open the **Reports** module.
2. In the datasheets tree, right-click a datasheet and select **Manage Datasheets**.
3. In the **Manage Datasheet Types** dialog box, select a datasheet type and then select **Edit Datasheet Type Chart**.
4. In the **Snapshots** dialog box, select a datasheet snapshot and click **Edit Snapshot**.
5. In the **Edit Snapshots** dialog box, make your changes and then click **Save**.

Schedule

You can create a schedule for capturing snapshots on an on-going basis, or capture a single snapshot of a datasheet's current data. A datasheet snapshot captures the data on a datasheet from a specific time period.

To schedule a datasheet snapshot

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Scheduled Services** tab.
3. Select the **Jobs** tab.
4. Click **New** to add a new attribute.
5. In the **Scheduled Job Properties** section, enter a name and description for the job.
6. Select *Datasheet History* from the **Job Type** list.
7. Set the frequency, date, and time options.
8. Click **Save**.

View

Select a datasheet that contains the snapshot you want to view and click **Snapshots**.

To view a datasheet snapshot

1. Open the **Reports** module.
2. Select a datasheet.
3. In the action pane, select a snapshot from the **Data** drop-down.

Manage Types

The **Manage Datasheet Types** dialog is used to edit, copy, and delete datasheet types, as well as create and manage datasheet type charts. When you click **Promote to Datasheet Type** in the **Reports** module, the **Promote to Datasheet Type** dialog opens, offering the same functionality as the **Manage Datasheet Types** dialog.

Properties

The **Datasheet Properties** dialog box, the **New Datasheet** page, and the **Datasheet Type Properties** page are used to describe either a datasheet or a datasheet type.

- **Datasheet Name** Type the name of the selected datasheet.
- **Datasheet Type** Select a datasheet type from the **Datasheet Type** list to assign the datasheet to a datasheet type. Select **None** from the Datasheet Type box if you do not want to assign the datasheet to a datasheet type, or have no datasheet types saved.

Once you have provided a name for the datasheet, you can filter the displayed portfolio data using the settings on the following tabs:

- **General** This tab contains basic information about a datasheet.
- **Columns** This tab defines which columns appear on the datasheet, and in what order they are displayed.
- **Filters** This tab defines which columns appear on the datasheet, and the order in which they are displayed.
- **Time views** This tab shows how data is grouped and sorted on the datasheet.

- **Demand vs Capacity** This tab shows the resource demand against capacity for selected resources.
- **Dashboard** This tab shows how the charts are displayed on the datasheet's dashboard, and whether the data displayed on the charts reflects the current data.

Columns

This tab is used to define which columns appear on the datasheet, and in what order they are displayed. If you are creating or editing a datasheet that is assigned to a datasheet type, you cannot edit any of the datasheet properties on the **Columns, Filters, Organize, Time Views, or Dashboard** tabs:

Fields	Description
Add	Click this button to move the selected attributes from the Available Attributes box to the Selected Attributes box.
Available Attributes	The attributes that have been assigned to the work item types listed on the General tab.
Custom Header	The custom display name for the attribute, as it will appear in the datasheet. If this field is empty, the Default Header will be used.
Datasheet Name	The name of the datasheet.
Default Header	The default display name for the attribute, as it will appear in the datasheet.
Move Down	Columns are displayed from left to right in a datasheet. Click this button to move the column for this attribute to the right in the datasheet.
Move Up	Columns are displayed from left to right in a datasheet. Click this button to move the column for this attribute to the left in the datasheet.
Remove	Click this button to move the selected attributes from the Selected Attributes box to the Available Attributes box.
Selected Attributes	The attributes that are displayed as columns in the datasheet. Columns are displayed from left to right in the order listed here.

Dashboard

This tab is used to define the charts displayed on the datasheet's dashboard, and determine whether the data displayed on the charts reflects the data currently displayed on the datasheet. You can also determine whether users can display the other charts created for the datasheet from the dashboard on the **Dashboard** tab. If you are creating or editing a datasheet that is assigned to a datasheet type, you cannot edit any of the datasheet properties on the **Columns, Filters, Organize, Time Views, or Dashboard** tabs:

Fields	Description
Allow users to change chart	Select the Allow users to change chart check box to allow users to view the other charts created for the datasheet on the dashboard. If this check box is selected the user can select one of the datasheet's other charts from the chart list on the dashboard. Clear the check box if you only want the chart you selected from the Left Chart or Right Chart chart list to be displayed on the dashboard for the datasheet.
Datasheet Name	The name of the datasheet.
Left Chart	Select the chart you want to be displayed on the left side of the datasheet's dashboard. The charts displayed in the chart list, are the charts created for the datasheet in the Charts tab.
Right Chart	Select the chart you want to be displayed on the right side of the datasheet's dashboard. The charts displayed in the chart list, are the charts created for the datasheet in the Charts tab.
Synchronize with datasheet	Select the Synchronize with datasheet check box to have the data displayed in the selected chart reflect the data displayed in the datasheet. For example, if a snapshot is selected on the datasheet, the chart would display the data from the selected snapshot. Clear the check box if you want the selected chart to only display live data from the datasheet. When the Synchronize with datasheet check box is cleared, the chart on the dashboard displays the data from the snapshot selected in the View chart using this data box in the New Chart or Chart Properties page in the Charts tab.

Demand vs. Capacity

This tab is used to display the relationship between resource capacity and demand by filtering on resource teams and roles, allocation status and other demand. Using this tab, you can specify the resource-related information that is included in the datasheet:

Fields	Description
Allocation Status	This tab enables you to select the type of allocation that is included on the datasheet. Proposed and Committed are selected by default. This will include both types of allocation status on the datasheet. If you want to filter out one type or the other, clear the appropriate check box. For example, if you want to filter out soft allocations, clear the Proposed check box.

Fields	Description
Other Demand	This tab enables you to define the attributes that constitute "other demand." This demand comes from work item allocations that are outside the scope of the current datasheet, but are contained within the same portfolio hierarchy. For example, you can include demand data from only a work item with a specific project status. Other demand can also be a work item filtered out of the datasheet.
Resource Role	This tab enables you to select the resource roles that are included on the datasheet. Resource roles display as columns on the datasheet within the specified time period. For example, if you have 5 resource roles and the selected time period is Calendar Month from January to December, the datasheet displays 12 time periods, each of which contains five resource role columns. To display a subset of available resource roles, clear the appropriate check box.
Resource Team	This tab enables you to select the resource teams that is included on the datasheet. In the Resource Team column, select the resource teams to include their resource demand and capacity data on the datasheet. All resource teams are selected by default. To display a subset of available resource teams, clear the appropriate check box.

Filters

This tab is used to define which columns appear on the datasheet, and in what order they are displayed. If you are creating or editing a datasheet that is assigned to a datasheet type, you cannot edit any of the datasheet properties on the **Columns, Filters, Organize, Time Views, or Dashboard** tabs:

Fields	Description
Add	Click this button to move the selected attributes from the Available Attributes box to the Selected Attributes box.
And	Select this option to indicate that the work item on the datasheet must meet the conditions of the selected filter rule and all other filter rules that do not begin with Or . For example, if multiple rules use the And option, and one rule uses the Or option, the rules containing the And option are grouped together, and the rule containing the Or option is considered separately. The work item on the datasheet must either meet all of the And conditions, or at least the Or condition.
Attribute	Select the datasheet column that you are building a filter rule around from this list.

Fields	Description
Compare To	Select what the filter rule should compare the attribute to. Select the this specific value option and type a value in the box below the options to filter the datasheet so that only work item with the Comparison relationship with the value you specified for the selected attribute are displayed. Select the another attribute option and select an attribute from the list below the options to filter the datasheet so that only work item with the Comparison relationship between the two selected attributes are displayed.
Comparison	Select the test you want to apply to the column selected in the Attribute list.
Datasheet Name	The name of the datasheet.
Delete	Removes the selected rule from the Filter Rules box.
Down	Moves the selected rule down in the list.
Filter Rules	Lists all of the current rules set up to filter the datasheet.
Or	Select this option to indicate that the work item on the datasheet must meet the conditions of the selected filter rule, or all the filter rules that do not begin with Or , or another filter rule that begins with Or .
Up	Moves the selected rule up in the list.
Update	Click this button to update the selected filter rule.

General

This tab is used to identify the basic information about a datasheet. If you are creating or editing a datasheet that is assigned to a datasheet type, you cannot edit the work item types included on the datasheet type on the **General** tab. You cannot edit any of the datasheet properties on the **Columns**, **Filters**, **Organize**, **Time Views**, or **Dashboard** tabs:

Fields	Description
Associate With	You can associate the datasheet with a specific location in the work item hierarchy. This enables you to define the root work item for the datasheet; the work item you select is the top-level work item in the datasheet. By default, datasheets are associated with the enterprise portfolio.
Created By	Displays the user name of the person who initially created the datasheet, and the date and time it was created. This box is read-only.

Fields	Description
Default Expansion Level	Select the default expansion level for the datasheet from the Default Expansion Level list. The Default Expansion Level list determines how many levels of the datasheet are opened on the datasheet by default.
Description	Type a brief description of what the datasheet can be used for, or what data it includes.
Display Levels	Select how many levels of data you want to view on the datasheet from the Display Levels list.
Last Modified By	Displays the user name of the person who made the most recent changes to the datasheet, and the date and time they modified it. This box is read-only.
Location	Displays the location of the datasheet within your organization's portfolios.
Private	Select this check box if you want the datasheet to only be available to you. Clear the check box if you want the datasheet to be available to all users that have access to datasheets for the portfolio. When the Private check box is selected, only the user that created the datasheet can view and modify the datasheet, unless you are sharing the datasheet.
Share	This button is only available if the Private check box is selected on a datasheet that you created. If you selected the Private check box, but would like to share the datasheet with specific users and/or security groups, you can share the datasheet. When you share a datasheet, the users and/or members of the security groups you assigned to the datasheet can also view and modify the datasheet. Click the Share button on the General tab on the New Datasheet, Datasheet Properties, or Datasheet Type Properties page to assign users and/or security groups to the datasheet on the Datasheet Shared Access page.
Show All Roles	Select this check box check box to display excluded rows on the datasheet. A row is excluded on a datasheet when the check box to the left of the row is cleared. Excluded rows are displayed in gray on the datasheet. If the Show All Roles check box is cleared, the excluded rows are not displayed on the datasheet.
Show Unallocated	Select the Show Unallocated check box to display the differences between a parent work item and its child work item for roll-up attributes in non-roll-up dimensions, such as the target dimension.

Fields	Description
Work Items	Select the Include All Types option to include all work item types on the datasheet. Select the Include Only These Types option and select the work item types you want to include on the datasheet. To select more than one work item type from the list, press CTRL while selecting each work item type.

Organize

The **Organize** tab is used to determine how data is grouped and sorted on the datasheet. If you are creating or editing a datasheet that is assigned to a datasheet type, you cannot edit any of the datasheet properties on the **Columns, Filters, Organize, Time Views, or Dashboard** tabs on the **New Datasheet** or **Datasheet Properties** page:

Fields	Description
Ascending	Select this option if you would like the corresponding column sorted in ascending order.
Descending	Select this option if you would like the corresponding column sorted in descending order.
Group By	Select the column's attribute name that will be used for the first grouping of data on the datasheet.
Sort By	Select the column's attribute name that the datasheet's data will sort by first.
Then By	Select the column's attribute name that will be used for each of the consecutive groups of data. You do not need to select an attribute for each of the Then By lists.

Time Views

This tab is used to group and sort data for a datasheet.

Fields	Description
Add	Click this button to move the selected attributes from the Available Attributes box to the Selected Attributes box.
Available Attributes	The attributes that have been assigned to the work item types listed on the General tab.
Dimension 1	Select the type of dimension to display in the Timegrid tab.
Dimension 2	Select the type of dimension to display in the Timegrid tab.

Fields	Description
Move Down	Columns are displayed from left to right in a datasheet. Click this button to move the column for this attribute to the right in the datasheet.
Move Up	Columns are displayed from left to right in a datasheet. Click this button to move the column for this attribute to the left in the datasheet.
Remove	Click this button to move the selected attributes from the Selected Attributes box to the Available Attributes box.
Selected Attributes	The attributes that are displayed as columns in the datasheet. Columns are displayed from left to right in the order listed here.
Show Milestones	Select this check box to display milestones in the Timeline tab.

Resources

Resource management decisions are often based around labor. How much is needed? What types of skills are required and when does it need to be done by? Who can do it? Did it get done? You can measure labor in the following ways:

- **Demand** How much is needed? Demand is the net request for labor, work, and resources for a work item.
- **Capacity** What types of skills are required and when does it need to be done by? Capacity measures what is needed for a work item and the availability of resources that can be allocated or assigned to one or more tasks. Capacity can be measured using actual resources or by using generic resources as a placeholder.
- **Allocation** Who can do it? An allocation is an agreement between a resource manager and a project manager as to the availability of a given resource (actual or generic) to work on one or more tasks in task plan.
- **Assignments** Did it get done? Assignments are tracked against the individual tasks within the task plan. Assignments are tracked in timesheets that are submitted by the resources assigned to tasks in the task plan. Timesheets can be approved or rejected.

Resources are people (labor) that can be used by a work item. This includes generic labor resources and a TBH (to-be-hired or unknown) resource. A resource manager is allowed to add resources and to create resource teams for actual and generic resources (a placeholder). The **Resources** module helps provide tools to resource managers for creating, managing, allocating, and securing your resources.

For more information, see the following topics:

- [Allocations \[page 132\]](#)
- [Resource Pool \[page 136\]](#)
- [Resource Roles \[page 138\]](#)
- [Team Summary \[page 142\]](#)

Allocations

You can use the **Allocations** tab to initiate and manage the commitment of resources to a work item, which are tracked as resource allocations. A resource allocation is an agreement between a resource manager and a project manager as to a resource's availability to work on a work item. There are two types of resource allocations:

- **User** An actual resource that is available to work.
- **Generic** A placeholder that represents an actual resource or a group of actual resources. You can use generic resource allocations to plan for the resource needs of a work item prior to assigning actual resources. For example, if you have a generic allocation for a project manager at 300% (essentially three project managers), you can substitute three user resources at 100% each, six resources at 50% each, and so on. Assignments can be made against a generic resource that are then transferred to the user resource, once named.

The upper pane of the **Allocations** tab is used to view existing resources, the work item to which they are allocated, and the timegrid/timeline views of their allocation over a period of time. Select a resource team. The default column shown for resources is: *Name*.

You can add additional columns to the upper pane by clicking the **Properties** button. Use the **Filters** tab to select specific resources. Use the **Organize** tab to sort and group resources.

Use the **Swap/Grid Timeline** button to toggle between the timegrid and timeline views. **Timegrid** and **Timeline** tabs can be optimized for starting and ending dates, units (FTE, currency, or hours), time period (*Calendar Week, Calendar Month, Calendar Quarter, Calendar Year, Fiscal Month, Fiscal Quarter, or Fiscal Year*), and timescale. Click the **Apply** button to recalculate the timeline or timegrid view to include your changes. Move the splitter bar to increase or decrease the size of the upper pane.

The lower pane of the **Allocations** tab is used to view resource allocations. Select a resource team in the upper pane to view a resource allocation graph in the lower pane. A resource allocation graph displays a resource team's capacity, net allocation, and net assignments. Settings for timegrid and timeline views (such as date range, dimension, etc.) are tracked in the resource allocation graph. Select a work item allocated to a resource to view and modify resource allocations using the **General** tab.

The resource allocation graph is a time-phased graph. It displays several details for the selected work item on the upper pane. The selected work item can be a resource, resource team, resource allocation, or an arbitrary group defined in the view settings. Resource capacity is shown as a horizontal line. The allocations are displayed as stacked bars with different colors for each work item. The units (FTE, hours, currency) and time period of the graph track the units selected in the upper pane.

Add allocation

A resource allocation is when you make a resource available for work on a work item. He or she can be allocated to a work item, a task-based work item, or an activity-based work item. For a task-based work item, the user needs to be allocated to the work item before he or she can be assigned to a task.

To add a resource allocation

1. Open the **Resources** module.
2. Select the **Allocations** tab.
3. Click **New Allocation**.
4. In the **Resource Allocation** dialog box, select a resource from the **Resource** drop-down.
5. From the **Investment** drop-down, select the work item to which the generic allocation will be made. In the **Select Investments** dialog box, choose the work item and click **OK**.
6. From the **Role on Investment** drop-down, select the resource role you want to associate with the allocation.
7. From the **Status** drop-down, indicate whether the generic allocation is *Proposed* or *Committed*.
8. Click **Plus** to define how much and when a resource will be allocated. For each resource allocation, define the percentage of full time (% FTE), the start and finish dates for the allocation, and any comments specific to the allocation. (Click **Delete** to remove a resource allocation definition.)
9. Click **Rates** to define the rates associated with the allocation.
10. Click **OK**.

Add generic allocation

A generic resource allocation is when you use a placeholder to allocate a resource instead of allocating an actual resource. When a generic resource has the same name as a resource role, it can help simplify the process of identifying the actual resource who needs to be assigned. A generic resource can be allocated to a task- or an activity-based work item. For a task-based work item, the generic resource needs to be allocated before a task can be assigned.

To add a generic resource allocation

1. Open the **Resources** module.
2. Select the **Allocations** tab.
3. Select a resource team in the resources tree, right-click and select **New Generic Allocation**.
4. In the **Resource Allocation** dialog box, select a resource role from the **Resource Role** drop-down.
5. From the **Investment** drop-down, select the work item to which the generic allocation will be made. In the **Select Investments** dialog box, choose the work item and click **Save**.
6. From the **Status** drop-down, indicate whether the generic allocation is *Proposed* or *Committed*.
7. Click **Plus** to define how much and when a generic resource will be allocated. For each generic resource allocation, define the percentage of full time (% FTE), the start and finish dates for the allocation, and any comments specific to the allocation. (Click **Delete** to remove a generic resource allocation definition.)
8. Click **Rates** to define the rates associated with the role.
9. Click **Save**.

Add team allocation

A resource team allocation is when you make an entire resource team available for work on a work item. The primary resource role of each person in the team is selected by default and cannot be edited. The resource team can be allocated to a task-based work item or an activity-based work item. For a task-based work item, the resource team needs to be allocated to the work item before resources can be assigned tasks.

To add a resource team allocation

1. Open the **Resources** module.
2. Select the **Allocations** tab.
3. Select a resource team in the resources tree, right-click and select **New Team Allocation**.
4. In the **New Team Allocation** dialog box, select a resource role from the **Resource Team** drop-down.
5. From the **Investment** drop-down, select the work item to which the generic allocation will be made. In the **Select Investments** dialog box, choose the work item and click **OK**.

6. From the **Status** drop-down, indicate whether the generic allocation is *Proposed* or *Committed*.
7. Click **Plus** to define how much and when a resource will be allocated. For each resource allocation, define the percentage of full time (% FTE), the start and finish dates for the allocation, and any comments specific to the allocation. (Click **Delete** to remove a resource allocation definition.)
8. Click **Rates** to define the rates associated with the allocation.
9. Click **OK**.

Delete

If you no longer need a resource allocation, you can delete it.

To delete a resource allocation

1. Open the **Resources** module.
2. Select the **Allocations** tab.
3. Select a resource team.
4. Select a resource in the resource team and click the work item to which they are allocated. Click **Delete** to delete the resource allocation.

Edit

You can modify a resource allocation.

To edit a resource allocation

1. Open the **Resources** module.
2. Select the **Allocations** or **Assignments** tab.
3. Select a resource.
4. In the lower pane, make your changes and click **Save**.

Substitute

You can substitute a resources who have been allocated, including substituting generic resources for actual resources. For example, if you have a generic allocation for project manager at 300% (essentially three project managers), you can substitute three user resources at 100% each, six resources at 50% each, or virtually any other combination; you can also substitute one project manager at 100% and leave the other 200% allocated to the generic resource.

To substitute a resource

1. Open the **Resources** module.
2. Select a work item.
3. Select the **Allocations** tab.
4. Select a resource from the resource tree and right-click to open the **Resource Substitution** dialog box.
5. Select the **Effective Date of Substitution**. This is the date upon which the resource substitution will occur.

6. Select the resource you want to substitute. Click to open the **Find Resource** dialog box.
7. From the **Resource Role to Use** drop-down, select the resource role you want to associate with the allocation.
8. Click **OK**.

View

Resource allocations can be viewed from the **Allocations** tab in the **Resources** module.

To view a resource allocation

1. Open the **Resources** module.
2. Select the **Allocations** tab.
3. Select a resource team from the resources tree.

Resource Pool

You can use the **Resource Pool** tab to create resources, organize resource teams and manage the resources in them, and to track and update an individual resource's skills. Any member of the Resource Managers security role can modify resources. The nodes on the Resource Breakdown Structure (RBS) are the individual resource teams. Individual resource are the leaf nodes in the resource breakdown structure, although the resources pane does not display the individual resources. In the **Resource Pool**, **Allocations**, **Assignments**, and **Demand vs Capacity** tabs, individual resources are displayed in the view pane.

The upper pane of the **Resource Pool** tab is used by a resource manager to display resources, their roles, and the skills associated with them. Select a resource team. The default column shown for resources is: *Name*. Click the plus symbol next to a resource name to view the list of resource roles and skills associated with that resource. You can add additional columns to the upper pane by clicking the **Properties** button. Use the Filters tab to select specific resources. Use the Organize tab to sort and group resources.

The lower pane of the **Resource Pool** tab is used to view and modify a resource's details. Select a resource in the upper pane to view details, resource roles, and resource calendars in the lower pane.

Add resource

A new resource can be added. When a new resource is created, that resource is not assigned to a user account, is not assigned to a license, and is inactive. To assign a license and activate the account, please contact your administrator.

To add a resource

1. Open the **Resources** module.
2. Select the **Resource Pool** tab.
3. Click **New Resource**.
4. In the **New Resource** dialog box, type the first name, last name, user name, email address, and contact information for the new resource.
5. Enter starting and ending dates for the resource.
6. Select the resource type from the **Resource Type** drop-down.

7. Click **OK**. The resource will be inactive until a license is assigned to the user account. Please work with an administrator to assign a license to the new resource.

Add role

You can associate a resources role to a resource. From the **Resource Pool** view, select a resource. In the lower pane, choose the **Resource Role** tab.

To add a resource role to a resource

1. Open the **Resources** module.
2. Select the **Resource Pool**, **Allocations**, or **Assignments** tab.
3. Select a resource.
4. In the lower pane, select the **Resource Roles** tab.
5. Under **Available Resource Roles**, select a role and click **Add**.
6. Click **Save**. Confirm.

Add resource from user

In order for a resource to be assigned to tasks, report time against those tasks, manage projects, manage resources, or otherwise perform work against items, that resource must also have a user account. If your administrator has imported resources, when you add a new resource, they may already have a user account. Use the **New Resource from User** option to create a new resource based on an existing user account.

To add a resource who already has a user account

1. Open the **Resources** module.
2. Right-click the navigation tree and select **New Resource from User** to create a new resource based on an existing user account.
3. In the **New Resource from User** dialog box, select a user.
4. Click **Save**. The resource will be an active resource.

Apply team security

When you create a resource team you can determine who has access to the resource team, and what they can do with the resource team and individual resources. Resource team security is defined on the **Resource Team Properties** page. To define resource team security for a resource team, security groups and/or users are assigned to specific security roles on the resource team. The security roles determine the permissions the members of a security group or individual users have for the resource team and its resources.

To apply security to a resource team

1. Open the **Resources** module.
2. Select a resource team in the resources tree, right-click and select **Resource Team Properties** to open the **Resource Team Properties** dialog box
3. On the **Role Assignments** tab, from the **Group / User** drop-down, select a security role.
4. Select a security role and click **Add**.
5. Click **OK**.

Delete

If a resource isn't needed in the resource pool, it can be deleted.

To delete a resource

1. Open the **Resources** module.
2. Select the **Resource Pool** tab.
3. Select a resource team.
4. Select a resource and click **Delete**.

Move

Open the **Move Resources** dialog box to move a resource or a resource team to a different location in the Resource Breakdown Structure (RBS).

To move a resource

1. Open the **Resources** module.
2. Select the **Resource Pool** tab.
3. Select a resource team.
4. Select a resource.
5. Click **Move/Copy**.
6. In the **Move Resources** dialog box, click a resource team into which the resource will move.
7. Click **OK**.

View

Resources can be viewed from the **Resource Pool** tab in the **Resources** module.

To view a resource

1. Open the **Resources** module.
2. Select the **Resource Pool**, **Allocations**, or **Assignments** tab.
3. Select a resource team from the resources tree.
4. Click the resource you want to view. The resource's details appear in the lower pane.

Resource Roles

You can use the **Resource Roles** tab to create and manage resource roles. The upper pane of the **Resource Roles** tab is used to view resource roles and the skills associated with each role. Click the plus symbol next to a resource role to view the skills associated with that resource role. The lower pane of the **Resource Roles** tab is used to view resource role properties. Select a resource role in the upper pane. A resource role can be associated with a security role. A resource role can contain one or more skills. Labor attribute mapping (and the calculations that are needed to create them) are highly dependent on resource roles. It is recommended that the permission to create and modify resource roles be granted carefully.

Add

A new resource role can be added. You can associate a list of skills to a resource role. When creating a new resource role, the associated skills and rates are added to the resource role. Labor attribute mappings and the calculations the often accompany them are highly dependent on resource roles. It is recommended that the permission to create and modify resource roles be granted carefully.

To add a resource role

1. Open the **Resources** module.
2. Select the **Resource Roles** tab.
3. Click **New Resource Role**.
4. Type the name of the new resource role and add a description.
5. Under **Default Security Role and Rate**, select the security role to which the resource role is associated and click **Rates** to define the rates associated with the role.
6. Under **Skill Membership**, move the skills you want to associate with the resource role to the right column.
7. Click **OK**.

Delete

Any resource role that is not assigned to a resource can be deleted.

To delete a resource role

1. Open the **Resources** module.
2. Select the **Resource Roles** tab.
3. Select the resource role that you want to delete, and then click **Delete**. You cannot delete a resource role that is assigned to a resource.
4. Click **OK**.

Edit

You can edit the properties of a resource role.

To edit the properties of a resource role

1. Open the **Resources** module.
2. Select the **Resource Roles** tab.
3. Select a resource role.
4. Make your changes. Modify resource rates. Modify skills.
5. Click **Save**.

Rates

You can use the **Rate Editor** dialog box to add, modify, and delete resource rates used for resource allocations. Add an attribute rate for a *Timephased - FTE* or a *Timephased - UNITS* attribute. If you add a new rate, the rate for the resource will be the new rate starting at the selected date. Click the **Rates** button to open the **Rate Editor** dialog box.

If you are allocating a resource to a work item, the default rate for that resource can be changed during the allocation.

It may be important for your organization to limit access to who can define resource role rates. They affect resource costs when resources are allocated to items and every calculation that is based on those resource allocations. Any change to a resource rate may also require changes to labor attribute mapping.

Add

Open the **Resource Role Rates** dialog box to associate rates with resource roles. The default rates (\$ per hour) are defined for each resource role. It's important to limit access who in your organization can add, modify, or delete a resource role rate, since they affect resource costs when they are allocated to items. All calculations based on resource role rates; therefore, changes to resource rates may also require changes to labor attribute mapping.

To add a rate

1. Open the **Resources** module.
2. Select the **Resource Roles** tab.
3. Select a resource role.
4. In the lower pane, click **Rates**.
5. In the **Resource Role Rates** dialog box, click **New Rate** to add a new rate.
6. Specify the date upon which the rate takes effect, add the rate (per hour), and provide comments (if necessary).
7. Click **Save**.

Delete

Delete a rate for a resource allocation.

To delete a rate

1. Open the **Projects** module.
2. Select a work item.
3. Select the **Team Roster** tab.
4. Select a resource.
5. In the lower pane, select the **Allocation** tab.
6. Click **Rates**.
7. In the **Allocation Rates** dialog box, select the rate you want to delete and click **Delete**.
8. Click **OK**.

Skills

You can use the **Manage Skills** dialog box to manage the list of skills used in your organization. Project managers and resource managers can use skills to help find the best resources in your organization to work on a work item based on the needs of that work item. Resource roles are associated with a set of skills. And resources who are associated with a resource role can be given proficiency and experience levels for each skill.

Add

Select a resource role and define a rate. The default rate (\$s per hour) is defined for each resource role and the rate must include an date with which the rate is to take effect and the rate (in \$) per hour. Open the **Manage Skills** dialog box to work with the list of skills available in your organization. Enter the name of a skill and click **Add**. If you add a new rate, the rate for the resource will be the new rate starting at the selected date.

To add a skill

1. Open the **Resources** module.
2. Select the **Resource Roles** tab.
3. Click **New Skill** to open the **Manage Skills** dialog box.
4. In the **Manage Skills** dialog box, add the name of a skill and click **Add**.
5. Click **Save**.

Delete

If your organization is not using a skill, you can delete it. Pick a skill from the list of skills and click **Delete**.

To delete a skill

1. Open the **Resources** module.
2. Select the **Resource Roles** tab.
3. In the resources tree, right-click and select **Manage Skills**.
4. In the **Manage Skills** dialog box, under **Skill List**, select a skill and click **Remove**.
5. Click **Save**.

Edit

You can modify an existing skill. If you modify an existing rate, the allocation associated with that rate will use the modified rate.

To edit a skill

1. Open the **Resources** module.
2. Select the **Resource Roles** tab.
3. Open the **Manage Skills** dialog box. Right-click a resource role in the navigation pane and select **Manage Skills**; or click **Manage Skills** in the view pane.
4. In the **Manage Skills** dialog box, select a skill, rename the skill, and then click **Update**.
5. Click **Save**.

Rename

Skills can be renamed. Pick a skill from the list of skills, rename it, and then click **Update**.

To rename a skill

1. Open the **Resources** module.
2. Select the **Resource Roles** tab.

3. In the resources tree, right-click and select **Manage Skills**.
4. In the **Manage Skills** dialog box, under **Skill List**, select a skill, rename it, and then click **Update**.
5. Click **Save**.

Team Summary

You can use the **Team Summary** tab to manage a resource team. A resource team is an arbitrary node in your organization's Resource Breakdown Structure (RBS). You can select a resource team to view and edit the resource team name and description. You can add resources and resource teams, delete resources, apply security to the resources in a resource team, move resources and resource teams within the Resource Breakdown Structure (RBS), and so on.

Add

New resource teams can be added, into which new resources can be placed, creating a new resource team.

To add a resource team

1. Open the **Resources** module.
2. Select the **Resource Pool** tab.
3. In the navigation tree, under the location in which you want to add a resource team, right-click and select **New Resource Team**.
4. In the **New Resource Team** dialog box, type the name of the new resource team and add a description.
5. Click **OK**.

Delete

A resource manager can delete a resource team from the resource pool. A resource team cannot be deleted if it contains resources.

To delete a resource team

1. Open the **Resources** module.
2. Select the **Resource Pool** tab.
3. In the resources tree, right-click the resource team that you want to delete, and then click **Delete**. Only empty resource teams can be deleted.
4. Click **OK** to confirm.

Move

Open the **Move Resources** dialog box to move a resource or a resource team to a different location in the Resource Breakdown Structure (RBS).

To move a resource team

1. Open the **Resources** module.
2. Select the **Resource Pool** tab.
3. Select a resource team.

4. Select a resource.
5. Click **Move/Copy**.
6. In the **Move Resources** dialog box, click a resource team into which the resource will move.
7. Click **OK**.

View

A resource team can be viewed from the **Team Summary** tab.

To view a resource team

1. Open the **Resources** module.
2. Select the **Resource Pool** tab.
3. Click a resource team to view a list of team members who belong to the resource team. The resource team's details appear in the lower pane.

Workspace

The **Tools** module is used to view and edit information that you work with on a daily basis, such as your timesheet, notifications, reports, and calendar. You can also open your homepage to displays a collection of important information in a single view.

For more information, see the following topics:

- [Import Data \[page 144\]](#)
- [My Calendar \[page 157\]](#)
- [My Homepage \[page 157\]](#)
- [My Notifications \[page 158\]](#)
- [Define Notifications \[page 159\]](#)

Import Data

You can use the **Import Data** tab to download the template (a Microsoft Excel file) into which you can enter data about items, resources, resource roles, and resource teams, and then bulk import that data. Only users with the Import Data (View/Edit) permission will be allowed to import work item and resource data.

In the template, there is a tab for each of the types of data that you can import: Investments, Resource Roles, Resource Teams, and Resources. On each tab, a row represents a single item, resource role, resource team, or resource that will be imported.

This is a feature that can be a useful way to add data, especially during the configuration phase of your deployment. However, this feature, when used carelessly, can add a lot of unnecessary data into your environment. Permission to use this feature should be granted carefully and only to people who are capable of removing unwanted data, should it get imported.

Some important things to remember:

- This is a feature that should not be viewed as a way to manage data on a day-to-day basis.
- The tabs are imported in the following order: **Resource Teams, Resource Roles, Resources, and Investments**. It can be easier to import data one tab at a time; if you import data one tab at a time, you should use the same order.
- Do not use characters in the template that are commonly used in Microsoft Excel as calculation indicators. For example, the ampersand symbol (&) may create a calculated cell and a calculated cell will fail upon import.
- You cannot have spaces in user names.
- Importing data should be done at times when there are no other users from your organization logged-in. The import process will fail when conflicts are caused by other work being done.
- There is no preview function.

Download template

Download the Import Data template (a Microsoft Excel file) from which you can import data.

To download the Import Data template

1. Open the **Tools** module.
2. Select the **Import Data** tab.
3. Click **Download Template**.

Import data

You can import data by using a template (a Microsoft Excel file). You should keep the file size below 3 MB while importing data; files larger than 3 MB may not import successfully or may require multiple attempts.

To import data using the Import Data template

1. Open the **Tools** module.
2. Select the **Import Data** tab.
3. Enter project information into the template.
4. After you are finished entering project data on the projects tab in the template, click **Browse** and choose the file on your local computer from which you want to import data.
5. Click **Upload and Check**.
6. Click **Finish**.

Template Details

The import data template has the following tabs:

- Agile Work Items
- Projects
- Resource Roles
- Resource Teams
- Resources

In addition, you may receive messages that describe the current state of the import data process as you are importing items.

Agile Work Items

A work item is a user story, defect, epic, goal story, impediment, or task. A work item can be associated with projects, releases, sprints, and backlogs. Any work item can be part of a hierarchical structure called the project tree, which orders every work item in relation to its parent, peers, and children.

You can use the import data template to import a work item. Each row on the **Agile Work Types** tab represents a work item that you want to import. Each column on the **Agile Work Types** tab represents an attribute (required or optional) that is used to define where the imported work item will be placed in the project hierarchy, what its name will be, and so on.

The **Agile Work Items** tab has the following columns:

Column	Description
Import	Required. Values: <i>True</i> , <i>False</i> . Set this column to <i>True</i> to import the data contained in the row.
Agile Work Item Type	Required. The following work item types may be imported: impediment, tasks, or user stories. Use the system name for the user story. This can be found in the <i>System Name</i> field on the Agile Work Types tab in the Types Setup tab of the Customization module.
Name	Required. The name of the work item.
Description	Optional. The description of the work item.
Product	Required. The name of the project under which the work item will be placed.
Release	Optional. The name of the release under which the work item will be placed.
Team	Optional. The name of the team under which the work item will be placed.
Sprint	Optional. The name of the sprint under which the work item will be placed.
Parent Agile Work Item	Optional. The name of a parent work item in the work item hierarchy. This is valid only for assignable tasks, and tasks must be associated with a user story.
Attributes	<p>Optional. The system name and value of an attribute that can appear in a view for the work item being imported. This must be a valid attribute for the work item type. Valid attributes can be found in the Attributes tab on the Agile Work Types tab in the Types Setup tab of the Customization module.</p> <p>For each attribute that you want to appear in a view, add a column in the template using the system name for the attribute as the column header. The system name of an attribute can be found on the Attributes tab in the Attributes Setup tab of the Customization module.</p> <p>Enter the value that you want to import in the column. This must be a valid value for the attribute. List values associated with attribute lists can be found on the Lists tab in the Attributes Setup tab of the Customization module.</p>

Work Items

A work item is any entity within your organization to which personnel, finances, and time can be allocated. Items can be scheduled, tracked, modeled, compared, reported against, managed, analyzed, and assigned.

Items are represented by projects, portfolios, projects (including backlogs, features, and sprints), products, programs, applications, and by custom items that your organization may have created.

All items are part of a hierarchical structure called the work item tree, which orders every work item in relation to its parent, peers, and children.

You can use the template to import work item data. Each row on the **Investments** tab of the template represents work item that you want to import. Each column on the **Investments** tab represents an attribute (required or optional) that is used to define where the imported work item will be placed in the work item hierarchy, what its name will be, and so on.

The **Items** tab has the following columns:

Column	Description
Import	Required. Values: True, False. Set this column to True to import the data contained in the row.
Item	Required. The name of the work item as it will appear in the work item hierarchy and also in the Name field of the item's Summary view.
Item Types	Required. The name of the work item type for the work item being imported. The name for a work item type can be found in the System Name field on the Item Types tab of the Types Setup view in the Configuration module.
Description	Optional. The description of the work item as it will appear in the Description field of the item's Summary view.
Parent Item	Optional. The name of a parent work item in the work item hierarchy. This name must be a valid parent of the work item type. A valid work item type parent can be found in the Containment tab of the Item Types tab in the Types Setup view of the Configuration module.

Column	Description
Attributes	<p>Optional. The system name and value of an attribute that can appear on the Summary view for the work item being imported. This must be a valid attribute for the work item type. Valid attributes can be found in the Attributes tab on the Item Types tab in the Types Setup view of the Configuration module.</p> <p>For each attribute that you want to appear on the item's Summary view, add a column in the template using the system name for the attribute as the column header. The system name of an attribute can be found on the Attributes tab in the Custom Attributes view of the Configuration module.</p> <p>Enter the value that you want to import in the column. This must be a valid value for the attribute. List values associated with attribute lists can be found on the Lists tab in the Custom Attributes view of the Configuration module.</p>

Resource Roles

A resource role is a way of grouping resources by skills, by cost, by security roles, by position titles, or by functional roles within your organization. Such as developers with C++ skills, technical writers that can create programming samples in C#, or project managers who have experience with Agile or SCRUM. Resource roles should be created so that they accurately reflect two things:

- How your organization functions. What are the roles of the people in your organization? Where do they fit within your organization's hierarchy? To which security roles and groups do users need to belong?
- As a way of organizing secondary data about a resource role (such as skills and costs). How much (per hour) does a resource cost (once allocated)? Do the rates (per hour) change over time? What proficiency levels do people have in your organization (low, medium, high)? Programming skills (C++, AJAX, JavaScript, and so on). Writing experience (Jr., Sr., and so on).

You can use the template to import resource role data. Each row on the **Resource Roles** tab of the template represents a resource role that you want to import. Each column on the **Resource Roles** tab represents an attribute (required or optional) that is used to define where the imported resource role will be placed in the enterprise resource pool, what its name will be, and so on.

The **Resource Roles** tab has the following columns:

Column	Description
Import	Required. Values: <i>True</i> , <i>False</i> . Set this column to <i>True</i> to import the data contained in the row.
Role Name	Required. The name of the resource role. This must be a unique name.

Column	Description
Description	Optional. The description of the resource role.
Rate	Required. The rate per-hour of the resource role that is being imported. This should be entered as a per-hour rate (with the default currency used by your organization implied). For example, if you are using United States dollars, then if you enter 10, that will be imported as \$10 per hour.
Rate Effective Date	Required. The date the rate becomes effective for the resource role that is being imported. This should be entered as day/month/year. For example, to import June 04, 2008, enter 04/06/2008.

Resource Teams

All resource teams are part of a hierarchical structure called the enterprise resource pool, which orders every resource (and resource team) in relation to its parent, peers, and children. Resources can be added to resource teams, which are nodes in the enterprise resource pool. Resources that belong to resource teams can be assigned and/or allocated to a log item and to tasks.

You can use the template to import resource team data. Each row on the **Resource Teams** tab of the template represents a resource team that you want to import. Each column on the **Resource Teams** tab represents an attribute (required or optional) that is used to define where the imported resource team will be placed in the enterprise resource pool, what its name will be, and so on.

The **Resource Teams** tab has the following columns:

Column	Description
Import	Required. Values: <i>True</i> , <i>False</i> . Set this column to <i>True</i> to import the data contained in the row.
Team	Required. The name of the resource team.
Description	Optional. The description of the work item as it will appear in the <i>Description</i> field of the item's Summary tab.
Parent Team	Optional. The name of a parent resource team in the enterprise resource pool.

Resources

A resource is a user (people -- labor) that can be used by items. This includes generic labor resources and a TBH (to-be-hired or unknown) resource. A resource manager is allowed to add resources and to create resource teams for actual and generic resources (a placeholder). The **Resources** module helps provide tools to resource managers for creating, managing, allocating, and securing your resources.

All resources are part of a hierarchical structure called the enterprise resource pool, which orders every resource (and resource team) in relation to its parent, peers, and children. All resources belong to resource teams. You should first import resource roles and resource teams before importing resources.

You can use the template to import resource data. Each row on the Resources tab of the template represents a resource that you want to import. Each column on the Resources tab represents an attribute (required or optional) that is used to define where the imported resource will be placed in the enterprise resource pool, what its name will be, and so on.

The **Resources** tab has the following columns:

Column	Description
Import	Required. Values: <i>True</i> , <i>False</i> . Set this column to <i>True</i> to import the data contained in the row.
User Name	Required. The logon name for the user. For customers who are using an on-demand version, this must include the domain, for example: egrant@serena.com.
Resource Team	Optional. A resource team to which this resource belongs.
Resource Type	Optional. The type of resource.
Primary Resource Role	Required. The resource's primary resource role.
Assign License	Optional. Values: <i>True</i> , <i>False</i> . Set this column to <i>True</i> to assign a license to this user during import.
Security Group	Optional. The name of the security group to which you want the user to belong.
First Name	Required.
Last Name	Required.
Email	Required. The email address of the user. For on-demand customers, this column is identical to the User Name column.
Start Date	Optional.
Address 1	Optional.
Address 2	Optional.
City	Optional.
State	Optional.

Column	Description
Zip	Optional.

Messages

As you are importing data, the **Results** window will report back information as the import process progresses, including information about which part of the import process is occurring and information about which part of the import process may have gone wrong. Before you click the **Finish** button and complete the data import process, you should review the messages and attempt to address any issues noted in the spreadsheet, and then re-import the data. You cannot import data when errors are present.

In the table below, brackets { } are used as placeholders for variables that you may see in the error messages. For example, the message *Row {row} was skipped because the following columns had invalid values: {value}*. could appear in the **Results** pane like this: *Row 2 was skipped because the following columns had invalid values: C*.

The following error messages may be returned during data import:

Error Message	Description
Exception when the server attempted to open {filename}.	This is a general error message. If you continue to get this error message, re-download the template and try again. If the error persists, please call Serena Support.
Could not open server copy of the workbook file {filename}. The file does not exist or this user does not have access.	Make sure that you are opening the template and that you have the appropriate permissions to import data. Only users with the Import Data (View/Edit) permission will be allowed to import work item and resource data. Users must also have permission to add resources (Create Resource), add items (Create Project Items), add resource teams (Create New Resource Team), and add resource roles (Create Resource Role).
Row {row} was skipped because the following columns had invalid values: {value}.	Verify the information in the row and column indicated. Ensure that the columns have valid values and re-import the data.
There was an unexpected error processing file. {filename}	This is a general error message. If you continue to get this error message, re-download the template and try again. If the error persists, please contact Serena Support.

Error Message	Description
A worksheet with the name of {worksheet tab name} was already processed.	The names of the tabs in the template should not be modified. New tabs should not be added. Verify that only four tabs exist (Items , Resource Roles , Resource Teams , and Resources) in the copy of the template you are using to import data.
The worksheet with the name of {worksheet tab name} did not have all the required columns.	Each tab in the template has required columns: <ul style="list-style-type: none"> ▪ Items tab: Import, Item, and Item Type. ▪ Resource Roles tab: Import, Role Name, Rate, and Rate Effective. ▪ Resource Teams tab: Import and Team. ▪ Resources tab: Import, User Name, Primary Resource Role, and Email.
There was an error opening the Microsoft Excel file. The file may be corrupt or of the wrong format.	Verify that you have attempted to import data using a copy of the template. If you continue to get this error, re-download the template.
The user does not have sufficient permissions to create {name of resource, item, resource team, or resource role}.	Only users with the Import Data (View/Edit) permission will be allowed to import work item and resource data. Users must also have permission to add resources (Create Resource), add items (Create Project Items), add resource teams (Create New Resource Team), and add resource roles (Create Resource Role).
Row {row} was skipped because the following values created a duplicate key {value}.	Verify the information in the row and column indicated. Duplicate user names, work item names, resource role names, and resource team names will not be imported.
Row {row}, Column {column} contained resource type {invalid resource type} which is invalid.	Verify the information in the row and column indicated. There are three valid resource types: Contractor, Permanent, and Part Time.
Row {row}, Column {column} contained role name {duplicate role name} which is already in the system.	Verify the information in the row and column indicated. Duplicate resource role names are not allowed.

Error Message	Description
Row {row}, Column {column} contained work item type {invalid work item type} which is either not a work item, not in the system, or is not creatable.	Verify the information in the row and column indicated. The work item type is incorrect. It may be misspelled, it may not exist, or it may not be a valid child work item of the parent work item.
Row {row}, Column {column} contained resource team {invalid resource team} which is not in the system.	Verify the information in the row and column indicated. The list of resource teams currently available can be found in the Resources module.
Column {column} was ignored because it was a duplicate.	An attribute can have only one value.
Row {row}, Column {column} contained user name {duplicate user name} which is already in the system.	Verify the information in the row and column indicated. Duplicate user names are not allowed.
Column {column} was ignored because they attribute key specified was not valid for importing.	Verify that the correct system name for the attribute is being used. The system name of an attribute can be found on the Attributes tab in the Custom Attributes view of the Configuration module.
Row {row}, Column {column} contained list value {invalid list value} which is invalid.	Verify the information in the row and column indicated. List values associated with attribute lists can be found on the Lists tab in the Custom Attributes view of the Configuration module.
Row {row} was skipped because it contained parent {invalid parent} which is not in the system or in the spreadsheet.	Verify the information in the row and column indicated. If you are importing a parent, be sure that it's a valid parent for the resource team or work item.
Row {row}, Column {column} contained resource role {invalid resource role} which is not in the system.	Verify the information in the row and column indicated. Resources can only be assigned to an existing resource role. Verify that you are importing the resource with the correct resource role name. If that role is not present, add it, and then re-import the resource.
There was an error assigning license to user {user name}. User was imported with no license.	A license could not be assigned to the user. Verify that the license is the correct license or that your organization has enough licenses.

Error Message	Description
Row {row} was skipped because parent work item type cannot contain this work item type.	Verify the information in the row indicated. Information for a work item can only have a child that is valid for the work item type being imported. Valid children can be found in the Containment tab on the Item Types tab in the Types Setup view in the Configuration module.
Row {row} was skipped because parent had same name as self.	Parent-child relationships for resources, resource teams, and items must have the correct parent-child relationships: <ul style="list-style-type: none"> ▪ Resource information must conform to the hierarchy defined in the Resource Breakdown Structure. ▪ Item information can only have a parent that is valid for the work item type being imported. Valid parents can be found in the Containment tab on the Item Types tab in the Types Setup view in the Configuration module.
The parser detected a recursion error. Please check the parent-child relationships of your {parent of resource team name or parent of work item name}. All processing will be stopped and nothing was imported!	See the previous entry.
Row {row}, Column {column} contained value {invalid attribute type value} which is not valid for the attribute type.	Verify the information in the row and column indicated. When importing attribute data, the value must be an appropriate value for the attribute's data type. If it is a list value, it must be one of the list values associated with that attribute type.
Errors occurred during processing file or there were no valid rows for importing.	Verify that you have selected an template, that there is data in at least one tab in the template, and that the Import column is set to True .
Row {row}, Column {column} contained user name {invalid email address} which is not a valid email address.	Verify the information in the row and column indicated. An email address must be the full email address. For example: rforster@serena.com.

Error Message	Description
<p>Row {row}, Column {column} contained security group {security group name} which is not in the system.</p>	<p>The user was not imported. Verify the information in the row and column indicated, and then re-import the user. The list of security groups available can be found in the Administration module, Users and Security view, on the Groups tab. The name of the security group in the should identical to the name of the security group shown in the Name field.</p>
<p>There was an error assigning user {row} to security group {column}. User was imported with no security group.</p>	<p>The user was imported, but without an associated security group. Verify the name of the security group and that it is the name of a valid security group. The list of security groups available can be found in the Administration module, Users and Security view, on the Groups tab. The name of the security group in the should identical to the name of the security group shown in the Name field.</p>
<p>Row {row} was skipped because it contained a ParentAgileWorkItem {name of parent work item} which is not in ths system or in the spreadsheet.</p>	<p>Verify the information in the row and column indicated. A parent work item must exist in order for a work item to be associated to it.</p>
<p>Row {row}, Column {column} contained AgileWorkItem {name of work item} which is either not an AgileWorkItem, not in the system, or is not creatable.</p>	<p>Verify the information in the row and column indicated. Valid work item types that are already in the system (and that can be imported) can be found in the Attributes tab on the Work Types tab in the Data Model Setup view of the Configuration module.</p>
<p>Row {row} was skipped because a Product had same name as self.</p>	<p>Verify the information in the row and column indicated. Owning work item names must be unique. Verify the name of the owning items in the template and re-import the data.</p>
<p>Row {row} was skipped because it contained a Product {name of owning item} which is not in the system or in the spreadsheet.</p>	<p>Verify the information in the row and column indicated. Ensure that the owning work item name is in the system or in the spreadsheet.</p>
<p>Row {row} was skipped because the work hierarchy was not found.</p>	<p>Verify the information in the row indicated. Ensure that a work hierarchy is available for the work item you are trying to import.</p>

Error Message	Description
Row {row} was skipped because the AgileWorkItemType cannot exist without a parent under the work hierarchy.	Verify the information in the row indicated. Ensure that the work item you are trying to import has a parent that exists in the work hierarchy. The parent is defined in the ParentAgileWorkItem column.
Row {row} was skipped because the AgileWorkItemType of the parent is not supported by the work hierarchy.	Verify the information in the row indicated. Verify that the work item's parent work item type exists in the existing work hierarchy.
Row {row} was skipped because the AgileWorkItemType is not a valid type under its parent AgileWorkItemType.	Verify the information in the row indicated. Verify that the work item's parent work item type is a valid parent based on the existing work hierarchy.
Moved {row} from parent {row} to parent {row}.	Verify the information in the rows indicated. Ensure that the work item's new parent is the one you want it to be.

The following status messages may be returned during data import:

Status Message	Description
Finished parsing of worksheet named {worksheet tab name}.	The validation process for data import has finished.
The following rows were parsed successfully: {row}.	Status message. Each row that was parsed successfully will be listed. For example, <i>The following rows were parsed successfully: 2, 3, 4, 5, 9.</i>
Starting parse of worksheet named {worksheet tab name}.	Status message.
User {user name} already had a license. No action was taken.	Status message.
The import job has finished.	Status message.
The import job has started.	Status message.
Finished assigning licenses.	Status message.
Attempting to assign license named {license name} to users.	Status message. Indicates the license type being assigned to users during import.

Status Message	Description
License was assigned to user {user name}.	Status message. Each user that was successfully assigned a license will be listed. For example: <i>License was assigned to user gmclennan, rforster, lbalcom.</i>

My Calendar

A resource's starting and ending dates can affect his or her availability and capacity. You can use the **My Calendar** tab to view your personal calendar. A personal calendar is based on the company calendar. A user with appropriate permission can modify their personal calendar, including the working and non-working, the days of the week, and working hours per day.

Define

Your calendar is based on the company calendar and modifying your calendar overrides the settings in the company calendar. You can modify the working and non-working days, the days in the work week, and the working hours per day. These settings help determine the your availability and capacity for their assigned tasks.

To define your personal calendar

1. Open the **Tools** module.
2. Select the **My Calendar** tab.
3. To mark a day as a vacation day select the date on the calendar and click **Non-working**.
4. To mark a non-working day, such as a Saturday or Sunday, as a working day, select the date on the calendar and then click **Working**.
5. To define a work week that is different then the company's work week, click **Custom**. Then select the days included in your work week and enter your working hours per day.
6. Click **Save** to save your changes. The days selected in the calendar are marked according to the color grid.

View

Your personal calendar can be viewed from the **My Calendar** tab in the **Tools** module.

To view your personal calendar

1. Open the **Tools** module.
2. Select the **My Calendar** tab.

My Homepage

You can use the **My Homepage** tab to display important information in a single view. Your administrator designs the layout of the **My Homepage** tab by defining the size, position, and type of content that appears. For example, if you are a team member, you might have a homepage that lists your work item assignments and projects. You can choose to log on directly to the **My Homepage** view. Some homepage views contain a

link to an actual view (for example, homepage view may have content about your timesheet, and it can also contain a link to the **My Timesheet** tab).

Display

Open the **Tools** module and click the **My Homepage** tab.

To display your homepage from the action pane

1. On the application toolbar, click **Global Properties**. Your homepage displays within the interface.

My Notifications

You can use the **My Notifications** tab to display your list of notifications. The **My Notifications** tab displays a list of notifications (custom and system) and associated information for each. You can create new, copy existing, delete, and modify notifications. This view can be found in the **Tools** module.

Acknowledge

A notification that is marked in bold has not been acknowledged. Use the **Acknowledged** check box to keep track.

To acknowledge a notification

1. Open the **Tools** module.
2. Select the **My Notifications** tab.
3. Select the notification you want to acknowledge from the list. Acknowledged notifications are shown as plain text; un-acknowledged notifications are shown as bold.
4. Click **Acknowledge**.

Cancel

You can cancel a notification acknowledgement.

To cancel a notification acknowledgement

1. Select the **My Notifications** tab.
2. Select a notification and click **Unmark Acknowledge** to un-mark a notification acknowledgement.

Delete

If you don't need a notification, you can delete it.

To delete a notification

1. Open the **Tools** module.
2. Select the **My Notifications** tab.
3. Click **Delete Notification** to delete the notification.

View

Notification definitions can be viewed from the **My Notifications** tab in the **Tools** module.

To view a notification

1. Open the **Tools** module.
2. Select the **My Notifications** tab.
3. Select a notification.

Notification Settings

If your administrator has enabled it, you can manage your system notification settings from the **My Notifications** tab in the **Tools** module. You will only see notifications listed in this dialog box that have been enabled by your administrator. You are automatically subscribed to those notifications that the administrator has set as default notifications. However, you must subscribe to any enabled notification that is not set as default.

If the administrator modifies a system notification's default status, your subscription choices may be overwritten. If you suddenly find that you are not receiving notifications to which you previously subscribed, you may need to subscribe again.

Subscribe

Open the **System Notification Settings** dialog box to subscribe to them. If an administrator modifies a system notification's default status, your subscription choices may be overwritten. If you suddenly find that you are not receiving notifications to which you previously subscribed, you may need to subscribe again.

To subscribe to a system notification

1. Open the **Tools** module.
2. Click **System Notifications** to open the **System Notification** Settings dialog box.
3. Select the **My Notifications** tab.
4. For each notification you want to receive, select the check box in the **Subscribe** column.
5. Click **Save**.

Define Notifications

A notification is an automated way of being notified when specific actions occur within the application, such as when a resource submits their timesheet, when a new work item is added, updated, and so on. Some notifications--system notifications--are available to all users; some notifications--custom notifications--can be configured by each user from the **Define Notifications** tab in the **Tools** module.

You can use the **Define Notifications** tab to create and edit user notifications. The **Define Notifications** tab displays a list of notification definitions and associated information for each. You can create new, copy existing, delete, and modify any notification definition.

You can create custom notifications for several types of events; for each type, you can select a trigger from a list of available triggers that defines the action whereupon the notification is sent. A notification can only have one trigger. If you want to configure notifications to fire based on several actions, you must create multiple notifications.

For example, you can create a notification that is sent any time a log (such as a risk or an issue) is escalated. The available notification types and associated triggers are as follows:

- Investment: **On Add, On Delete, On Move, On Schedule, On Task Plan Checkin, On Resource Substituted, On Update**
- Log Type (such as a risk, an issue, or a custom log type): **On Add, On Assign, On Delete, On Escalate, or On Update**
- Work Item: **On Add, On Delete, or On Update**
- Workflow: **On Approved or On Rejected**

Once you define the notification type and trigger, you can further define the notification details, such as the work item to which the notification is associated, recipient list, criteria, and so on.

You can create, delete, edit, and copy definitions. Copying a definition is useful if you want to create a new one that is similar to an existing one. You can copy the first definition and edit it to make the new one.

Add

In the **Tools** module, the **Define Notifications** tab displays a list of notification definitions and associated information for each. Defining a notification enables you to augment out-of-the-box system notifications with organization-specific notifications. Users cannot subscribe to these custom notifications in the same way they can subscribe to system notifications; however, users can specify a set of recipients.

You can create custom notifications for several types of events; for each type, you can select a trigger from a list of available triggers that defines the action whereupon the notification is sent. A notification can only have one trigger. If you want to configure notifications to fire based on several actions, you must create multiple notifications. For example, you can create a notification that is sent any time a log (such as a risk or issue) is escalated. The available notification types and associated triggers are as follows:

- **Item** This type can use the following triggers: **On Add, Delete, Move, Schedule, Task Plan Check In, Resource Substituted, or Update.**
- **Item** This type can use the following triggers: **On Add, Assign, Delete, Escalate, or Update.**
- **Work Item** This type can use the following triggers: **On Add, Delete, or Update.**
- **Workflow** This type can use the following triggers: **On Approved or Rejected.**

Once you define the notification type and trigger, you can further define the notification details, such as the work item to which the notification is associated, recipient list, criteria, and so on. You can create, delete, edit, and copy definitions. Copying a definition is useful if you want to create a new one that is similar to an existing one. You can copy the first definition and edit it to make the new one.

To add a notification definition

1. Open the **Tools** module.
2. Select the **Define Notifications** tab.
3. Click **New Definition**.
4. In the **New Definition** dialog box, select a notification type and the trigger by which a notification is sent. Click **OK**.
5. Name the notification, add a description, and set its priority.

6. Select **Definition Active** to start sending notifications based on this notification definition.
7. On the **Investment Types** tab, you can choose the types of items and the location of these items in your organization's work item tree for which notifications will be sent.
8. On the **Criteria** tab, you can define a filter to narrow down the items identified in the **Investment Types** tab for which notifications will be sent.
9. On the **Recipients** tab, select the users, security groups, or security roles who will receive the notification and click **Add**.
10. On the **Template** tab, enter the notification's subject line in **Title**. Add custom attributes into the message body and subject line. Choose an attribute from the **Insert Attribute** drop-down and then click **Into Template** (for the message body) or **Into Title** (for the subject line). Click **Into Template** next to **Insert URL Link** to insert the URL of the summary view for the work item type from which the notification is sent.
11. On the **Mashup Event** tab, you can link the notification to a Serena Business Mashups. Select **Send Mashup Event**, type a name for the event, and enter the URL for the location of the Serena Mashup Manager that will process the event.
12. Click **Save**.

Copy

Click to copy a notification definition.

To copy a notification definition

1. Open the **Tools** module.
2. Select the **Define Notifications** tab.
3. Select a notification definition and click **Copy Notification**. A copy of the notification appears in the list.
4. Click **Edit** and modify the copy of the notification as required.

Delete

Click to delete a notification definition.

To delete a notification definition

1. Open the **Tools** module.
2. Select the **Define Notifications** tab.
3. Select a notification definition and click **Delete Notification**.

Edit

Click to modify a notification definition.

To edit a notification definition

1. Open the **Tools** module.
2. Select the **Define Notifications** tab.

3. Select an notification and click **Manage Notifications** to open the **Edit Definition** dialog box.
4. Make your changes.
5. Click **Save**.

View

Notification definitions can be viewed from the **Define Notifications** tab in the **Tools** module.

To view a notification definition

1. Open the **Tools** module.
2. Select the **Define Notifications** tab.
3. Select a notification definition.

Manage Users

This module is used to define the individual users and groups of users (security groups) who will be working. If you already have users set up in an existing Microsoft Windows server or Lightweight Directory Access (LDAP) server, you can import them. A resource can also be created from the **Resource Pool** tab in the **Resources** module. This automatically creates a user in the **Security** tab. Resources created from the **Resources** module will need to be activated and assigned a license before they can be allocated or assigned.

For more information, see the following topics:

- [Users \[page 163\]](#)

Users

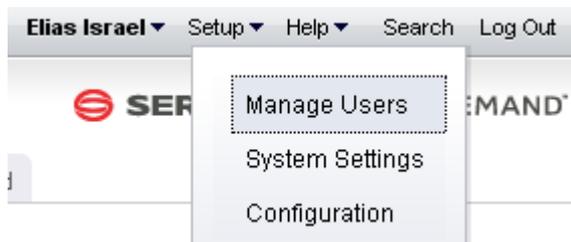
This tab is used to define the individual users and groups of users (security groups) who will be working. If you already have users set up in an existing Microsoft Windows server or Lightweight Directory Access (LDAP) server, you can import them. A resource can also be created from the **Resource Pool** tab in the **Resources** module. This automatically creates a user in the **Security** tab. Resources created from the **Resources** module will need to be activated and assigned a license before they can be allocated or assigned.

Add

There are two ways to add users. You can import them from a directory service such as Active Directory or Novell eDirectory. The other way to add users from the **Manage Users** module.

To add a user

1. From the application toolbar, click **Setup**, and then choose **Manage Users**.



2. Click **+** Add.
3. Under **User Properties**, enter the first name, last name, email address, and user name for the user.

User Properties

First Name	<input type="text" value="Robert"/>	*
Last Name	<input type="text" value="Forster"/>	*
Email	<input type="text" value="rforster@serena.com"/>	*
User Name	<input type="text" value="rforster@serena.com"/>	*

Active

4. Click  Save.

Assign to license

After you have created or imported a user, you must assign the user to a license and then assign the user to the applicable security roles and security groups. Users are assigned to licenses. Users should then be assigned to a security group before being assigned to a security role. Using a security group to assign groups of users to a security role can simplify the tracking and management of permissions for users.

To assign a user to a license

1. From the application toolbar, click **Setup**, and then select **Manage Users**.
2. Select the **Security** tab.
3. Select the **Users** tab.
4. Select a user.
5. Under **Licenses**, select the check box next to each license you want to assign to the user. The license you assign the user to should be appropriate to the user's responsibilities in your organization.
6. Click **OK**.

Delete

If the user is no longer needed, you can delete it. It is recommended that you inactivate a user instead of deleting it.

To delete a user

1. From the application toolbar, click **Setup**, and then select **Manage Users**.
2. Select the **Security** tab.
3. Select the **Users** tab.
4. Select a user.
5. Click **Delete**. Confirm. It is recommended that you inactivate users instead of deleting them.

Edit

Make your changes and then save them.

To edit a user

1. From the application toolbar, click **Setup**, and then select **Manage Users**.
2. Select the **Security** tab.
3. Select the **Users** tab.
4. Make your changes.
5. Click **Save**.

Import

You can import users from an existing network directory service, such as Active Directory or Novell eDirectory. You must first set up the authentication provider, which determines which users and/or security groups will be imported. You can configure the authentication provider to be run periodically. When the authentication provider is re-run, only new or changed data will be imported. First name, last name, status, and email address are used to determine which users are new and/or have been changed. A user's username, password, domain, and authentication provider will remain unchanged.

To import users

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. In the **Import Users** dialog box, select the authentication provider from which you are importing.
3. The **Import Users** dialog box displays your authentication provider settings as read-only.
4. Type the following in the *Name* and **Password** boxes: If the authentication provider you selected uses the Application authentication type, type the database user name and password in the corresponding boxes. If the authentication provider you selected uses the Active Directory authentication type, type the domain user name (such as user name), a qualified domain name (such as domain/username), or a full distinguished name (such as cn=username,ou=pretend, dc=domain, dc=com) and password in the corresponding boxes. If the authentication provider you selected uses the Novell eDirectory authentication type, type a full distinguished name and password in the corresponding boxes.
5. Click **Import**. When users are imported, their user name and password are lowercase. When the import completes, click **OK**. If the import returns an error, check the authentication provider to ensure it is configured properly. Also ensure that the user context running the import has sufficient rights on the directory services server. If the user context does not have sufficient rights, the query will return null strings for those parts of the query the user cannot access. Once you have imported the users and groups, you can edit their information on the **Users** tab and **Groups** tab in the **Security**.

Inactivate

If the user is no longer needed, you can inactivate it.

To inactivate a user

1. From the application toolbar, click **Setup**, and then select **Manage Users**.
2. Select the **Security** tab.
3. Select the **Users** tab.

4. Select the name of the user you want to deactivate.
5. De-select **Active**.
6. Click **Save**.

View

Users can be viewed from the **Users** tab in the **Manage Users** module.

To view a user

1. From the application toolbar, click **Setup**, and then select **Manage Users**.
2. Select the **Security** tab.
3. Select the **Users** tab.

Administrator

An administrator is a user who has been granted access to the **Manage Users**, **System Settings**, and **Customization** modules within the application.

Change password

Serena On Premise customers should change their Administrator password from its default. (The default administrator password is KEYSTONE.) Use a strong password of 8 (or more) characters, with at least one capital letter, one numeral, and one symbol.

To change the Administrator password

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Security** tab.
3. Select the **Users** tab.
4. Select the Administrator user from the **Users** tab.
5. In **Password**, enter the new password.
6. Click **Save**.

Users

A license determines what users in your organization can do once in the application. A license provides up to three actions: view, edit, and administer. These three actions are used to give access to modules, views, dialog boxes, and other areas within the application. Actions are often associated to security roles. Licenses are different for each Serena application and may vary between On Premise and On Demand deployment options.

Assign user to license

After you have created or imported a user, you must assign the user to a license and then assign the user to the applicable security roles and security groups. Users are assigned to licenses. Users should then be assigned to a security group before being assigned to a security role. Using a security group to assign groups of users to a security role can simplify the tracking and management of permissions for users.

To assign a user to a license

1. From the application toolbar, click **Setup**, and then select **Manage Users**.

-
2. Select the **Security** tab.
 3. Select the **Users** tab.
 4. Select a user.
 5. Under **Licenses**, select the check box next to each license you want to assign to the user. The license you assign the user to should be appropriate to the user's responsibilities in your organization.
 6. Click **OK**.

Notifications

A notification is an automated way of being notified when specific actions occur within the application, such as when a resource submits their timesheet, when a new work item is added, updated, and so on. Some notifications--system notifications--are available to all users; some notifications--custom notifications--can be configured by each user from the **Define Notifications** tab in the **Tools** module.

Manage who receives notifications

There are two ways to manage who receives email notifications. You can manage it on a per-user basis using the **Send Email Notifications** check box on the Users tab. Or you can manage it on a multiple-user basis by clicking the **Manage Email Notifications** button.

To manage who receives email notifications

1. From the application toolbar, click **Setup**, and then select **Manage Users**.
2. Select the **Security** tab.
3. Select the **Users** tab.
4. Below the list of users, click the **Manage Email Notifications** button to display the **Select Users to Receive Notifications** dialog box.
5. Move the names of users that you want to receive notifications to the right list box. Only users in the right list box will receive email notifications. You can **CTRL**-click or **SHIFT**-click to select multiple users.
6. Click **OK**, then click **Save**.

System Settings

The **System Settings** module is used to set up and configure financial settings, scheduled services, calendar settings, localization settings, system notifications, licenses, and security configuration for your organization.

For more information, see the following topics:

- [Company Calendar \[page 168\]](#)
- [Localization Settings \[page 169\]](#)
- [Scheduled Services \[page 170\]](#)
- [System Notifications \[page 173\]](#)
- [Security \[page 175\]](#)

Company Calendar

You can use the **Company Calendar** tab to customize the calendar being used by your organization. You can define your organization's working and non-working days, you can define the days in your organization's working week, and you can define the number of hours in a day that makes up a full working day. These settings are used to determine resource capacity and scheduling for resources that are used in task plans or for the number of days that can appear in a sprint burndown chart. Individual resources have their own calendars and they may override company calendar settings in their local calendar (if they are given permission to do so).

Define working days

Working days are the days in a week, month, and year that count towards resource allocation and resource capacity.

To define working days

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Company Calendar** tab.
3. Under **Select Day Value**, specify whether the day is defined by the default calendar, is a working day for your organization, or is a non-working day for your organization.
4. Click **Save**.

Define working hours

The default number of working hours per day is eight.

To define working hours per day

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Company Calendar** tab.
3. Under **Working Hours Per Day**, enter the number of hours that make up a resource's working day. The default is 8.
4. Click **Save**.

Define working weeks

Working weeks are the weeks in a year, typically grouped by month (within quarters).

To define working weeks

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Company Calendar** tab.
3. Under **Select Work Week**, choose the days of the week that comprise your organization's working week.
4. Click **Save**.

View

Your organization's calendar can be viewed from the **Company Calendar** view in the **Customization** module.

To view the company calendar

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Company Calendar** tab.

Localization Settings

You can use the **Localization Settings** tab to modify the strings that appear in the application's user interface. This can help your organization address any localized language requirements that you may have. If you add new elements, such as views, attributes, forms, or charts, you will be able to localize the strings associated with the new elements.

You can filter the text strings available in the user interface by language and by string type. English (United States) is the default language; any new element created will be associated with an English (United States) value. Strings must be modified individually. Default text strings are associated with the English (United States) string values. Updating the English (United States) string values will update the default text string values.

Localize strings

Select the language for which you want to create localized text strings, select the string type, and then search. For each string result, you can enter the localized text string in the **String Value** column.

To localize text strings

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Localization Settings** tab.
3. Select the language for which you want to create localized strings from the **Language Locale** drop-down.
4. Select a string grouping from the **String Type** drop-down.
5. Click **Search**.
6. In the results, for each row you want to localize, enter the localized text in the **String Value** column.
7. Click **Save**.

View strings

Localized text strings can be viewed from the **Localization Settings** tab.

To view localized text strings

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Localization Settings** tab.
3. Select the language for which you want to view localized strings from the **Language Locale** drop-down.
4. Select a string grouping from the **String Type** drop-down.
5. Click **Search**.

Scheduled Services

You can use the **Scheduled Services** tab to create and maintain scheduled jobs and plug-ins. Jobs that are in the queue are run sequentially, with the next job in the queue starting after the current one is finished. In general, most jobs should be scheduled to run at off-peak times.

For more information, see the following topics:

- [Jobs \[page 170\]](#)
- [Plug-ins \[page 171\]](#)

Jobs

The **Jobs** tab lets you schedule recurring tasks (jobs) that run a plug-in so that it performs a specific action, such as cleaning up abandoned print jobs, posting timesheet data, sending workflow notifications, recalculating range calculations on a nightly basis, using connectors to refresh and publish data, and so on. You can schedule jobs for any plug-in that has scheduling enabled.

Schedule

You can create schedules for processing plug-ins on a daily, weekly, monthly, or one-time basis on the **Jobs** tab of the **Scheduled Services** tab. Plug-ins are DLL files that can be used to process data, such as sending connector job notifications, recalculating range calculations, or cleaning up abandoned print jobs.

To schedule jobs

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Scheduled Services** tab.
3. Select the **Jobs** tab.
4. Select a job.
5. Under **Scheduled Job Properties**, define the schedule that this job should run. Jobs should be scheduled during time of the day where users are not logged onto the system. In most cases, running of a scheduled job will log off users or cause interruption to their use of the system.
6. Click **Save**.

View history

You can view the history of a scheduled service, including the start and finish times, status of the job when it ran, and so on.

To view a scheduled service's job history

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Scheduled Services** tab.
3. Select the **Jobs** tab.
4. Under **Status**, click **View Job History**.

View status

You can check the status of a scheduled job in the **Scheduled Services** tab.

To view the status of a scheduled job

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Scheduled Services** tab.
3. The status of the scheduled job is listed under **Status**, including its current status, the last time the job ran, whether it was successful the last time it ran, and so on.

Plug-ins

The **Plug-ins** tab lets you manage plug-ins that are included. Plug-ins are DLL files that can be used to process data, such as sending connector job notifications, recalculating range calculations, or cleaning up abandoned print jobs. Predefined plug-ins are included; additional plug-ins can be created by Serena Professional Services for your organization.

Available plug-ins

The following plug-ins are included:

- **Clean Up Abandoned Print Jobs** Use this plug-in to clean up abandoned print jobs and temporary files from the database and file system. This plug-in is run by the **Clean Up Abandoned Print Jobs** scheduled service.
- **Datasheet History** Use this plug-in to create and schedule datasheet snapshots in the **Reports** module.
- **Post All Data** Use this plug-in to combine the **Post Timesheet Data** and **Post Attribute Maps** plug-ins. This plug-in is run by the **Nightly Post Job** scheduled service. This plug-in should be run during off-peak hours.
- **Post Attribute Maps** Use this plug-in to consolidate timesheet data for task plans to the portfolio hierarchy using defined attribute maps. This plug-in can be run manually.
- **Post Timesheet Data** Use this plug-in to consolidate approved timesheet actuals back into task plans. Actual hours and costs will be recalculated. All timesheet data submitted since the last time this plug-in was run is updated. This plug-in can be run manually.
- **Recalculate Range Calculations** Use this plug-in to update all range calculations. Range calculations can change based on the system date; this plug-in forces all calculations to be updated to the current system date. This plug-in is run by the

Nightly Recalculation of Range Calculations scheduled service. This job should be run nightly and at off-peak hours.

- **Refresh Audit Tables for Agile Work Items** Use this plug-in to rebuild the audit tables for a work item (story, epic, and so on) if they get out of sync. This job should be run (manually) and only when Serena Support recommends it.
- **Refresh Audit Tables for Investments** Use this plug-in to rebuild the audit tables for items (projects, programs, and so on) if they get out of sync. This job should be run (manually) and only when Serena Support recommends it.
- **Reporting Master Job** Use this plug-in to determine what scheduled reports need to be run. This is the master job for scheduled reports and is set by default to be run every 15 minutes. This plug-in is run by the **Reports Master** scheduled service.
- **Rollup Investment Hierarchy** Use this plug-in to force a roll-up of data within the work item hierarchy. The hierarchy will not be accessible during this time. This job should be run (manually) and only when Serena Support recommends it.
- **Scheduled Notification Master Job** Use this plug-in to send a message to the notification processor to check if any scheduled notifications need to be run. This plug-in is set by default to be run every hour. This is the master job for scheduled notifications. This plug-in is run by the **Notification Master** scheduled service.
- **Send Job Notifications** Use this plug-in to generate and send nightly email notifications for the execution status of a specific, scheduled service. Plug-in notifications are based on an XML configuration file.
- **Send Workflow Notifications** Use this plug-in to generate and send reminder notifications for expired transitions in the Workflow tab in the **Projects** module. Workflow notifications are sent to the members of transition approval lists and to the individual who initiates a workflow transition. This plug-in is run by the **Nightly Workflow Notifications** scheduled service.
- **Synchronize Users** Use this plug-in to synchronize users and resources with information from selected authentication providers, such as Active Directory or Lightweight Directory Access (LDAP). This plug-in may require the assistance of Serena Professional Services in order to ensure proper configuration.
- **System Calendar Change** Use this plug-in to apply changes that have been made to the system calendar to all task plans. This plug-in should be run during off-peak hours. This plug-in is not used in Project Portfolio Management 2009 R1.

Add plug-in

If you want to be able to schedule jobs for the plug-in, be sure to select the **Can be Scheduled** check box.

To add a plug in

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Scheduled Services** tab.
3. Select the **Plug-ins** tab.
4. Click **New**.
5. Name the new plug-in and provide a description.
6. Enter the plug-in DLL file name that is provided to you by Serena Professional Services in the **DLL Name** box.

7. Enter the plug-in class name that is provided to you by Serena Professional Services in the **Class Name** box.
8. Select the **Can be Scheduled** check box to allow jobs to be scheduled against this plug-in using the **Jobs** tab in the **Scheduled Services** view.
9. Click **Save**.

System Notifications

A notification is an automated way of being notified when specific actions occur within the application, such as when a resource submits their timesheet, when a new work item is added, updated, and so on. Some notifications--system notifications--are available to all users; some notifications--custom notifications--can be configured by each user from the **Define Notifications** tab in the **Tools** module.

You can use the **System Notifications** tab to manage the notifications that will be available to all of the users in your organization. System notifications are available for many events associated with the lifecycle of a work item, such as adding resource allocations or assigning risks. The full list of system notifications is available in the **System Notifications** tab.

Add

You cannot add system notifications.

Edit

You can use the **Edit System Notifications** dialog box to modify a system notification. System notifications are preset. System notifications are available for many events associated with the lifecycle of a work item, such as resources added, risks assigned, or timesheets due. Your administrator can enable and disable system notifications to meet the needs of the users. The administrator can also edit a system notification to make it more useful for your enterprise. The administrator uses the **System Notifications** tab of the **System Settings** module to set up system notifications.

To edit a system notification

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **System Notifications** tab.
3. Select a notification and click **Edit Notification**.
4. In the **Edit System Notifications**, dialog box, make your changes.
5. Click **Save**.

Enable (default)

Enabled system notifications that are also default notifications will be sent to all users in your organization regardless of their individual subscription preferences. If a default system notification is changed so that it is no longer a default system notification, all user subscriptions to that system notification will be removed.

To enable a default system notification

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **System Notifications** tab.

3. Select the check-boxes from both the **Enabled** and **Default** columns beside the notifications you want to enable.

Enable (system)

System notifications that are enabled will be available to users in your organization from the **My Notifications** tab in the **Tools** module.

To enable a system notification

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **System Notifications** tab.
3. Select the check-box from the **Enabled** column beside the notification that you want to enable.

Schedule

You can configure the **Timesheet Due** and **Timesheet Overdue** system notifications to be sent to recipients at a scheduled time.

To schedule system notifications

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **System Notifications** tab.
3. Select a notification that has an On Schedule trigger, such as **Timesheet Due** or **Timesheet Overdue**, and then click the **Edit System Notifications** button.
4. In the **Edit System Notifications** dialog box, select the **Schedule** tab.
5. Under **Job Schedule**, choose the frequency, time of day, and day of the week or month.
6. Click **Save**.

View

The list of system notifications is available from the **System Notifications** tab in the **System Settings** module.

To view system notifications

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **System Notifications** tab.

Email Settings

Users in your organization can view, subscribe to, and un-subscribe from any system notification that is enabled. Users can subscribe to and un-subscribe from their system notifications using the **My Notifications** tab in the **Tools** module. You can subscribe every user in your organization to an enabled system notification by making it a default notification.

Disable email

You may want to enable notifications for users, but not have those notifications be sent to a user's email account. In this case, when notifications are available, an icon will appear in the application toolbar.

To disable email for a system notification

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **System Notifications** tab.
3. In the row for the system notification you want to disable, un-check the **Enabled** column.

Manage who receives notifications

Once you've configured and enabled system notifications, you have to specify which users and groups of users should receive email notifications. This is done from the **Users** tab in the **Security** tab.

To manage which users receive email notifications

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Security** tab.
3. Select the **Users** tab.
4. Below the list of users, click the **Manage Email Notifications** button to display the **Select Users to Receive Notifications** dialog box.
5. Select the users who should receive notifications and click the right arrow to add them. You can **CTRL**-click to select multiple users.
6. Click **OK**.

Security

You can use the **Security** tab to manage the users and groups of users who will be working, and to define the security roles that allow them to access the **Projects**, **Reports**, **Resources**, **Tools**, **System Settings**, and **Customization** modules.

For more information, see the following topics:

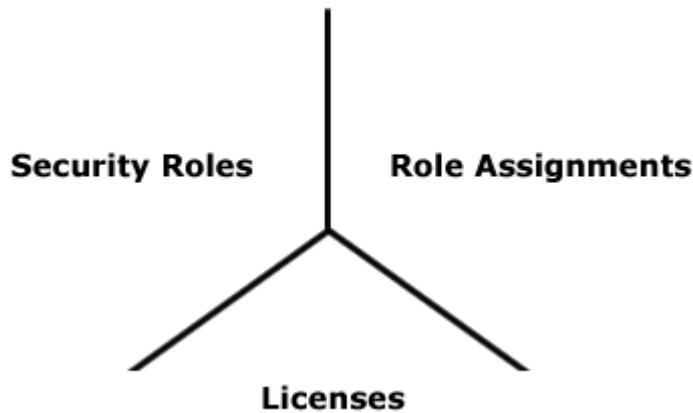
- [Application Security \[page 175\]](#)
- [Groups \[page 179\]](#)
- [Roles \[page 182\]](#)
- [Active Users \[page 184\]](#)
- [Password Policy \[page 184\]](#)

Application Security

Data is integrated from a wide variety of sources that may encompass sensitive project, budget, and resource information. To provide secure and controlled access across to your portfolio data, a multi-layered application security framework is used. This framework enables you to define user access both at a system and individual work item level. Designing a security policy that meets the needs of your organization requires careful planning and a thorough understanding of the security framework.

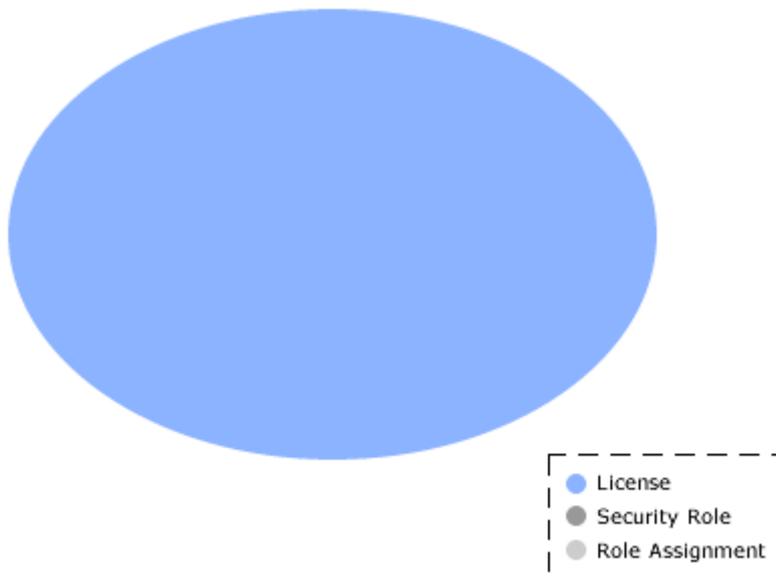
Overview

The structure of this framework is made up of three separate security elements: licenses, security roles, and work item role assignments. The combination of these security elements defines your overall security policy.



Licenses

Licenses are the foundation of the security model. There are two types of licenses: a base license that provides access to a limited set of functionality and a full license that provides access to the full application. A license is assigned individually to each user, providing the ability to log on and defining user access to modules and views. Essentially, a license defines the maximum possible access a user can be given to modules and views. Think of the license as a large container; it holds a user's greatest potential access to the application.

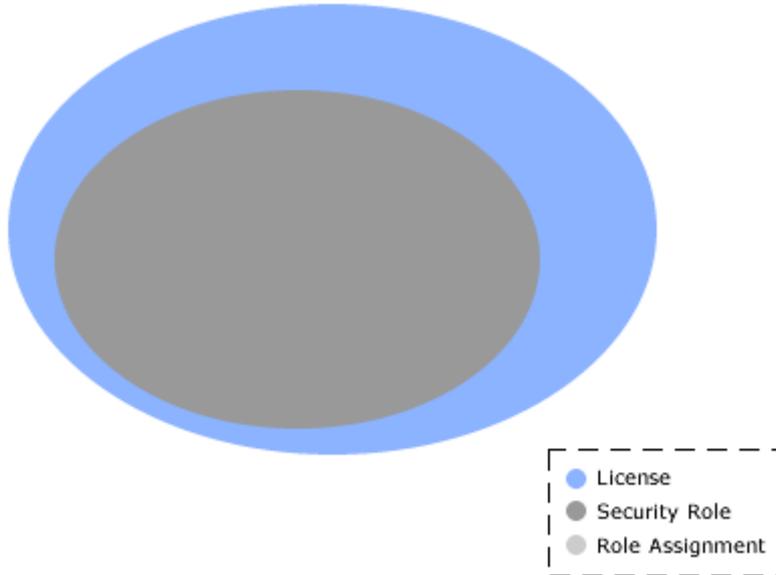


Security Roles

Security roles are basically a collection of individual permissions and define the level of access for users and groups and functions they can perform. The permissions structure enables you to specify the precise level of access for the security role, and to the individual views, dimensions, and user actions. Licensed users are put in groups, which are then assigned to a security role. When user access provided by a security role is

combined with the potential access granted by the license, the net result is the most restrictive level of access.

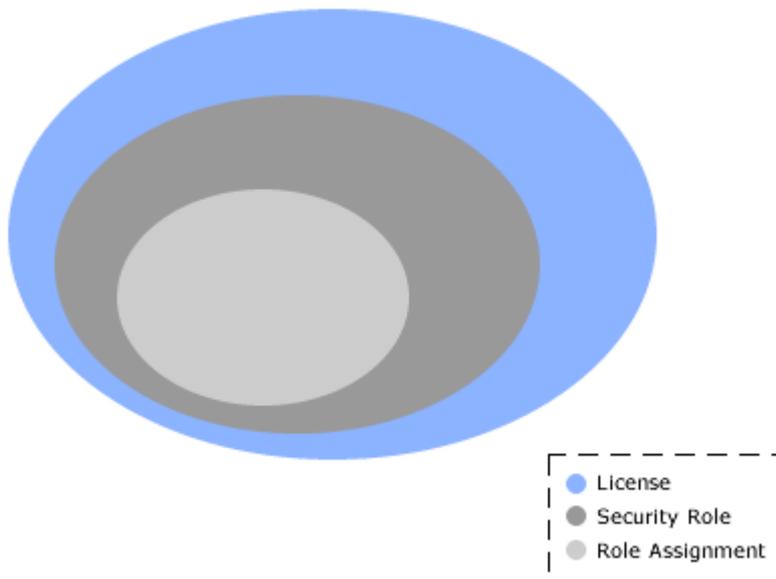
When security roles and licenses are combined, the result is restrictive. However, users and groups can belong to more than one security role. In this case, the user access from each security role is cumulative, but only to the extent provided by the license.



Role Assignments

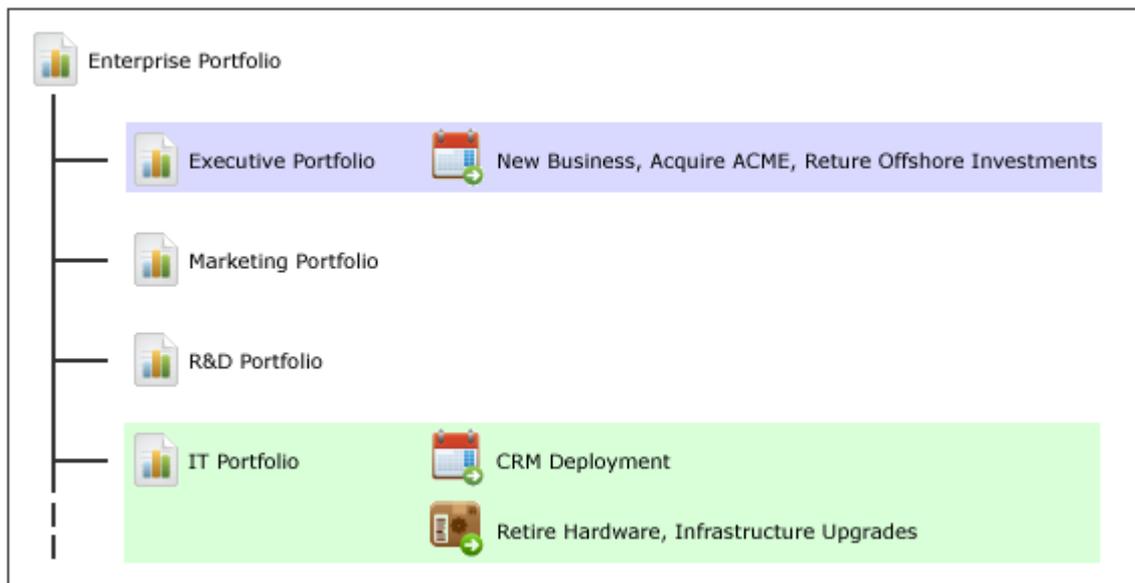
A role assignment is the last layer in the security framework. Role assignments define user and group access to a specific work item or work item portfolios. The security role assignment is actually part of the work item's properties. This is the final step in determining a the level of access for a user or group. A user can have a full license and have unrestricted access via their security role, and will not have access to a work item or portfolio without a appropriate role assignment.

Combining licenses, security roles, and role assignments effectively can provide the appropriate level of access and visibility into portfolio data. In fact, when combined with a well-designed portfolio structure, you can virtually isolate a work item and entire portfolios from unauthorized access.



Security Example

The following visual provides an example of this security-based portfolio isolation. Users with role assignments on the IT Portfolio, for instance, see only those items highlighted in green. When those users log on, the other items and portfolios will not even appear in the hierarchy. In the same way, users assigned to the Executive Portfolio will only see and have access to items in that specific portfolio.



Best Practices

There are many ways to approach application access and security role definitions. The security framework is designed to provide the flexibility to meet the specific application security needs of your organization. To help you achieve a well conceived security model, consider the following best practices:

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- Document your requirements for user access and application security. Determine the level of granularity needed by your organization.
 - Outline the security roles.
 - Devise the licensing scheme that will match this setup.
 - Define and create each security role and assign corresponding permissions.
 - Ensure each security role has access to the appropriate dimensions.
 - Create groups, and assign groups to security roles.
 - Create users and then add them to appropriate groups.
 - Assign users the appropriate licenses that match their security roles.

If you assign a security role permission to edit the properties of a work item in the work item hierarchy, that permission will be inherited by all of that work item's children. It is possible to restrict permission to edit an work item's children, but it is not possible to restrict permission to view an work item's children.

Groups

The **Groups** tab is used to define the security groups, to specify the users and groups who belong to them, and to specify the security roles to which they are associated. Security groups are a collection of users and/or other security groups that have similar roles in your organization and similar needs for accessing work item data. Without using security groups, every user would need to be individually given permission to access the various modules and views. With groups, you can assign multiple users with similar roles and permission requirements to a single security group, and you can then assign a single security group permission to access a module or a view. Users can be assigned to more than one security group. If a user is assigned to more than one security group, that user has all the permissions associated with the all the groups to which they are assigned.

Add

Several default security groups are included. If these groups aren't the right ones for how your organization wants to work, you can add new ones.

To add a security group

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Security** tab.
3. Select the **Groups** tab.
4. Click **New**.
5. Under **Group Properties**, enter a name and a description. Select the **Active** check box to activate the group.
6. Under **Users and Groups**, select a user or a security group from the left pane and move them to the right pane to add them to the security group.
7. Under **Global Administrative Roles**, choose the security roles to which the security group will belong.
8. Click **Save**.

Assign user

You can assign users and security groups to security groups. Security groups are given permission to access modules and views by assigning the security group to one or more security roles.

To assign a user to a security group

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Security** tab.
3. Select the **Groups** tab.
4. Select the name of the security group to which you want to assign a user or group.
5. Under **Users and Groups**, select the name of the user or group you want to add move the user or group to the column on the right.
6. Click **Save**.

Copy

You can add a security group by copying the properties of an existing security group. When you copy a security group, the users and/or security groups that are assigned to the security group from which the copy is made will also be copied.

To copy a security group

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Security** tab.
3. Select the **Groups** tab.
4. Select the security group you want to copy and click **Copy**.
5. Under **Group Properties**, enter a name and a description. Select the **Active** check box to activate the group.
6. Under **Users and Groups**, select a user or a security group from the left pane and move them to the right pane to add them to the security group.
7. Under **Global Administrative Roles**, choose the security roles to which the security group will belong.
8. Click **Save**.

Delete

If your organization doesn't need a security group, you can delete it.

To delete a security group

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Security** tab.
3. Select the **Groups** tab.
4. Select a group.
5. Click **Delete**. Confirm.

Edit

Make your changes and then save them.

To edit a security group

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Security** tab.
3. Click the **Groups** tab.
4. Select a group.
5. Make your changes.
6. Click **Save**.

Import

You can import users from an existing network directory service, such as Active Directory or Novell eDirectory. You must first set up the authentication provider, which determines which users and/or security groups will be imported. You can configure the authentication provider to be run periodically. When the authentication provider is re-run, only new or changed data will be imported. First name, last name, status, and email address are used to determine which users are new and/or have been changed. A user's username, password, domain, and authentication provider will remain unchanged.

To import security groups

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. In the **Import Users** dialog box, select the authentication provider from which you are importing.
3. The **Import Users** dialog box displays your authentication provider settings as read-only.
4. Type the following in the *Name* and **Password** boxes: If the authentication provider you selected uses the Application authentication type, type the database user name and password in the corresponding boxes. If the authentication provider you selected uses the Active Directory authentication type, type the domain user name (such as user name), a qualified domain name (such as domain/username), or a full distinguished name (such as cn=username,ou=pretend, dc=domain, dc=com) and password in the corresponding boxes. If the authentication provider you selected uses the Novell eDirectory authentication type, type a full distinguished name and password in the corresponding boxes.
5. Click **Import**. When users are imported, their user name and password are lowercase. When the import completes, click **OK**. If the import returns an error, check the authentication provider to ensure it is configured properly. Also ensure that the user context running the import has sufficient rights on the directory services server. If the user context does not have sufficient rights, the query will return null strings for those parts of the query the user cannot access. Once you have imported the users and groups, you can edit their information on the **Users** tab and **Groups** tab in the **Security**.

View

Security groups can be viewed from the **Groups** tab of the **Security** tab in the **Projects** module.

To view a security group

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Security** tab.
3. Select the **Groups** tab.

Roles

The **Roles** tab is used to assign permission to areas within each of the modules: **Projects, Reports, Resources, Tools, System Settings, and Customization**. Permissions are granted on a role-by-role basis. Security roles define the permissions that are available for the users and security groups that are assigned to the security role. Users can be assigned to more than one security role. If a user is assigned to more than one security role, that user has all the permissions associated with the all the roles to which they are assigned.

Add

Several default security roles are included. If these security roles don't map to the way your organization manages security, you can add new ones.

To add a security role

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Security** tab.
3. Click the **Roles** tab.
4. Click **New**.
5. Under **Security Role Properties**, enter a name and a description.
6. In the **System Settings, Customization, Resources, Tools, Reports, and Projects** tabs, select the permissions that will be allowed for the security role. If the Allowed column is selected for a permission, any user or security group will be granted permission to do the associated actions.
7. Click **Save**.

Assign user to role

Users can be assigned to security roles one at a time or as part of security groups.

To assign a user or a security group to a security role

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Security** tab.
3. Select the **Roles** tab.
4. Select the name of the security role to which you want to assign a user or group.
5. Under **Users and Groups**, select the name of the user or group you want to add move the user or group to the column on the right.
6. Click **Save**.

Copy

You can add a security role by copying the properties of an existing security role. When you copy a security role, the users and/or security roles that are assigned to the security role from which the copy is made will also be copied.

To copy a security role

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Security** tab.
3. Select the **Roles** tab.
4. Select the security role you want to copy and click **Copy**.
5. Under **Security Role Properties**, enter a name and a description.
6. In the **Administration, Configuration, Resources, Workspace, Analyzer**, and **Projects** tabs, select the permissions that will be allowed for the security role. If the **Allowed** column is selected for a permission, any user or security group will be granted permission to do the associated actions.
7. Click **Save**.

Delete

If your organization doesn't need a security role, you can delete it.

To delete a security role

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Security** tab.
3. Select the **Roles** tab.
4. Select a role.
5. Click **Delete**. Confirm.

Edit

Make your changes and then save them. The Administrator (padmin) security role cannot be modified.

To edit a security role

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Security** tab.
3. Select the **Roles** tab.
4. Select a role.
5. Make your changes.
6. Click **Save**.

View

Security roles can be viewed from the **Roles** tab of the **Security** tab in the **System Settings** module.

To view a security role

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Security** tab.
3. Select the **Roles** tab.

Active Users

The **Active Users** tab lists the current active users.

View

The users who are currently working (active users) can be viewed from the **Active Users** tab of the **Security** tab in the **System Settings** module.

To view active users

1. From the application toolbar, click **Setup**, and then select **System Settings**.
2. Select the **Security** tab.
3. Click the **Active Users** tab.

Password Policy

The **Password Policy** tab provides the following options for password complexity:

- **Strong** The password must be between 8-16 characters and must contain at least one number (0-9), one lowercase letter (a-z), one uppercase letter (A-Z), and one non-alphanumeric character (such as #, \$, !, or %).
- **Medium** The password must be between 8-16 characters and must contain at least one number (0-9), one lowercase letter (a-z), and one uppercase letter (A-Z).
Default.
- **Weak** The password must be between 4-16 characters.

Password policy options are global settings and will be applied to any database that is used by your organization.

Configuration

After you have created users, added licenses, defined security roles (and assigned users to them), you are ready to configure the application. The **Customization** module is used to manage the work item types, attributes, and views that your organization wants to use.

For more information, see the following topics:

- [Attributes Setup \[page 185\]](#)
- [Environment Settings \[page 216\]](#)
- [Types Setup \[page 220\]](#)
- [Module Designer \[page 229\]](#)
- [User Synchronization \[page 274\]](#)
- [View Designer \[page 277\]](#)
- [View Management \[page 302\]](#)

Attributes Setup

You can use the **Attributes Setup** tab to create and manage work item type attributes.

For more information, see the following topics:

- [Attribute Dependencies \[page 185\]](#)
- [Attributes \[page 187\]](#)
- [Dimensions \[page 207\]](#)
- [Lists \[page 210\]](#)
- [Scorecard and Notesgrid \[page 211\]](#)
- [Split Attributes \[page 214\]](#)
- [Type System \[page 215\]](#)

Attribute Dependencies

The Attribute Dependencies tab allows you to link attributes to each other by defining a parent/child relationship. You can define parent/child relationships for any attribute type that can be associated with a list, such as *date*, *float*, *integer*, *money*, *percent*, or *text*.

After you have chosen the parent and child attributes, you need to define the dependency relationships. Select a list work item from the parent attribute and then associate a value from the child attribute by adding a list work item from the child attribute to the list work item of the parent attribute.

Add

Open the **New Attribute Dependency** dialog box and choose the parent and child attributes. Then specify the relationships between a list work item which belongs to the parent and child attributes.

To add an attribute dependency

1. From the application toolbar, click **Setup**, and then select **Customization**.

2. Select the **Attributes Setup** tab.
3. Select the **Attribute Dependencies** tab.
4. Click **New**.
5. In the **New Attribute Dependency** dialog box select a parent attribute (the attribute for which dependencies will be created) and a child attribute (the attribute from which the dependencies are based).
6. Select the parent/child pair that was just created.
7. Click **OK**.
8. Under **Selections**, select a priority for the dependency (*High, Medium, and Low*). For each priority, select the parent attributes that are associated with the child attribute and move them to the right column. As the parent / child relationships are created, they will be shown in the **Summary** section below.
9. Click **Save**.

Deleting

If you are not using an attribute dependency, you can delete it.

To delete an attribute dependency

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attribute Dependencies** tab.
4. Select a dependency pair.
5. Click **Delete**.

Edit

Make your changes and then save them.

To edit an attribute dependency

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attribute Dependencies** tab.
4. Select an attribute dependency.
5. Make your changes.
6. Click **Save**.

View

An attribute dependency can be viewed from the **Attribute Dependencies** tab in the **Attributes Setup** tab.

To view an attribute dependency

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attribute Dependencies** tab.

4. Select a dependency pair. This populates the **Selections** and **Summary** boxes. The **Summary** box allows you to view a graphical representation of the parent/child relationship.
5. Use the **Parent List Items** drop-down to select the work item from which you want to view a child work item.

Attributes

Attributes are information about a work item that shows in a field or column of a view. Attributes should have unique names; if an attribute has the same name as another attribute, then it must have a unique attribute type and/or it must be dimensioned. Attributes can be assigned to work item types from the Investment Type tab in the **Types Setup** tab.

There are six primary types of attributes:

- **General** A general attribute can be used by any work item type. A general attribute is never timephased (or ranged) and it is never a milestone. General attribute types include: *date, flag, float, integer, large text, money, percent, resource, text, time,* and *URL link*.
- **Timephased** A timephased attribute can be used to track costs and/or benefits over a defined time period. There are four types of timephased attributes: labor costs, non-labor costs, other costs, and benefits. Timephased attributes can be split so that costs and/or benefits can be tracked in smaller, more detailed levels. When a timephased attribute is split, cost and benefit values are tracked at the split level, plus are rolled-up into the parent timephased attribute. Timephased attribute types include: *Timephased - CURRENCY, Timephased - FTE, Timephased - NonLabor,* and *Timephased - UNITS*.
- **Calculated Timephased** A *calculated timephased* attribute can be used to calculate currency, hours, skills, and other measurements that are already being tracked using a timephased attribute. There are four types of *calculated timephased* attributes: currency, FTE, hours, and units. Calculated timephased attributes may use MathML. The *calculated timephased* attribute type includes: *Timephased Calc - CURRENCY, Timephased Calc - FTE, Timephased Calc - HOURS,* and *Timephased Calc - UNITS*.
- **Ranged Calculation** A *ranged calculation* attribute can be used to derive the sum for timephased attributes and *calculated timephased* attributes. Ranged calculation attributes always use MathML.
- **Milestone** A milestone attribute can be used to define dates. A milestone attribute is always dimensioned and can be rolled-up. Status can be assigned to a milestone.
- **Constant** A *constant* attribute can be used in calculations, transitions, or whenever there is a need for a fixed value. A *constant* attribute is defined using the Edit Rates dialog box. A *constant* attribute must have a rate defined; use the Edit Rates dialog box to define a rate.

There are four roll-up types that can be applied to attributes (from the Attributes tab) and attribute dimensions (from the Dimensions tab):

- **Sum** The *sum* roll-up type adds all of an attribute's direct descendent values.
- **Average** The average roll-up type calculates the mean average of an attribute's direct descendent values.

- **Minimum** The *min* roll-up type selects the lowest value or earliest date from an attribute's direct descendent values.
- **Maximum** The *max* roll-up type selects the highest value or latest date from an attribute's direct descendent values.

Roll-up types can be used with the following attribute types: *date*, *float*, *integer*, *milestone*, *money*, *percent*, *ranged calculation*, *time*, and *calculated timephased* (all four of them).

Copy

You can create new attributes by copying existing ones.

To copy an attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Select the attribute you want to copy and click **Copy**.
5. Make your changes.
6. Click **Save**.

Delete

You can remove any attribute that is not being used by an existing work item type, column, or box. Removing an attribute will remove any associated attribute list values.

To delete an attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Select an attribute.
5. Click **Delete**.

Edit

Make your changes and then save them. Once created, there are some properties of an attribute that cannot be modified, including its data type, roll-up type, or whether it is dimensioned.

To edit an attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Select an attribute.
5. Make your changes.
6. Click **Save**.

View

An attribute can be viewed from the Attributes tab in the **Types Setup** view.

To view an attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Select an attribute and view its properties.

Calculated Timephased

A calculated timephased attribute (or field) is used to store information that is calculated and that can vary over time. There are several types of calculated timephased attributes: *Timephased Calc - CURRENCY*, *Timephased Calc - FTE*, *Timephased Calc - HOURS*, and *Timephased Calc - UNITS*. Some types of calculated timephased fields include *TotalCost* and *TotalCostCumulative*.

Add

Add a new *calculated timephased* attribute. From the **Type** drop-down, select *Timephased Calc - CURRENCY*, *Timephased Calc - FTE*, *Timephased Calc - HOURS*, or *Timephased Calc - UNITS*. A *calculated timephased* attributes can be cumulative, reset, and dimensioned.

To add a calculated timephased attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Click **New**.
5. Name the new attribute. The system name will be generated automatically.
6. From the **Type** drop-down, select one of the following: *Timephased Calc - CURRENCY*, *Timephased Calc - FTE*, *Timephased Calc - HOURS*, or *Timephased Calc - UNITS*.
7. From the **Rollup Type** drop-down, select *none* (default, no roll-up) or *sum* (to add all of this attribute's direct descendent values). A *calculated timephased* attribute that uses the *sum* roll-up type should only be used with a dependency. An attribute with a rollup type other than *none* will be saved as a global attribute. (A global attribute is required for all work item types and optional for any work type.)
8. Under **Time Phase Attributes**, select **Cumulative** and then select *Calendar Quarter*, *Calendar Year*, *End of Time*, *Fiscal Quarter*, or *Fiscal Year* from the **Reset Interval** drop-down.
9. A *calculated timephased* attribute can be associated with one or more dimensions. Under **Dimensions**, select **Dimensioned** and then choose the dimensions to which the attribute is associated. If you want to use a MathML calculation with the *calculated timephased* attribute, select **Calculated** and then click **Calculation** to open the Calculation Editor dialog box. Add the MathML calculation and click **OK**.
10. Click **Save**.

Constant

A *constant* attribute (or field) is used to store a value that will remain constant.

Add

Add a new *constant* attribute. From the **Type** drop-down, select *constant*. Choose a display value. A *constant* attribute can be dimensioned.

To add a constant attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Click **New**.
5. Name the attribute. The system name will be generated automatically.
6. From the **Type** drop-down, select *constant*.
7. From the **Display Value** drop-down, select *float*, *integer*, *money*, or *percent*.
8. A *calculated timephased* attribute can be associated with dimensions. Under **Dimensions**, select **Dimensioned** and then choose the dimensions to which the attribute is associated. If you want to use a MathML calculation with the *calculated timephased* attribute, select **Calculated** and then click **Calculation** to open the Calculation Editor dialog box. Add the MathML calculation and click **OK**.
9. Click **Save**.

Add rate

Add an attribute rate for a *Timephased - FTE* or a *Timephased - UNITS* attribute. Click the **Rates** button to open the **Rate Editor** dialog box.

To add an attribute rate

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. In the list of attributes, select an attribute that has an attribute type of *constant*, *Timephased - FTE*, or *Timephased - UNITS*.
5. Under **Time Phase Attributes**, click **Rates**.
6. In the **Edit Rates** dialog box, select **Add**. In the **Rate** column, enter the rate and choose the date upon which the rate is to take effect.
7. Click **Save**.

Delete rate

You can delete rates that have been defined for *Timephased - FTE* and *Timephased - UNITS* attributes. Click the **Rates** button to open the **Rate Editor** dialog box.

To delete an attribute rate

1. From the application toolbar, click **Setup**, and then select **Customization**.

2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Select an attribute with a type of *constant*, *Timephased - FTE*, or *Timephased - UNITS*.
5. Click **Rates**.
6. In the **Rate Editor** dialog box, select a rate and click **Delete**.
7. Click **OK**.

Edit rate

You can modify rates that have been defined for *Timephased - FTE* and *Timephased - UNITS* attributes. Click the **Rates** button to open the **Rate Editor** dialog box.

To edit an attribute rate

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Select an attribute with a type of *constant*, *Timephased - FTE*, or *Timephased - UNITS*.
5. Under **Time Phase Attributes**, click **Rates**.
6. Click **Save**.

Date

A *date* attribute (or field) is used to store dates, such as *Review Date*, *Task Actual Start*, *Task Actual Finish*, *Task Start*, and *Task Finish*.

Add

Add a new attribute. From the **Type** drop-down, select *date*.

To add a date attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Click **New**.
5. Name the new attribute. The system name will be generated automatically.
6. From the **Type** drop-down, select *date*.
7. From the **Rollup Type** drop-down, select *none* (default, no roll-up), *min* (selects the lowest value or earliest date from an attribute's direct descendent values), *max* (selects the highest value or latest date from an attribute's direct descendent values), *sum* (to add all of this attribute's direct descendent values). General attributes that use the *sum* roll-up type do not require a dependency. An attribute with a rollup type other than *none* will be saved as a global attribute.
8. Select **Global** to make the attribute a global attribute. A global attribute is required for all work item types and optional for any work type.

9. Select **Searchable** to allow users to search for the attribute in the **Projects** and **Reports** modules.
10. Under **List Attributes**, choose an attribute list to which the attribute will be associated.
11. Under **Calculation**, select **Calculated** and then click **Calculation** to open the **Calculation Editor** dialog box.
12. Calculated attributes can be associated with dimensions (except when using Serena Agile On Demand). Under **Dimensions**, select **Dimensioned** and then choose the dimensions to which the attribute is associated. If you want to use a MathML calculation with the *calculated timephased* attribute, select **Calculated** and then click **Calculation** to open the Calculation Editor dialog box. Add the MathML calculation and click **OK**.
13. Click **Save**.

Flag

A *flag* attribute (or field) is used to indicate yes/no data, such as whether a work item is billable (*Billable*), whether a document or a project is checked in (*Is Checked In*), whether a team member has assigned themselves to a task (*Self Assigned*), or whether a task has been made visible across projects (*Task Externally Visible*).

Add

Add a new attribute. From the **Type** drop-down, select flag.

To add a flag attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Click **New**.
5. Name the new attribute. The system name will be generated automatically.
6. From the **Type** drop-down, select *flag*.
7. Select **Global** to make the attribute a global attribute. A global attribute is required for all work item types and optional for any work type.
8. Select **Searchable** to allow users to search for the attribute in the **Projects** and **Reports** modules.
9. Under **Calculation**, select **Calculated** and then click **Calculation** to open the Calculation Editor dialog box.
10. Calculated attributes can be associated with dimensions (except when using Serena Agile On Demand). Under **Dimensions**, select **Dimensioned** and then choose the dimensions to which the attribute is associated. If you want to use a MathML calculation with the *calculated timephased* attribute, select **Calculated** and then click **Calculation** to open the Calculation Editor dialog box. Add the MathML calculation and click **OK**.
11. Click **Save**.

Float

A *float* attribute (or field) is used to store a value that will vary across the projects in which the field is available, such as *Estimated Work*, *Remaining Work*, *Task Duration*, or *Task Remaining Duration*.

Add

Add a new attribute. From the **Type** drop-down, select *float*.

To add a float attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Click **New**.
5. Name the new attribute. The system name will be generated automatically.
6. From the **Type** drop-down, select *float*.
7. From the **Rollup Type** drop-down, select *none* (default, no roll-up), *min* (selects the lowest value or earliest date from an attribute's direct descendent values), *max* (selects the highest value or latest date from an attribute's direct descendent values), *sum* (to add all of this attribute's direct descendent values). General attributes that use the *sum* roll-up type do not require a dependency. An attribute with a rollup type other than *none* will be saved as a global attribute.
8. Select **Global** to make the attribute a global attribute. A global attribute is required for all work item types and optional for any work type.
9. Select **Searchable** to allow users to search for the attribute in the **Projects** and **Reports** modules.
10. Under **List Attributes**, choose an attribute list to which the attribute will be associated.
11. Under **Calculation**, select **Calculated** and then click **Calculation** to open the **Calculation Editor** dialog box.
12. Calculated attributes can be associated with dimensions (except when using Serena Agile On Demand). Under **Dimensions**, select **Dimensioned** and then choose the dimensions to which the attribute is associated. If you want to use a MathML calculation with the *calculated timephased* attribute, select **Calculated** and then click **Calculation** to open the **Calculation Editor** dialog box. Add the MathML calculation and click **OK**.
13. Click **Save**.

Integer

An *integer* attribute (or field) can be used to store a unique value in the application, such as *Parent ID*, *Resource User ID*, or *Team Owner*. Or it can be used to capture a required value from a list of values, such as *Priority*.

Add

Add a new attribute. From the **Type** drop-down, select *integer*.

To add an *integer* attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Click **New**.
5. Name the new attribute. The system name will be generated automatically.
6. From the **Type** drop-down, select *integer*.
7. From the **Rollup Type** drop-down, select *none* (default, no roll-up), *min* (selects the lowest value or earliest date from an attribute's direct descendent values), *max* (selects the highest value or latest date from an attribute's direct descendent values), *sum* (to add all of this attribute's direct descendent values). General attributes that use the *sum* roll-up type do not require a dependency. An attribute with a rollup type other than *none* will be saved as a global attribute.
8. Select **Global** to make the attribute a global attribute. A global attribute is required for all work item types and optional for any work type.
9. Select **Searchable** to allow users to search for the attribute in the **Projects** and **Reports** modules.
10. Under **List Attributes**, choose an attribute list to which the attribute will be associated.
11. Under **Calculation**, select **Calculated** and then click **Calculation** to open the Calculation Editor dialog box.
12. Calculated attributes can be associated with dimensions (except when using Serena Agile On Demand). Under **Dimensions**, select **Dimensioned** and then choose the dimensions to which the attribute is associated. If you want to use a MathML calculation with the *calculated timephased* attribute, select **Calculated** and then click **Calculation** to open the Calculation Editor dialog box. Add the MathML calculation and click **OK**.
13. Click **Save**.

Large Text

A *large text* attribute (or field) is used to store very large strings of characters.

Add

Add a new attribute. From the **Type** drop-down, select *large text*.

To add a large text attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Click **New**.
5. Name the new attribute. The system name will be generated automatically.
6. From the **Type** drop-down, select *large text*.

7. Select **Global** to make the attribute a global attribute. A global attribute is required for all work item types and optional for any work type.
8. Click **Save**.

Milestone

A *milestone* attribute (or field) is used to store a specific value.

Add

Add a new *milestone* attribute. From the **Type** drop-down, select *milestone*. When a *milestone* is a global attribute, it can be discovered as a search result.

To add a milestone attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Click **New**.
5. Name the new attribute. The system name will be generated automatically.
6. From the **Type** drop-down, select *milestone*.
7. From the **Rollup Type** drop-down, select *none* (default, no roll-up), *min* (selects the lowest value or earliest date from an attribute's direct descendent values), or *max* (selects the highest value or latest date from an attribute's direct descendent values). An attribute with a rollup type other than *none* will be saved as a global attribute.
8. Select **Global** to make the attribute a global attribute. A global attribute is required for all work item types and optional for any work type.
9. Select **Searchable** to allow users to search for the attribute in the **Projects** and **Reports** modules.
10. Milestone attributes are always part of an attribute list. Under **List Attributes**, choose an attribute list to which the milestone attribute will be associated. Milestone attributes are always dimensioned, but they cannot use MathML calculations.
11. Click **Save**.

Money

A *money* attribute (or field) is used to capture cost data, such as *Task Actual Cost*, *Task Actual Non-Labor Cost*, *Task Total Cost*, or *Project Costs Total*.

Add

Add a new attribute. From the **Type** drop-down, select *money*.

To add a money attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Click **New**.

5. Name the new attribute. The system name will be generated automatically.
6. From the **Type** drop-down, select *money*.
7. From the **Rollup Type** drop-down, select *none* (default, no roll-up), *min* (selects the lowest value or earliest date from an attribute's direct descendent values), *max* (selects the highest value or latest date from an attribute's direct descendent values), *sum* (to add all of this attribute's direct descendent values). General attributes that use the *sum* roll-up type do not require a dependency. An attribute with a rollup type other than *none* will be saved as a global attribute.
8. Select **Global** to make the attribute a global attribute. A global attribute is required for all work item types and optional for any work type.
9. Select **Searchable** to allow users to search for the attribute in the **Projects** and **Reports** modules.
10. Under **List Attributes**, choose an attribute list to which the attribute will be associated.
11. Under **Calculation**, select **Calculated** and then click **Calculation** to open the Calculation Editor dialog box.
12. Calculated attributes can be associated with dimensions (except when using Serena Agile On Demand). Under **Dimensions**, select **Dimensioned** and then choose the dimensions to which the attribute is associated. If you want to use a MathML calculation with the *calculated timephased* attribute, select **Calculated** and then click **Calculation** to open the Calculation Editor dialog box. Add the MathML calculation and click **OK**.
13. Click **Save**.

Percent

A *percent* attribute (or field) is used to store data that is best represented as a percentage, such as *Estimated Percent Complete*, *Percent Work Complete*, or *Task Percent Complete*.

Add

Add a new *percent* attribute. From the **Type** drop-down, select *percent*.

To add a percent attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Click **New**.
5. Name the new attribute. The system name will be generated automatically.
6. From the **Type** drop-down, select *percent*.
7. From the **Rollup Type** drop-down, select *none* (default, no roll-up), *min* (selects the lowest value or earliest date from an attribute's direct descendent values), *max* (selects the highest value or latest date from an attribute's direct descendent values), *sum* (to add all of this attribute's direct descendent values). General attributes that use the *sum* roll-up type do not require a dependency. An attribute with a rollup type other than *none* will be saved as a global attribute.

8. Select **Global** to make the attribute a global attribute. A global attribute is required for all work item types and optional for any work type.
9. Select **Searchable** to allow users to search for the attribute in the **Projects** and **Reports** modules.
10. Under **List Attributes**, choose an attribute list to which the attribute will be associated.
11. Under **Calculation**, select **Calculated** and then click **Calculation** to open the Calculation Editor dialog box.
12. Calculated attributes can be associated with dimensions (except when using Serena Agile On Demand). Under **Dimensions**, select **Dimensioned** and then choose the dimensions to which the attribute is associated. If you want to use a MathML calculation with the *calculated timephased* attribute, select **Calculated** and then click **Calculation** to open the Calculation Editor dialog box. Add the MathML calculation and click **OK**.
13. Click **Save**.

Ranged Calculations

A *ranged calculation* attribute (or field) is used to store data that is calculated for a specified timeperiod.

Add

Add a new *ranged calculation* attribute. From the **Type** drop-down, select *ranged calculation*. Select a roll-up type. Choose a display value. A *ranged calculation* attribute can be dimensioned.

To add a ranged calculation attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Click **New**.
5. Name the new attribute. The system name will be generated automatically.
6. From the **Type** drop-down, select *ranged calculation*.
7. From the **Rollup Type** drop-down, select *none* (default, no roll-up) or *sum* (to add all of this attribute's direct descendent values). Ranged calculation attributes that use the *sum* roll-up type should only be used with a dependency. An attribute with a rollup type other than *none* will be saved as a global attribute.
8. From the **Display Value** drop-down, select *float*, *integer*, *money*, or *percent*.
9. Select **Global** to make the attribute a global attribute. A global attribute is required for all work item types and optional for any work type.
10. Select **Searchable** to allow users in your organization to find this attribute using search.
11. A *calculated timephased* attribute can be associated with dimensions. Under **Dimensions**, select **Dimensioned** and then choose the dimensions to which the attribute is associated. If you want to use a MathML calculation with the *calculated*

timephased attribute, select **Calculated** and then click **Calculation** to open the Calculation Editor dialog box. Add the MathML calculation and click **OK**.

12. Click **Save**.

Resource

A *resource* attribute (or field) is used to identify a specific resource, such as *Development Owner*, *QA Owner*, and *Owner*. The resources that are available from a *resource* field include all of the resources who are currently available in the application.

Add

Add a new attribute. From the **Type** drop-down, select *resource*.

To add a resource attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Click **New**.
5. Name the new attribute. The system name will be generated automatically.
6. From the **Type** drop-down, select *resource*.
7. Select **Global** to make the attribute a global attribute. A global attribute is required for all work item types and optional for any work type.
8. Select **Searchable** to allow users to search for the attribute in the **Projects** and **Reports** modules.
9. Click **Save**.

Text

A *text* attribute (or field) is used to store strings of text, such as *Resource Email*, *Name*, *Project Status*, *Mitigation Strategy*, *Impact*, or *Description*.

Add

Add a new attribute. From the **Type** drop-down, select *text*.

To add a text attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Click **New**.
5. Name the new attribute. The system name will be generated automatically.
6. From the **Type** drop-down, select *text*.
7. Select **Global** to make the attribute a global attribute. A global attribute is required for all work item types and optional for any work type.
8. Select **Searchable** to allow users to search for the attribute in the **Projects** and **Reports** modules.

9. Under **List Attributes**, choose an attribute list to which the attribute will be associated.
10. Under **Calculation**, select **Calculated** and then click **Calculation** to open the Calculation Editor dialog box.
11. Calculated attributes can be associated with dimensions (except when using Serena Agile On Demand). Under **Dimensions**, select **Dimensioned** and then choose the dimensions to which the attribute is associated. If you want to use a MathML calculation with the *calculated timephased* attribute, select **Calculated** and then click **Calculation** to open the Calculation Editor dialog box. Add the MathML calculation and click **OK**.
12. Click **Save**.

Time

A *time* attribute (or field) is used to store the time at which something started or finished, such as *Finish Time* or *Start Time*.

Add

Add a new attribute. From the **Type** drop-down, select time.

To add a time attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Click **New**.
5. Name the new attribute. The system name will be generated automatically.
6. From the **Type** drop-down, select *time*.
7. From the **Rollup Type** drop-down, select *none* (default, no roll-up), *min* (selects the lowest value or earliest date from an attribute's direct descendent values), *max* (selects the highest value or latest date from an attribute's direct descendent values), *sum* (to add all of this attribute's direct descendent values). General attributes that use the *sum* roll-up type do not require a dependency. An attribute with a rollup type other than *none* will be saved as a global attribute.
8. Select **Global** to make the attribute a global attribute. A global attribute is required for all work item types and optional for any work type.
9. Select **Searchable** to allow users to search for the attribute in the **Projects** and **Reports** modules.
10. Under **Calculation**, select **Calculated** and then click **Calculation** to open the Calculation Editor dialog box.
11. Calculated attributes can be associated with dimensions (except when using Serena Agile On Demand). Under **Dimensions**, select **Dimensioned** and then choose the dimensions to which the attribute is associated. If you want to use a MathML calculation with the *calculated timephased* attribute, select **Calculated** and then click **Calculation** to open the Calculation Editor dialog box. Add the MathML calculation and click **OK**.
12. Click **Save**.

Timephased

A timephased attribute (or field) is used to store information whose value can change over time. There are several types of timephased attributes: Timephased - Currency, Timephased - FTE, Timephased - Hours, Timephased - Nonlabor, and Timephased - Units. Some types of timephased fields include Labor Cost and Work Remaining TPA.

Add

Add a new timephased attribute. From the **Type** drop-down, select *Timephased - CURRENCY*, *Timephased - FTE*, *Timephased - NonLabor*, or *Timephased - UNITS*. If you select *Timephased - FTE* or *Timephased - UNITS*, you can assign rates to the attribute. If you select *Timephased - FTE*, you can use it with a labor attribute map.

To add a timephased attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Click **New**.
5. Under **Attribute Properties**, name the new work item type. The system name will be generated.
6. From the **Type** drop-down, select one of the following: *Timephased - CURRENCY*, *Timephased - FTE*, *Timephased - HOURS*, or *Timephased - UNITS*. Timephased attributes always have a roll-up type of *sum*. Timephased attributes are global by default. Timephased attributes are always dimensioned, but they cannot use MathML calculations.
7. Click **Save**.

Add timephased - FTE for labor attribute mapping

Labor attribute mapping is done using attributes that are based on the *Timephased - FTE* attribute type and have the **Mappable** option selected.

To add a Timephased - FTE attribute for labor attribute mapping

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Click **New**.
5. Under **Attribute Properties**, name the new work item type. The system name will be generated.
6. From the **Type** drop-down, select *Timephased - FTE*. Timephased attributes always have a roll-up type of *sum*. Timephased attributes are global by default. Timephased attributes are always dimensioned, but they cannot use MathML calculations.
7. Click **Save**.

URL Link

A *URL link* attribute (or field) is used to store a URL value. A *URL link* can also be configured as a URL container.

Add

A URL container allows you to display information that resides elsewhere inside of your project workspace. A URL container can point to any URL addressable content, including reports on other internal systems, such as those generated by SAP or by Serena Business Mashups, or content on external systems or the Internet. You can use more than one URL container, sharing them across projects or dedicating them to specific projects and/or specific views within a project.

For each unique URL container that you want to add to a view, you must first create a global *URL link* attribute. Then, in the **View Designer** tab, you can add that URL container to any view on which you want it to be accessible. Set the `IsURLContainer` property to `True`. The URL shown in the URL container is specified by the user at run-time.

To add a *URL link* attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. Click **New**.
5. Name the new attribute. The system name will be generated automatically.
6. From the **Type** drop-down, select *URL link*.
7. Select **Global** to make the attribute a global attribute. A global attribute is required for all work item types and optional for any work type.
8. Click **Save**.

Calculation Editor

Mathematical Markup Language (MathML) is an XML-based method of rendering mathematical expressions in Web pages. MathML consists of a number of XML tags which can be used to calculate equations. MathML is used for calculated timephase attributes and ranged calculated attributes. MathML calculations must be entered using the proper syntax and must call the XML names of properly formatted attributes.

Each MathML calculation must define the type of calculation that will be performed, the numbers or a variable to be included in the calculation, and a definition of any variable. The elements of a MathML calculation (including required container elements) are as follows:

```
<Calculation>
  <expression>
    <math xmlns:mathml="http://www.w3.org/1998/Math/MathML">
      <lambda>
        <bvar> <ci>a</ci>
        </bvar>
        <bvar> <ci>b</ci>
        </bvar>
        <apply> <plus/> <ci>a</ci> <ci>b</ci>
      </math>
    </expression>
  </Calculation>
```

```
        </apply>
      </lambda>
    </math>
  </expression>
  <RHSVariable name="Total-Cost-Labor.Actual" identifier="a"/>
  <RHSVariable name="Total-Cost-Support.Actual" identifier="b"/>
</Calculation>
```

For more information, see the following topics:

- [Basic Calculations \[page 202\]](#)
- [Range Calculations \[page 202\]](#)
- [MathML Examples \[page 204\]](#)

Basic Calculations

There are several standard calculations that can be performed using MathML:

- **Plus** This calculation lets you add values together.
- **Minus** This calculation lets you subtract one values from another.
- **Times** This calculation lets you multiply two values.
- **Divide** This calculation lets you divide one value by another.
- **Nested** Any combination of plus, minus, times, and divide.

Range Calculations

Range calculations can be used to derive the value of a timephased attribute over a defined period. A range calculation is used in a MathML calculation as the value for the name attribute in the RHSVariable element. A range calculation syntax has six components:

- **Range Calculation** A prefix for that range calculation which identifies the entry in the name attribute to be a range calculation.
- **Calculation** The calculation type to be used: SUM, AVG, MIN, MAX, NPV, LIST, or LISTCOUNT.
- **Attribute.Dimension** A timephased attribute, a calculated timephased attribute, or a group name. Using a group name will cause a macro-substitution of all the attributes in the group. The dimension to which the timephased attribute, calculated timephase attribute, or group name belongs must be specified.
- **Units** The unit of measurement: FTE, CURRENCY, HOURS, or UNITS.
- **Timescale** The period in which the range calculation will be used: CALENDAR_MONTH, CALENDAR_QUARTER, CALENDAR_YEAR, FISCAL_QUARTER, or FISCAL_YEAR.
- **Range 1, +n or ,-n.Dimension** The period with which the range calculation begins: TODAY, START, MONTH_START, QUARTER_START, YEAR_START, FISCAL_QUARTER_START, FISCAL_YEAR_START, or a milestone. You may use ,+n to create a range index which increments the starting range by n; you may use ,-n to create a range index which decrements the starting range by n. If the range is a

milestone, then the dimension must also be specified. Milestones and actual dates (such as the actual date of the start of the fiscal year) are inclusive.

- **Range 2, +n or ,-n.Dimension** The period with which the range calculation ends: TODAY, END, MONTH_END, QUARTER_END, YEAR_END, FISCAL_QUARTER_END, FISCAL_YEAR_END, or a milestone. You may use ,+n to create a range index which increments the ending range by n; you may use ,-n to create a range index which decrements the ending range by n. If the range is a milestone, then the dimension must also be specified. Milestones and actual dates (such as the actual date that February ends in a given year) are inclusive.

The syntax is the six components of the range calculation presented (in order), each component contained within a percent symbol (%):

```
%RangeCalculation%Calculation%Attribute.Dimension
%Units%Timescale%Range1%Range2%
```

For example, to find the sum of all timephased attributes in the Labor-Currency group that is part of the Plan dimension with a range from a milestone that is part of the Plan dimension through 12/1/2008, the range calculation would be:

```
%RangeCalculation%SUM%Labor-Currency.Plan%CURRENCY
%CALENDAR_MONTH%StartMS.Plan%12/1/2008%
```

To find the monthly average cost for all timephased attributes in the Server group that is part of the Plan dimension from today through the end of the fiscal year, the range calculation would be:

```
%RangeCalculation%AVG%Server.Plan%CURRENCY
%CALENDAR_MONTH%TODAY%FISCAL_YEAR_END%
```

To find the sum of all increased revenue in the Plan dimension for an entire calendar year and the Plan dimension is defined to begin on 1/1/2007 and end on 1/1/2008, the range calculation would be:

```
%RangeCalculation%SUM%IncreasedRevenue.Plan%CURRENCY
%CALENDAR_YEAR%Start.Plan%Finish.Plan%
```

To use a range index to find the sum of all increased revenue in the Plan dimension for three calendar years (back from the current calendar year) and the Plan dimension is defined to begin on 1/1/2007 and end on 1/1/2008, the range calculation would be:

```
%RangeCalculation%SUM%IncreasedRevenue.Plan%CURRENCY
%YEAR_START%Start.Plan,-2%Finish.Plan%
```

To use a range index to find the sum of all increased revenue in the Plan dimension for the two previous calendar years (back from the current calendar year) and the Plan dimension is defined to begin on 1/1/2007 and end on 1/1/2008, the range calculation would be:

```
%RangeCalculation%SUM%IncreasedRevenue.Plan%CURRENCY
%YEAR_START%Start.Plan,-2%Finish.Plan,-1%
```

MathML Examples

This section contains examples of using MathML to find calculated data, such as total to-date sum, net present value, return on item, internal rate of return, and item timeframe.

For more information, see the following topics:

- [Comparing Dates between Dimensions \[page 204\]](#)
- [Comparing Dates in a List Attribute \[page 204\]](#)
- [Finding a Total To-Date Sum \[page 205\]](#)
- [Finding an Item Timeframe \[page 206\]](#)
- [Finding Internal Rate of Return \[page 206\]](#)
- [Finding Net Present Value \[page 206\]](#)
- [Finding Return on Investment \[page 207\]](#)

Comparing Dates between Dimensions

You can use MathML to compare dates in dimensions. For example:

```
<?xml version="1.0" encoding="utf-16"?>
<Calculation>
  <Expression>
    <math xmlns:mathml="http://www.w3.org/1998/Math/MathML">
      <lambda>
        <bvar>
          <ci>x</ci>
          <ci>y</ci>
        </bvar>
        <apply>
          <minus></minus>
          <ci>x</ci>
          <ci>y</ci>
        </apply>
      </lambda>
    </math>
  </Expression>
  <RHSVariable name="StartMS.Actual" identifier="x"></RHSVariable>
  <RHSVariable name="StartMS.Plan" identifier="y"></RHSVariable>
</Calculation>
```

Comparing Dates in a List Attribute

You can compare dates in a list attribute. For example, comparing a status date, its various list items, and across dimensions. If you had a list attribute with list items of Status.Red, Status.Yellow, and Status.Green, and if you wanted to see their related dates as they exist in the Actual and Plan dimensions, you could use the MathML piecewise element to display the attribute values. For example:

```
<?xml version="1.0" encoding="utf-16"?>
<Calculation>
  <Expression>
```

```

<math xmlns:mathml="http://www.w3.org/1998/Math/MathML">
  <lambda>
    <bvar>
      <ci>x</ci>
      <ci>y</ci>
    </bvar>
    <piecewise>
      <piece>
        <ci>z1</ci>
        <apply>
          <gt;</gt>
          <apply>
            <minus></minus>
            <ci>x</ci>
            <ci>y</ci>
          </apply>
          <cn>30</cn>
        </apply>
      </piece>
      <piece>
        <ci>z2</ci>
        <apply>
          <gt;</gt>
          <apply>
            <minus></minus>
            <ci>x</ci>
            <ci>y</ci>
          </apply>
          <cn>0</cn>
        </apply>
      </piece>
      <otherwise>
        <ci>z3</ci>
      </otherwise>
    </piecewise>
  </lambda>
</math>
</Expression>
<RHSVariable name="StartMS.Actual" identifier="x"></RHSVariable>
<RHSVariable name="StartMS.Plan" identifier="y"></RHSVariable>
<RHSVariable name="%ListItem%Status.Red%" identifier="z1"></RHSVariable>
<RHSVariable name="%ListItem%Status.Yellow%" identifier="z2"></RHSVariable>
<RHSVariable name="%ListItem%Status.Green%" identifier="z3"></RHSVariable>
</Calculation>

```

Finding a Total To-Date Sum

You can use MathML to find a total, to-date sum of a timephased attribute by using the following syntax:

```

<Calculation>
  <expression>
    <math xmlns:mathml="http://www.w3.org/1998/Math/MathML">
      <lambda>

```

```

        <bvar>
          <ci>a</ci>
        </bvar>
      <apply>
        <plus />
        <ci>a</ci>
      </apply>
    </lambda>
  </math>
</expression>
<RHSVariable name="%RangeCalculation%SUM%Cost-Labor-Total%CURRENCY
  %CALENDAR_YEAR%Start%Today" identifier="a" />
</Calculation>

```

Finding an Item Timeframe

You can use MathML to find an item timeframe by using the following syntax:

```

<Calculation>
  <expression>
    <math xmlns:mathml="http://www.w3.org/1998/Math/MathML">
      <lambda>
        <bvar>
          <ci>a</ci>
        </bvar>
        <apply>
          <plus />
          <ci>a</ci>
        </apply>
      </lambda>
    </math>
  </expression>
  <RHSVariable name="%RangeCalculation%SUM%Cost-Exp-Total%CURRENCY
    %CALENDAR_YEAR%Start%End" identifier="a" />
</Calculation>

```

Finding Internal Rate of Return

You can use MathML to find internal rate of return by using the following syntax:

```

<Calculation>
  <expression className="PacificEdgeSoftware.Data.Calculations.Programmatic
    .InternalRateOfReturnWithGuess30,SerenaSoftware.Data" />
  <RHSVariable name="cMonthly-Discount-Rate" identifier="rate" />
  <RHSVariable name="%RangeCalculation%NPV%Cost-Total%CURRENCY%CALENDAR_MONTH
    %StartMS%END%" identifier="costs" />
  <RHSVariable name="%RangeCalculation%NPV%Benefits%CURRENCY%CALENDAR_MONTH
    %StartMS%END%" identifier="benefits" />
</Calculation>

```

Finding Net Present Value

You can use MathML to find net present value by using the following syntax:

```

<Calculation>
  <expression className="PacificEdgeSoftware.Data.Calculations
    .Programmatic.NetPresentValueFixedRate30,SerenaSoftware.Data" />
  <RHSVariable name="cMonthly-Discount-Rate" identifier="rate" />
  <RHSVariable name="%RangeCalculation%NPV%Cost-Total%CURRENCY
    %CALENDAR_MONTH%StartMS%END%" identifier="costs" />
  <RHSVariable name="%RangeCalculation%NPV%Benefits%CURRENCY
    %CALENDAR_MONTH%StartMS%END%" identifier="benefits" />
</Calculation>

```

Finding Return on Investment

You can use MathML to find return on investment by using the following syntax:

```

<Calculation>
  <expression className="PacificEdgeSoftware.Data.Calculations.Programmatic
    .ROI,SerenaSoftware.Data"/>
  <RHSVariable name="cMonthly-Discount-Rate" identifier="rate" />
  <RHSVariable name="%RangeCalculation%NPV%Benefits-Net%CURRENCY
    %CALENDAR_MONTH%StartMS%END%" identifier="netcost" />
  <RHSVariable name="%RangeCalculation%NPV%Cost-Total%CURRENCY
    %CALENDAR_MONTH%StartMS%END%" identifier="totalcosts" />
</Calculation>

```

Dimensions

Dimensions are data sets that are used to represent certain situations or goals. Dimensions enable users to group data which represents these situations or goals within a single time period, such as a project plan, a target, a budget, or actuals. There are two system dimensions: **Actual** and **Plan**. System dimensions can be renamed, but they must be present:

- **Actual** This dimension contains values that represent the actual amounts of dimensioned attributes. For example, posted timesheet time is included in the **Actual** dimension for assignments.
- **Plan** This dimension is used for more detailed project planning. Values in the plan dimension reflect a more detailed knowledge of the program and project execution requirements. The **Plan** dimension includes task plans for a task based work item, such as projects, as well as allocations for an activity-based work item.

Dimensions can be added to some (but not all) of the views that are available in the **Projects** and **Reports** modules. Two types of dimensions are included:

- **Roll-up** In a roll-up dimension, a parent work item displays data that is rolled-up from a child work item. Rolled-up data is read-only in the parent work item. When data in the child work item changes, data in the parent work item changes too. If a child work item becomes a parent work item, original data in the child data is replaced by rolled-up data from a child work item. Most dimensions are roll-up dimensions.
- **Static** In a static dimension, data is not rolled-up and there are no calculations. Data will be editable at any level of the parent/child hierarchy. Static dimensions are useful for top-down planning.

All security roles are given permission to view a dimension's work item data. You can prevent all users in your organization from being able to view a dimension's work item data by locking the dimension. Permission to edit a dimension's work item data is granted on a per-security role basis for each dimension. To give permission to edit a dimension's work item data, select the check box next to the security role. Permission to edit a dimension's work item data is given to all security groups for a dimension that comes pre-configured.

Note: This tab is not available when using Serena Agile On Demand.

Add

Add a dimension and pick its type. If you want to prevent users (regardless of their security roles) from editing work item data in the dimension, then select **Locked**. If you want the dimension to be available as a baseline option in the **Tasks** tab, then select **Baseline**. If you want to allow users to edit work item data in a dimension, select the security roles which contain these users.

To add a dimension

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Dimensions** tab.
4. Click **New**.
5. Under **Dimension Properties**, enter a name. The system name will be generated.
6. If you want work item data in the dimension to be view-only, select **Locked**.
7. If you want the dimension to be available for baselines, select **Baseline**.
8. For each of the security roles in your organization, check the ones that will have edit permissions to this dimension when it is available in any work item to which they have access.
9. Click **Save**.

Allow editing

For each dimension, you must specify the security groups (and the users who belong to them) that will be allowed to edit work item data in a dimension. Simply check the box next to the security role and save the dimension.

To allow users to edit work item data in a dimension

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Dimensions** tab.
4. Choose the dimensions from the list on the left, then select the roles that should be able to edit data in the dimension from the **Security Roles** box.
5. Click **Save**.

Delete

Pick a dimension and delete it. This could cause a lot of data (related to that dimension) to be deleted as well, so be sure this is what you really want to do.

To delete a dimension

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Investment Request Pages** tab.
4. Select a dimension.
5. Click **Delete**.

Edit

Make your changes and then save them.

To edit a dimension

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Dimensions** tab.
4. Select a dimension.
5. Make your changes.
6. Click **Save**.

Prevent editing

Locking a dimension will prevent all users in your organization from being able to view work item data in a dimension. All dimensions are unlocked by default. In order for users to edit work item data in a dimension, they must also be able to view work item data in a dimension.

To prevent users from editing work item data in a dimension

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Dimensions** tab.
4. Select a dimension.
5. Select **Locked** to prevent all users from being able to edit work item data in this dimension or de-select the security roles to prevent specific security roles from being able to edit work item data in this dimension.
6. Click **Save**.

View

A dimension can be viewed from the Dimensions tab in the **Attributes Setup** tab.

To view a dimension

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Dimensions** tab.
4. Select a dimension.

Lists

Attributes can be configured to have drop-down lists. If an attribute has a drop-down list, you can define the values contained within it. A list work item can be named and can have icons associated with it.

Add

Add a new attribute list. Once added, it will be available to choose from the **List** drop-down in the **List Attributes** section of the **Attributes** tab.

To add an attribute list

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Attributes** tab.
4. In the list of attributes, select an attribute that has an attribute type of *constant*, *Timephased - FTE*, or *Timephased - UNITS*.
5. Under **Time Phase Attributes**, click **Rates**.
6. In the **Edit Rates** dialog box, select **Add**. In the Rate column, enter the rate and choose the date upon which the rate is to take effect.
7. Click **Save**.

Delete

You can remove any attribute list that is not being used by an existing attribute. An attribute list's values will be removed when the attribute list is removed.

To delete an attribute list

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Lists** tab.
4. Select an attribute list.
5. Click **Delete**.

Edit

Make your changes and then save them. Once created, you cannot modify an attribute list's list type.

To edit an attribute list

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Lists** tab.
4. Make your changes.
5. Click **Save**.

View

An attribute list can be viewed from the Lists tab in the **Attributes Setup** tab.

To view an attribute list

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Lists** tab.
4. Under **Lists**, select an attribute list.

Scorecard and Notesgrid

Scorecard and notesgrid attributes can be assigned to the layout of the **Summary** tab (and custom **Summary** tabs) in the **View Designer** tab. Scorecard and notesgrid attributes are pre-configured with XML and XSL templates that can be modified to meet your organization's needs. When you add a scorecard or notesgrid attribute to a view, it will be displayed as a tab in a view that is available from the **Projects** module. Scorecard and notesgrid attributes can be global attributes.

For more information, see the following topics:

- [Notesgrid \[page 211\]](#)
- [Scorecard \[page 212\]](#)

Notesgrid

A notesgrid is a simple list of work items, issues, and so on, that can be configured to allow team members to track and manage them outside of your team's normal workflow. Anything that is tracked using a notesgrid is not available for tracking within a backlog, a task plan, a datasheet, or a custom report.

Add

Start with the pre-configured template. Modify the layout XML and layout XSL the way you want it. If you make the notesgrid attribute searchable, the search will look for only all values in the notesgrid.

To add a notesgrid attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Scorecard/Notes Grid** tab.
4. Choose **Notes Grid** from the drop-down list.
5. Click **New**.
6. Under **Properties**, enter a name and a description. The system name will be generated. The default label is what the notesgrid will be named in summary views.
7. If you want the notesgrid attribute to be global, select **Global**. A global attribute is required for all work item types and optional for any work type.
8. For each of the configuration options (**Layout** and **Layout XSL**), edit the XML.
9. Click **Save**.

Delete

If your organization is not using a notesgrid attribute, you can remove it. Even when it is assigned to a **Summary** tab.

To delete a notesgrid attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Scorecard/Notes Grid** tab.
4. Select **Notes Grid** from the list.
5. Select a notesgrid attribute.
6. Click **Delete**.

Edit

Make your changes and then save them.

To edit a notesgrid attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Scorecard/Notes Grid** tab.
4. From the drop-down list, select **Notes Grid**.
5. Select a notesgrid attribute.
6. Make your changes.
7. Click **Save**.

View

A notesgrid attribute can be viewed from the Scorecard/Notes Grid tab in the **Attributes Setup** tab.

To view a notesgrid attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Scorecard/Notes Grid** tab.
4. Select **Notes Grid** from the drop-down.
5. Select a notesgrid attribute.

Scorecard

A scorecard is a way of comparing data so that a simple identifier can be used, such as a spotlight (red, yellow, green) to indicate status.

Add

Start with the pre-configured template. Modify the default data XML, footnote XML, footnote XSL, layout XML, and layout XSL the way you want it. If you make the scorecard attribute searchable, the search will look only for the total score.

To add a scorecard attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Scorecard/Notes Grid** tab.
4. Choose **Scorecard** from the drop-down list.
5. Click **New**.
6. Under **Properties**, enter a name and a description. The system name will be generated. The default label is what the scorecard will be named in summary views.
7. If you want the scorecard to be a global attribute, select **Global**. A global attribute is required for all work item types and optional for any work type.
8. If you want allow users to search for the scorecard, select **Searchable**.
9. For each of the configuration options (**Default Data**, **Footnote**, **Footnote XSL**, **Layout**, and **Layout XSL**), edit the XML.
10. Click **Save**.

Delete

If your organization is not using a scorecard attribute, you can remove it. Even when it is assigned to a **Summary** tab.

To delete a scorecard attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Scorecard/Notes Grid** tab.
4. Select **Scorecard** from the list.
5. Select a scorecard attribute.
6. Click **Delete**.

Edit

Make your changes and then save them.

To edit a scorecard attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Scorecard/Notes Grid** tab.
4. Select **Scorecard** from the list.
5. Select a scorecard attribute.
6. Make your changes.
7. Click **Save**.

View

Scorecard attributes can be viewed from the **Scorecard/Notes Grid** tab in the **Attributes Setup** tab.

To view a scorecard attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Scorecard/Notes Grid** tab.
4. Select **Scorecard** from the drop-down.

Split Attributes

Split attributes are created from timephased attributes. Split attributes can be used to help your organization track the individual components of a timephased attribute and they roll-up their data to the parent timephased attribute. For example, your organization may want to track the number of sales leads generated for a specific time period. Using a split attribute can provide a way of tracking Internet, mail, and telephone leads individually, but also as part of a single timephased attribute. Split attributes cannot be created for *calculated timephased* attributes.

Note: This view is not available when using Serena Agile On Demand.

Add

Add a split attribute for a timephased attribute. If the timephased attribute already has data, this will cause that data to be replaced by the rolled-up data from any split attribute that is associated with the parent attribute.

To add a split attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Split Attributes** tab.
4. Select an attribute.
5. Click **New**.
6. Name the split attribute. The system name will be generated after the split attribute is saved.
7. Click **Save**.

Delete

You can delete a split attribute, but you should be sure they are not being used and that they do not contain data before you delete them. For example, deleting a split attribute which contains data that is being used in the **Financials** tab will permanently delete that data and it may affect the layout of the **Financials** tab itself.

To delete a split attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Split Attributes** tab.

4. Select an attribute.
5. Under **Splits**, select an attribute split.
6. Click **Delete**.

Edit

Make your changes and then save them.

To edit a split attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Split Attributes** tab.
4. Select a split attribute.
5. Make your changes.
6. Click **Save**.

View

Split attributes can be viewed from the Split Attributes tab in the **Attributes Setup** tab.

To view a split attribute

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Attributes Setup** tab.
3. Select the **Split Attributes** tab.
4. Select the timephased attribute containing the attribute split you want to remove in the **Attributes** list.
5. Select the split attribute whose details you want to view in the **Splits** list.

Type System

The type system is a collection of system configuration data that helps define the fundamental elements of your deployment, including work item types, attributes, dimensions, financials, workflow transitions, and so on. The type system represents out-of-the-box configuration elements plus custom configurations that your organization may have made. The type system is imported and exported from as an XML-based configuration template.

The type system is a template that stores configuration data. When your organization purchased this application, they may have also purchased a template containing configuration data. Importing a template populates a database with all of that template's configuration data. You can export the type system to create a back-up or to configure multiple databases with the same configuration.

Export

Export the type system to use in a different database or to save a backup of the customized elements within your current configuration. If you are creating another database and you want to use configuration data from an existing database, you can export the type system and then import it into the new database. You can also use the type system to create a backup of your custom configuration settings. The following information is not included as part of a type system export: Microsoft Project settings,

labor attribute mapping details, timesheet settings, user synchronization settings, changes made from the **Module Designer**, the order in which views appear, an work item request page, or anything that is included out-of-the-box.

To export a type system

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** tab.
3. In the application tool bar, click **Export Type System**.
4. Save the file.

Import

Import the type system to apply configuration settings from a different database to a new database, or to import a type system that you have saved as a backup for the type system your organization is currently using. When importing the type system, you can import custom forms created in the **View Designer** tab.

To import a type system

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** tab.
3. In the application tool bar, click **Import Type System**.
4. In the **Type System Import** dialog box, browse to the location where the type system XML file is located and click **OK**.

Environment Settings

You can use the **Environment Settings** tab to manage system settings, such as documents management, workflow, and reporting server settings or to configure system notifications.

For more information, see the following topics:

- [System Settings \[page 216\]](#)
- [Notification Settings \[page 218\]](#)

System Settings

This tab lets you configure documents manager server, workflow, and reporting server settings. A documents manager server is used to point to the Documents Manager. A reporting server is used to point to a server running Microsoft SQL Server 2005 Reporting Services. Workflow settings determine whether workflow transitions are done using the Workflow tab in the **Projects** module and the time period used for workflow transition audits.

Configure documents

Before users can save documents in the **Documents** tab of the **Projects** module, you must enable documents management.

To configure documents management

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Environment Settings** tab.

3. Select the **System Settings** tab.
4. Under **Documents Settings**, enter the name of the server running **Documents Manager** and the database into which documents will be saved.
5. Click **Save**.

Configure reporting

Before users can use out-of-the-box and/or custom reports, you must configure a server that is running Microsoft SQL Server 2000 Reporting Services or Microsoft SQL Server 2005 Reporting Services.

To configure reporting

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Environment Settings** tab.
3. Select the **System Settings** tab.
4. Under **Reporting Settings**, enter the HTTP location of the server running Microsoft SQL Server 2005 Reporting Services (for example, `http://serverName/ReportServer`), the service path for the location in which the reporting service is installed (for example, `/ReportService.asmx`), and the root path to the folder which will contain the reports (for example, `/PESReports`).
5. Click **Save**. You may need to run IISRESET to pick up the connection.

Configure auditing

Before users can view workflow audits, you must configure workflow auditing.

To configure workflow auditing

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Environment Settings** tab.
3. Select the **System Settings** tab.
4. From the **Workflow Audit Bucket Size** drop-down, select an option: *Calendar Month*, *Calendar Quarter*, *Calendar Year*, *Fiscal Month*, *Fiscal Quarter*, *Fiscal Year*, or *Selected Timeframe*. This time period is used to determine the date range for a workflow transition audit.
5. Click **Save**.

Disable transitions

Workflow transitions are enabled by default and help your organization ensure that work item type changes are done using established criteria and an approval process before they can be finished. You can disable workflow transitions in the Workflow tab, which will allow users with permission to edit items in the **Projects** module to change a work item type directly.

To disable workflow transitions

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Environment Settings** tab.
3. Select the **System Settings** tab.

4. Under **Workflow Settings**, select **Allow Investment Type Changes Without Workflow**.
5. Click **Save**.

View settings

System settings for documents management, workflow settings, and reporting can be viewed from the **System Settings** tab in the **Environment Settings** tab.

To view documents, workflow, and reporting settings

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **System Settings** tab.

Notification Settings

The Notification Settings tab lets you configure system notifications. Before system notifications can be generated, you must first enable a messaging queue on the MSMQ server that will host the notifications. This queue should be configured as a remote public queue (notifications cannot use remote private queues). You can configure the application so that users will only see their notifications in the application (and not their inbox) or so that users will see their notifications in the application (and in their inbox).

Notifications allow members of your organization to stay informed of changes made to items. Notifications can be displayed to users or they can be sent to users via email. There are four notification types:

- **Workflow** These notifications report the status of workflow transitions in the Workflow tab of the **Projects** module.
- **System** These notifications are pre-set. System notifications are available for many events associated with the lifecycle of a work item.
- **User** These notifications are defined by individual users in the **My Notifications** tab of the **Tools** module.
- **Report** Report notifications alert administrators when scheduled services have been completed.

There are two delivery methods for notifications:

- **Internal** Internal notifications are generated and sent by default. Internal notifications are displayed in the navigation toolbar as a notification alert. A notification alert indicates how many notifications a user has. Clicking the notification alert will open the Notifications view, where users can view and work with their notifications.
- **Email** Email notifications can be sent if that preference is configured. When email notifications are enabled, the application will send an email notification along with the internal notification. Email notifications can only be sent to users who have an email address configured. (Email addresses are configured from the **Security** tab in the **System Settings** module.) Team members can be allowed to disable their email notifications.

Allow disabling

You can allow users in your organization to disable email notifications. When this option is enabled, team members will be able to choose the **Receive Notifications as Emails** option when they manage their personal settings.

To allow users to disable their email notifications

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Environment Settings** tab.
3. Select the **Notification Settings** tab.
4. Select **Allow Users to Disable their Email Notifications**.
5. Click **Save**.

Configure

Before users can receive notifications, you must enable a notification queue that is hosted on messaging sever that supports MSMQ. The notification queue should be a remote public queue.

To configure notifications

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Environment Settings** tab.
3. Select the **Notification Settings** tab.
4. Enter the name of a server which is hosting email notification queue, the name of the queue, and the default locale.
5. Click **Save**.

Disable

Application notifications (system notifications) cannot be disabled, but it is possible to enable and disable email notifications.

To disable email notifications

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Environment Settings** tab.
3. Select the **Notification Settings** tab.
4. De-select **Enable Email Notifications**.
5. Click **Save**.

Enable

After a messaging server and a notification queue have been configured, you can enable email notifications. To do this, you will need to identify the SMTP server address, the port number, specify the default sender, and the default email address from which notifications will be sent.

To enable email notifications

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Environment Settings** tab.
3. Select the **Notification Settings** tab.
4. Select **Enable Email Notifications**. Only users who have an email address entered and the **Send Email Notifications** option selected from the **Users** tab of the **Security** tab can receive email notifications.

5. Enter the name from whom the email notification is sent.
6. Enter the email address from whom the email notification is sent.
7. Enter the address for the SMTP server through which an email notification is sent.
8. Enter the port through which an email notification is sent.
9. Click **Save**.

Enable SMTP authentication

SMTP authentication can be used to validate the account used to send email notifications to users.

To enable SMTP authentication

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Environment Settings** tab.
3. Select the **Notification Settings** tab.
4. Select **Use SMTP Authentication**.
5. Enter a user name and password (twice, for verification).
6. Click **Save**.

View settings

Notification settings can be viewed from the **Notification Settings** tab in the **Environment Settings** tab.

To view notification settings

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Environment Settings** tab.
3. Select the **Notification Settings** tab.

Types Setup

A work item is what users in your organization use to create, plan, manage, and analyze your projects. They can be assets, programs, projects, or portfolios. They can be the stages in a lifecycle, such as a request, an approval, or a rejection. They can be the phases in an Agile lifecycle, such as projects, releases, and sprints. They can have dependencies on other items.

You can use the **Types Setup** tab to manage the work item types your organization uses, their dependencies (if any), and how users in your organization can submit requests for new items.

For more information, see the following topics:

- [Item Types \[page 221\]](#)
- [Work Types \[page 224\]](#)
- [Work Hierarchy \[page 226\]](#)
- [Work Item Request Pages \[page 228\]](#)

Item Types

Use the **Investment Type** tab to add, manage, and maintain all of the work item types that are used by your organization. Only active work item types can be used. Only work item types flagged as creatable will be available to users when they create a new work item.

The **Investment Type** tab contains four tabs: **Properties**, **Attributes**, **Containment**, and **Set Views**.

The **Properties** tab lets you enter information that is unique to that investment type, such as its name, an associated icon, and color, and global information that is available to this work item type when it is used in your organization's portfolio, such as its work type, whether resources can self-allocate or self-assign themselves to this work item, and so on. The **Properties** tab contains the following elements:

- **Name** The name of the work item type.
- **System Name** The XML name for the work item type; the system name is generated automatically.
- **Icon** The icon used to represent the work item type.
- **Color** The color used to represent the work item type when it appears in the Timeline view or in a resource's timesheet (when they have enabled timesheet colors).
- **Active** Indicates whether the work item type is an active work item type. Only active work item types can be selected from a list that contains work item types.
- **Creatable** Indicates whether the work item type can be chosen while creating a new work item in the **Projects** module and or when working with a work item request page. Use this option in conjunction with workflow transitions to limit the work item types that users can initially create (and from which it can be transitioned to other work item types).
- **None** Default. This option prevents work assignments for this work item type. A work item type that is created from this work type is often used as container for another work item type.
- **Work Container** A container for a work item type is used as a container for a work type. When a work item type is a work container, you must select a work hierarchy from the **Work Hierarchy** drop-down. The default work hierarchy is **Basic**; you can create custom work hierarchies from the **Work Hierarchy** tab in the **Types Setup** view.
- **Team** A team work item type is used to represent an Agile team and is not directly associated with a work hierarchy. A team work item type can be assigned to a work item from any work container, most commonly by using a sprint work item type to which work a work item is assigned.

The **Attributes** tab displays all of the attributes that can be associated with the work item type. The full list of available attributes are in the left column and the attributes that are associated with the work item type are in the right column. To move an attribute between columns, select it and click the arrow that points to the other column. Hold down the **CTRL** key while selecting attributes to move more than one at a time.

The **Containment** tab displays all of the possible parent and child work item types. This determines all of the possible locations in which a work item can appear in the work item hierarchy; a work item can only be created under a valid parent work item and a work

item can only have valid children created underneath it. A work container cannot have a work container as a child work item type.

The **Set Views** tab lets you select the views that will be associated with the work item type. Custom summary views that have been created in the View Designer will be available; the default summary view is **Summary**.

Activate

If a work item type is inactive, you can reactivate it so that it can be used when creating a new work item.

To activate a work item type

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** tab.
3. Select the **Investment Types** tab.
4. Choose a work item type.
5. Select **Active**.
6. Click **Save**.

Add

Add a new work item type. The work container option allows a work item type to be associated with a specific work hierarchy. The team option allows a work item type to represent an Agile team (to which an assignable work item can be assigned). Once a work type is set to be a work container or a team, it cannot be changed.

To add a work item type

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** tab.
3. Select the **Investment Types** tab.
4. Click **New**.
5. Name the work item type. Select an icon and/or a color to which the work item type will be associated.
6. Select **Active** to make this work item type available; only an active work item type can be used to create a new work item.
7. Select **Creatable** to make this work item type available in the New Investment dialog box and in the **Investment Type** list on a work item request page. Use this option to limit the available work item that can be created.
8. Under **Type**, select the work type option: *None*, *Work Container*, or *Team*.
9. On the **Attributes** tab, move the attributes you want to be associated with this work item type to the right column. Required attributes cannot be removed.
10. On the **Containment** tab, select the work item type's parent and child work item types. A work container cannot have a work container as a child work item type.
11. On the **Set Views** tab, associate the views that will be available in the **Projects** module when team members are working on this work item.
12. Click **Save**.

Delete

A work item type can be deleted as long as it is not being used by an existing work item. If a work item type is being used (or may be used again) by a work item, you should inactivate it.

To delete a work item type

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** tab.
3. Select the **Investment Types** tab.
4. Select a work item type and click **Delete**.

Edit

Find a work item type on the **Investment Type** tab of the **Types Setup** tab, make the changes that need to be made, and then click **Save**.

To edit a work item type

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** tab.
3. Select the **Investment Types** tab.
4. Make your changes.
5. Click **Save**.

Inactivate

A work item type can be inactivated. This prevents them being available whenever a list of work item types is used and it helps preserve historical data associated with that work item type.

To inactivate a work item type

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** tab.
3. Select the **Investment Types** tab.
4. Under **Investment Types**, select a work item type.
5. De-select **Active**.
6. Click **Save**.

View

A work item type is shown on the **Investment Types** tab in the **Types Setup** tab.

To view a work item type

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** tab.
3. Select the **Investment Types** tab.
4. Select the work item type in the list.

Work Types

Use the **Agile Work Types** tab to add, manage, and maintain all of any work type that is used by your organization. Only an active work type can be used.

Note: This tab is only available when using Serena Agile On Demand.

The **Work Types** tab allows you to create and manage an individual work type that is being used by your organization. A default work type includes defects, epics, tasks, and stories. You can associate icons with any work type. The **Agile Work Types** tab contains the following elements:

- **Name** The name of the work type.
- **System Name** The XML name for the work type; the system name is generated automatically.
- **Icon** The icon used to represent the work type.
- **Active** Indicates whether the work type is an active work type. Only an active work type can be selected.

The **Attributes** tab displays all of the attributes that can be associated with the work type. The full list of available attributes are in the left column and the attributes that are associated with the work type are in the right column. To move an attribute between columns, select it and click the arrow that points to the other column. Hold down the **CTRL** key while selecting attributes to move more than one at a time.

Activate

If a work type is inactive, you can reactivate it so that it can be used when creating new work types.

To activate a work item

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** tab.
3. Select the **Agile Work Types tab**.
4. Choose a work type.
5. Select **Active**.
6. Click **Save**.

Add

Add a new work type.

To add a work type

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** tab.
3. Select the **Agile Work Types** tab.
4. Click **New**.
5. Name the work type. Select an icon and/or a color to which the work type will be associated.

6. Select **Active** to make this work type available; only an active work type can be used to create new items.
7. On the **Attributes** tab, move the attributes you want to be associated with this work type to the right column. Required attributes cannot be removed.
8. On the **Containment** tab, select the parent work type and any child work type.
9. Click **Save**.

Delete

A work type can be deleted as long as it is not being used by an existing work item. If a work type is being used (or may be used again) by a work item, you should inactivate it.

To delete a work type

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** tab.
3. Select the **Agile Work Types** tab.
4. Select a work type.
5. Click **Delete**.

Edit

Find a work type on the **Agile Work Types** tab of the **Types Setup** tab, make the changes that need to be made, and then click **Save**.

To edit a work type

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** tab.
3. Select the **Agile Work Types** tab.
4. Make your changes.
5. Click **Save**.

Inactivate

A work type can be inactivated. This prevents them being available whenever a work type list is used and it helps preserve historical data associated with that work type.

To inactivate a work type

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** tab.
3. Select the **Agile Work Types** tab.
4. Under **Agile Work Types**, select a work type.
5. De-select **Active**.
6. Click **Save**.

View

Every work type is shown on the **Agile Work Types** tab in the **Types Setup** tab.

To view a work type

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** tab.
3. Select the **Agile Work Types** tab.
4. Select the work type in the list.

Work Hierarchy

Use the **Work Hierarchy** tab to add, manage, and maintain all of the work breakdown structure that you will use in your organization. Only an active work type can be used.

Note: This tab is only available when using Serena Agile On Demand.

The **Work Hierarchy** tab allows you to define any work type relationship. The **Types Setup** view contains four default work type options: defects, epics, tasks, and stories. You can create a custom work hierarchy. Each work item in the hierarchy can be defined independently, including whether it can exist at the top of the hierarchy (without a parent), whether it is assignable (to a team work item type), and what its possible parent and child work item types can be. You can view a representation of the work hierarchy as you are building it. The **Work Hierarchy** tab contains the following elements:

- **Name** The name of the work type.
- **System Name** The XML name for the work type; the system name is generated automatically.
- **Work Type** A drop-down list that contains all of any available work type. A default work type is a defect, epic, task, or story. You can create a custom work type from the **Work Types** tab in the **Types Setup** view.
- **Can Exist Without Parent** Indicates whether this work type can appear at the top of the work hierarchy.
- **Valid Parents** Indicates that a work type has valid parents of the selected work type in the work hierarchy.
- **Valid Children** Indicates that a work type has valid children of the selected work type in the work hierarchy.

The **Attributes** tab displays all of the attributes that can be associated with the work type. The full list of available attributes are in the left column and the attributes that are associated with the work type are in the right column. To move an attribute between columns, select it and click the arrow that points to the other column. Hold down the **CTRL** key while selecting attributes to move more than one at a time.

Add

A work hierarchy is a defined relationship between any work type. A work hierarchy can be defined to use any combination of default and a custom work type. Each work type in the work hierarchy can be defined independently, including whether it can exist at the top of the hierarchy (without a parent), whether it can be assigned to a work item type, such as a team, and what its possible parent and any child work type can be. As you are adding a work hierarchy, you can view the relationships on the right side of the **Work Hierarchy** tab in the **Types Setup** view.

To add a work hierarchy

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** view.
3. Select the **Work Hierarchy** tab.
4. Enter a name for the new work hierarchy.
5. Select a work type from the **Work Type** drop-down.
6. Select the **Can Exist Without Parent** option to indicate whether this work type can appear at the top of the work hierarchy.
7. Select the **Assignable Work Item** option to indicate whether this work type can be assigned to other work item types, such as a team work item type.
8. Select any work type that will be valid parents and valid children.
9. Click **Save**.

Delete

You can delete a work hierarchy if you are not using it.

To delete a work hierarchy

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** view.
3. Select the **Work Hierarchy** tab.
4. Select a work hierarchy.
5. Click **Delete**.

Edit

You can edit a work hierarchy. Add a new work type, change the parent and child relationships, select a different assignable work type, and so on.

To edit a work hierarchy

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** view.
3. Select the **Work Hierarchy** tab.
4. Select a work hierarchy.
5. Make your changes.
6. Click **Save**.

View

A work hierarchy can be viewed from the **Work Hierarchy** tab of the **Types Setup** view in the **Configuration** module.

To view a work hierarchy

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** view.
3. Select the **Work Hierarchy** tab.

4. Select a work hierarchy.

Work Item Request Pages

Use the **IRP** tab to create a work item request page that allows people to submit a work item request page from outside the application. An work item request page is assigned a unique URL. A work item request page can be used to allow people from outside of your organization (or from outside of the application) to submit information without requiring that user to provide a user name or password in order to submit the work item request page. Before creating a work item request page, you must create a custom summary view that defines the layout of the work item request page.

The **IRP** tab contains the following elements:

- **Name** The name of the work item request page.
- **Item View** A named summary view that will be used with this work item request page. The summary view determines the layout of the work item request page. You can design custom layouts for a work item request page from the **View Designer** view.
- **Item Location** The work item to which this work item request page is associated. Any work item request that is created from this work item request page will be added as child work item to the selected work item location.
- **Email Address Required** Indicates whether a user of a work item request page is required to submit their email address along with a work item request page.
- **Page URL** A unique URL for the work item request page. This URL is generated automatically. This is the URL from which users can access the work item request page.
- **Available Item Request Pages** This box contains the list of any existing work item request page.

Add

A work item request page is based on a custom summary view; before a work item request page can be created, you must first design a custom summary page from which a work item request page can be based.

To add a work item request page

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** tab.
3. Select the **Investment Request Pages** tab.
4. Click **New**.
5. Name the work item request page.
6. Select the custom summary view to which the work item request page is associated. The custom summary view determines the layout of the work item request page's Web page. The layout of a work item request page is defined on the View Layout tab in the **View Designer** tab.
7. Click the ellipse button next to Investment Location and choose the work item type that will be created when the work item request page is used to request new work item types.

8. Select **Email Address Required** to require individuals who submit a work item request to also provide an email address.
9. Click **Save**. The **Page URL** is generated. This URL is the page from which users of the work item request page will submit their requests for a new work item.

Delete

If you are no longer using a work item request page, you can delete it.

To delete a work item request page

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** tab.
3. Select the **Investment Request Pages** tab.
4. Under **Available Investment Request Pages**, select a work item request page.
5. Click **Delete**.

Edit

To modify the work item request page, make your changes, and click **Save Request Page** in the **Actions** box.

To edit a work item request page

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** tab.
3. Select the **Investment Request Pages** tab.
4. Under **Available Investment Request Pages**, select a work item request page.
5. Make your changes.
6. Click **Save**.

View

Item types are shown on the **Investment Type** tab in the **Types Setup** tab.

To view a work item request page

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **Types Setup** tab.
3. Select the **Investment Request Pages** tab.
4. Select the work item request page you want to view from the **Available Investment Request Pages** list.

Module Designer

A module (sometimes called a homepage) is a container for views. A module can be used to provide a daily starting point for members of your organization, including individual contributors, project and resource managers, portfolio analysts, and so on. You can use the **Module Designer** tab to create and modify homepage layouts and to help provide a centralized view into the information that users in your organization need.

You can include many elements on a homepage, such as datasheets, charts, logs, and work item assignments. You can also include pages that live in your organization's intranet and pages that live on the Internet. When users visit their homepage, the elements that are included on the homepage will be presented as view frames within the homepage view. The layout for each user role determines the type of information that is displayed when users of that role view their homepages.

When working in the **Module Designer** tab, you can create a custom homepage or you can modify existing ones. The **Module Designer** tab has two panes: the left pane contains the layout control options and the right pane is where the homepage view is created. There are three layout options: **Modules** (along with **Module-Tabs**) shows the list of module/homepages and the tabs that are available in each, **Widgets** lists the widgets that can be added to views, and **Properties** displays the properties for each widget.

For more information, see the following topics:

- [Agile Widgets \[page 230\]](#)
- [Fixed Layout Widgets \[page 258\]](#)

Agile Widgets

The **Widgets** box lists the elements that can be in the view such as frames and graphical elements.

For more information, see the following topics:

- [Burndown Chart \[page 230\]](#)
- [Card Wall \[page 235\]](#)
- [Custom Help Link \[page 240\]](#)
- [List \[page 241\]](#)
- [My Work List \[page 246\]](#)
- [Summary View \[page 251\]](#)
- [URL Container \[page 253\]](#)
- [Widget Wireup \[page 255\]](#)

Burndown Chart

A **Burndown Chart** is used to add a burndown chart to a page in the application.

Overview

The **Burndown Chart** widget is configured from the **Module Designer**. Select a module (or add a new one), then add a tab into which a burndown chart can be added.

The screenshot shows the Configuration window with the Module Designer tab selected. The left sidebar has the following sections:

- Modules:** A dropdown menu showing "Tracking" with "Rename", "New", and "Delete" buttons.
- Module-Tabs:** A list of burndown chart types: "Release Burndown", "Sprint Burndown", "Sprint Task Burndown", "Sprint Storyboard", and "Integration Burndown" (selected). It includes "Rename", "New", "Delete", and "Save All" buttons.
- Widgets:** A dropdown menu.
- Properties:** A table of widget properties.

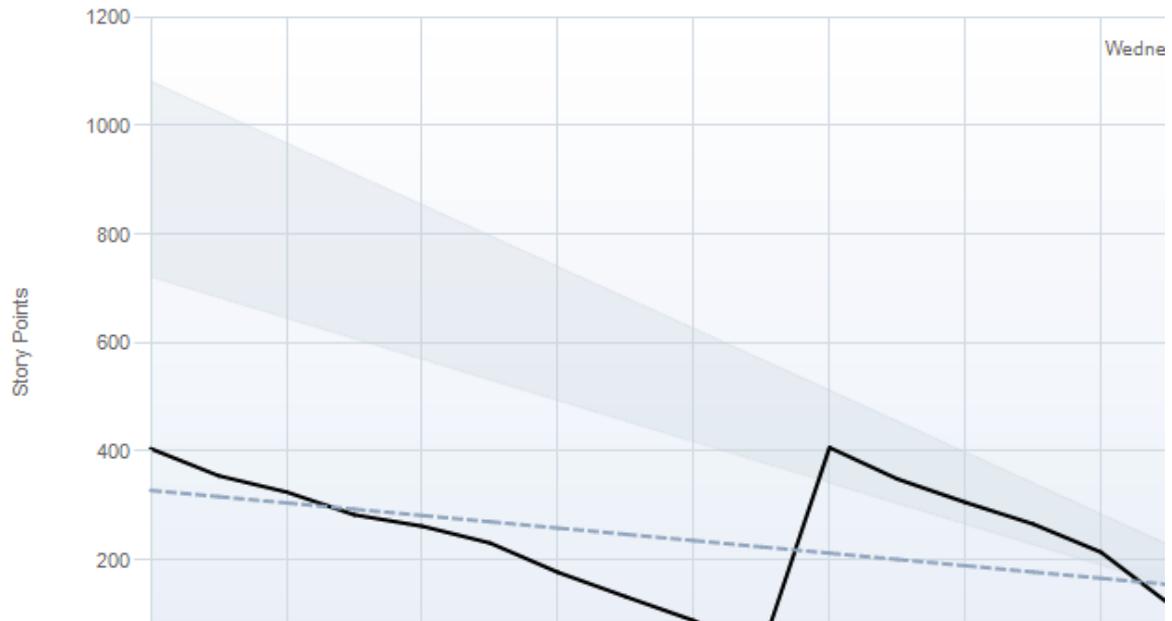
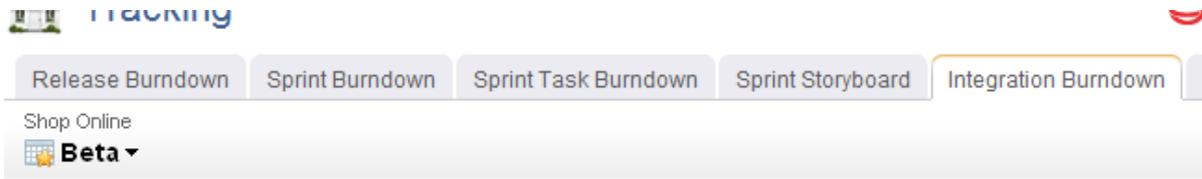
ID	ctl1255556618730
Type	agile-burn-down-chart
Item Type	Portfolio
Z-Index	
Chart Title	
Estimated Story Points	Task Hours Estimated

The right pane shows a wireframe of a burndown chart with the following actions:

- Publishes: /serena/grid/sourcechange
- Action: Wire_RefreshChart
- Action: Wire_SourceSelect

Properties for the widget can be set on the left-side under **Properties**.

When the burndown appears in a tab in Agile On Demand, you must first select the correct interval (product, release, team, or sprint). In this case, the burndown chart was configured for a release. Once a release is selected, the burndown chart will be available.

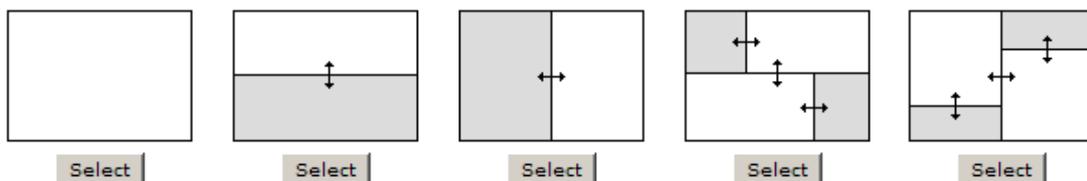


Add Burndown Chart widget

You can add a burndown chart to any custom view or custom workflow that your organization wants to add to Agile On Demand. A burndown chart must be configured for a specific interval type, for example a release or a team.

To add the Burndown Chart widget to a view

1. From the application toolbar, click **Setup** and select **Configuration**.
2. In the **Configuration** module, select **Module Designer**.
3. Under **Modules**, select an existing module or click **New** to add a module. (If you click **New**, enter the name at the prompt and click **OK**.)
4. Under **Module-Tabs**, click **New** to add a new tab. At the prompt, enter the name of the view, and then click **OK**.
5. Select the layout type. The most commonly used layout types are single, over-under, and side-by-side. (The fixed-size and fixed-position layout type does not support the Agile On Demand widgets.)



6. Select the **Burndown Chart** widget, click (and hold down) the mouse button, drag it to the layout pane on which you want it added, and then release the mouse button.
7. Set the properties.

Properties	
ID	ctl1255554665857
Type	agile-burn-down-chart
Item Type	Product
Z-Index	
Chart Title	
Estimated Story Points	Task Hours Estimate
Remaining Story Points	Task Hours Actual
Story Burn Up	Task Hours Remaini
Start Date	Interval Start Date
Finish Date	Interval End Date
Show Cone Of Confidence	True
+/- Confidence %	20
Y Axis Label	Story Points
X Axis Label	Days
CanChangeSource	True
LayoutWidth	100%
LayoutHeight	50%

8. Click **Save All**.

Wireup Options

When you add the **Burndown Chart** widget to a layout pane, you can use the **Widget Wireup** to synchronize the **Burndown Chart** with another widget, such as **List** or **Summary View**.

The **Burndown Chart** widget can perform the following actions:

Action	Description
Wire_RefreshChart	The Wire_RefreshChart action allows a Widget Wireup to update the information in a burndown chart based on changes made to any work item from which burndown chart details are based. When work item details are updated on the widget that has been configured as the publisher (using the datachange event), updates are then pushed to the widget that has been configured as the subscriber.

Action	Description
Wire_SourceSelect	The Wire_SourceSelect action allows a Widget Wireup to load information in a backlog, a burndown chart, or a list that is determined by the selected interval. When the selected interval on the widget that has been configured as the publisher changes (using the sourcechange event), updates are then pushed to the widget that has been configured as the subscriber.

The **Burndown Chart** widget can perform the following publish options:

Publish Option	Description
/serena/ grid/ sourcechange	The sourcechange event allows a Widget Wireup to listen for when a specific interval is selected for viewing in a backlog, storyboard, or burndown chart. When the selected interval changes on widget that has been configured as the publisher, the information on the widget that is configured as the subscriber is updated to match the information for the new interval (using the Wire_SourceSelect action).

Properties

The **Burndown Chart** widget has the following properties:

Properties	Description
CanChangeSource	The CanChangeSource property is used to indicate whether a user can change the source while they are working on the page. Set this property to No to prevent users from changing the source while working on the page.
Chart Title	The Chart Title property is used to set the title of a chart.
Estimated Story Points	The Estimated Story Points property is used to specify an estimate of work required to complete a story.
Finish Date	The Finish Date property is used to specify the end date for an interval.
ID	Read only. The ID property is used to show the unique ID of the design control.
Item Type	The work type: portfolio, product, release, team, or sprint.
LayoutHeight	The LayoutHeight property is used to specify the height of a control or widget. LayoutHeight can be specified in pixels or as a percentage of the height of the containing pane.

Properties	Description
LayoutWidth	The Layout Width property is used to specify the width of a control or widget. LayoutWidth can be specified in pixels or as a percentage of the width of the containing pane.
Remaining Story Points	The Remaining Story Points property is used to specify an estimate of work not yet completed on a story.
Show Cone of Confidence	The Show Cone of Confidence property is used to specify whether to show a set of lines on a burndown chart that indicate whether a team is likely to complete the work for a sprint. The lines show interpolated estimates based on the +/- Confidence % attribute, and are commonly referred to as the "cone of confidence."
Start Date	The Start Date property is used to specify the start date for an interval.
Story Burn Up	The Story Burn Up property is used to specify the amount of work completed within a sprint.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
X-Axis Label	The X Axis Label property is used to specify a label for the horizontal axis on a chart.
Y-Axis Label	The Y Axis Label property is used to specify a label for the vertical axis on a chart.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.
+/- Confidence	The +/- Confidence % property is used to set the range above and below the ideal confidence level that is shown in the cone of confidence in a burndown chart.

Card Wall

A **Card Wall** is used to add a card wall (also known as a storyboard) to a page in the application.

Overview

The **Card Wall** widget is configured from the **Module Designer**. Select a module (or add a new one), then add a tab into which a card wall can be added.

The screenshot shows the Configuration tool interface with the following components:

- Navigation Tabs:** Attributes Setup, Environment Settings, Types Setup, View Designer, View Management, Module Designer.
- Modules:** Tracking (with Rename, New, Delete buttons).
- Module-Tabs:** Release Burndown, Sprint Burndown, Sprint Task Burndown, Sprint Storyboard (selected), Integration Burndown (with Rename, New, Delete, Save All buttons).
- Widgets:** (Empty list).
- Properties Panel:**

ID	ct11248138169488	
Type	card-wall	
Work Item Type	Story	
Columns	Work State	
Z-Index		
Show Totals	True	
Configuration	{"0": "Agile_WorkEstir"}	
Title	Select a Sprint...	
LayoutWidth	100%	%
LayoutHeight	100%	%
- Main Canvas:** Publishes: /serena/grid/sourcechange
Action: Wire_SourceSelect

Properties for the widget can be set on the left-side under **Properties**.

When the card wall appears in a tab in Agile On Demand, you must first select an interval (project, release, sprint or team).

Case Burndown Sprint Burndown Sprint Task Burndown **Sprint Storyboard**

Commerce - Sprint 3

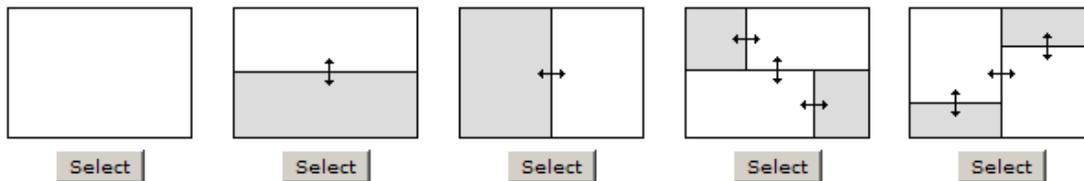
Not Started	In Development	In Test	In Review
<p>software download</p> <p>Estimated 8 Effort: 0 Remaining 0 Effort: 0 Dev Owner: Tara Team Member QA Owner: Member Status: Normal</p>	<p>Cross sell based on sales volume</p> <p>Estimated 8 Effort: 0 Remaining 0 Effort: 0 Dev Owner: James Scott QA Owner: Member Status: Normal</p>	<p>Add a specific configuration of a product to a car ...</p> <p>Estimated 5 Effort: 0 Remaining 0 Effort: 0 Dev Owner: Tara Team Member QA Owner: Member Status: Blocked</p>	<p>Add quantity of instance licenses to cart for ...</p> <p>Estimated 3 Effort: 0 Remaining 0 Effort: 0 Dev Owner: James Scott QA Owner: Member Status: </p>
	<p>Updates to product prices adjust account-level pri ...</p> <p>Estimated 13 Effort: 0 Remaining 0 Effort: 0 Dev Owner: Tom Team Member QA Owner: Member Status: Normal</p>		

Add Card Wall widget

You can add a card wall to any custom view or custom workflow that your organization wants to add to Agile On Demand. A card wall must be configured for a specific interval (project, release, sprint or team).

To add the Card Wall widget to a view

1. From the application toolbar, click **Setup** and select **Configuration**.
2. In the **Configuration** module, select **Module Designer**.
3. Under **Modules**, select an existing module or click **New** to add a module. (If you click **New**, enter the name at the prompt and click **OK**.)
4. Under **Module-Tabs**, click **New** to add a new tab. At the prompt, enter the name of the view, and then click **OK**.
5. Select the layout type. The most commonly used layout types are single, over-under, and side-by-side. (The fixed-size and fixed-position layout type does not support the Agile On Demand widgets.)



6. Select the **Card Wall** widget, click (and hold down) the mouse button, drag it to the layout pane on which you want it added, and then release the mouse button.
7. Set the properties.

Properties	
ID	ctl1255571358582
Type	card-wall
Work Item Type	Story
Columns	Priority
Z-Index	
Show Totals	True
Configuration	
Title	
CanChangeSource	True
LayoutWidth	100% %
LayoutHeight	100% %

8. Click **Save All**.

Wireup Options

When you add the **Card Wall** widget to a layout pane, you can use the **Widget Wireup** to synchronize the **Card Wall** with another widget, such as **List** or **Burndown Chart**.

The **Card Wall** widget can perform the following actions:

Action	Description
Wire_SourceSelect	The Wire_SourceSelect action allows a Widget Wireup to load information in a backlog, a burndown chart, or a list that is determined by the selected interval. When the selected interval on the widget that has been configured as the publisher changes (using the sourcechange event), updates are then pushed to the widget that has been configured as the subscriber.

The **Card Wall** widget can perform the following publish options:

Publish Option	Description
/serena/ grid/ sourcechange	The sourcechange event allows a Widget Wireup to listen for when a specific interval is selected for viewing in a backlog, storyboard, or burndown chart. When the selected interval changes on widget that has been configured as the publisher, the information on the widget that is configured as the subscriber is updated to match the information for the new interval (using the Wire_SourceSelect action).

Properties

The **Card Wall** widget has the following properties:

Properties	Description
CanChangeSource	The CanChangeSource property is used to indicate whether a user can change the source while they are working on the page. Set this property to No to prevent users from changing the source while working on the page.
Columns	The Columns property is used to specify the item types to be shown in the columns of a Card Wall widget.
Configuration	The Configuration property is used to specify the attributes shown on a Card Wall widget.
ID	The work type: portfolio, product, release, team, or sprint.
LayoutHeight	The LayoutHeight property is used to specify the height of a control or widget. LayoutHeight can be specified in pixels or as a percentage of the height of the containing pane.
LayoutWidth	The Layout Width property is used to specify the width of a control or widget. LayoutWidth can be specified in pixels or as a percentage of the width of the containing pane.
Title	The Title property is used to specify a title that is visible to team members while using the widget or control.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Work Item Type	The Work Item Type property is used to set the work item type that is used by this widget or control by default.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Custom Help Link

A **Custom Help Link** is used to add a custom link to an external help page from a page in the application. For example, the custom help link widget can be used to link to a page contained in your organization's intranet or to a page located in the Internet.

Add Custom Help Link widget

You can add a custom help link to any custom view or custom workflow that your organization wants to add to Agile On Demand. A custom help link must be configured to point to a URL that is accessible by a user, either a fully-qualified URL for a page that is on the Internet or an internal URL for a page that is within your organization's intranet.

To add the Custom Help Link widget to a view

1. From the application toolbar, click **Setup** and select **Configuration**.
2. In the **Configuration** module, select **Module Designer**.
3. Under **Modules**, select an existing module.
4. Under **Module-Tabs**, select an existing view (or one that you are currently creating).
5. Select the **Custom Help Link** widget, click (and hold down) the mouse button, drag it to the layout pane (anywhere -- only a single **Custom Help Link** widget will work for any custom view), and then release the mouse button.
6. Set the properties.

Properties	
ID	ctl1255645820925
Type	customhelp
Name	Process Guidance
CustomHelpURL	help.serena.com/agile/er
Left	73
Top	387
Width	23
Height	23
Z-Index	100

7. Click **Save All**.

Properties

The **Custom Help Link** widget has the following properties:

Properties	Description
CustomHelpURL	The CustomHelpURL property is used to specify the URL for a custom help page to be displayed when the help link on a page is clicked.

Properties	Description
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
ID	The work type: portfolio, product, release, team, or sprint.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Name	The Name property is used to specify the name of a control or widget.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

List

A **List** is used to add a work item grid to a page in the application.

Overview

The **List** widget is configured from the **Module Designer**. Select a module (or add a new one), then add a tab into which a card wall can be added.

The screenshot shows the Configuration tool interface with the Module Designer tab selected. The left sidebar contains the following sections:

- Modules:** A dropdown menu showing "Planning" with "Rename", "New", and "Delete" buttons.
- Module-Tabs:** A list of tabs: "Backlog", "Planning", "Multi Planning", and "Product Owner Storyboard". It includes "Rename", "New", "Delete", and "Save All" buttons.
- Widgets:** A section for widget configuration.
- Properties:** A table of properties for the selected widget.

Property	Value
ID	ctl1245982515120
Type	agile-work-item-grid
Allow Drag	True
Title	Select a Backlog...
Totals Row Label	Total
Z-Index	
Subscriptions	
Default Grid Settings	

The main workspace on the right is a yellow grid with a list of events:

- Publishes: /serena/grid/rowselectchange
- Publishes: /serena/grid/datachange
- Publishes: /serena/grid/sourcechange
- Action: Wire_UpdateRow
- Action: Wire_Refresh
- Action: Wire_SourceSelect

Properties for the widget can be set on the left-side under **Properties**.

Backlog Planning Multi Planning Product Owner Storyboard

products

Shop Online Save Edit +

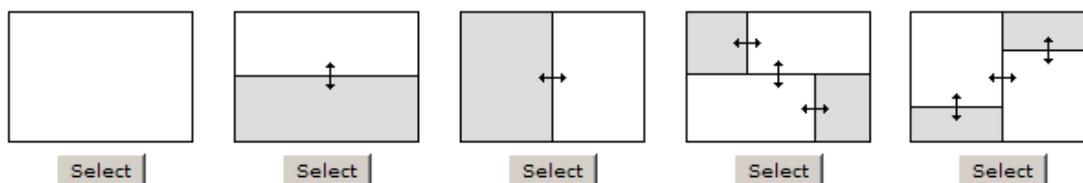
Name	Estimated Effort	Remaining Effort	Work State	
Commission tracking for Partners and Affiliates				Norm
Cross selling			Not Started	▲
Defects	0	0	Not Started	Norm
Defect 10156				Norm
Order management	13	13		Norm
View past order details	13	13	Not Started	Norm
Partner & Affiliate tools	23	23		Norm
Affiliate manages their account information	5	5	Not Started	Norm
Sign up for an Affiliate account	5	5	Not Started	Norm
User can register multiple Affiliate site URLs in their company profile	5	5	Not Started	Norm
View Affiliate commission balance	8	8	Not Started	Norm

Add List widget

You can add a backlog to any custom view or custom workflow that your organization wants to add to Agile On Demand.

To add the List widget to a view

1. From the application toolbar, click **Setup** and select **Configuration**.
2. In the **Configuration** module, select **Module Designer**.
3. Under **Modules**, select an existing module or click **New** to add a module. (If you click **New**, enter the name at the prompt and click **OK**.)
4. Under **Module-Tabs**, click **New** to add a new tab. At the prompt, enter the name of the view, and then click **OK**.
5. Select the layout type. The most commonly used layout types are single, over-under, and side-by-side. (The fixed-size and fixed-position layout type does not support the Agile On Demand widgets.)



6. Select the **List** widget, click (and hold down) the mouse button, drag it to the layout pane on which you want it added, and then release the mouse button.

- Set the properties.

Properties	
ID	ctl1245982515120
Type	agile-work-item-grid
Allow Drag	True
Title	Select a Backlog...
Totals Row Label	Total
Z-Index	
Subscriptions	
Default Grid Settings	<input type="checkbox"/>
LayoutWidth	100% %
LayoutHeight	100% %
DefaultMode	Tree
CanChangeSource	True

- Click **Save All**.

Wireup Options

When you add the **List** widget to a layout pane, you can use the **Widget Wireup** to synchronize the **List** widget with another widget, such as a **Burndown Chart**.

The **List** widget can perform the following actions:

Action	Description
Wire_Refresh	The Wire_Refresh action allows a Widget Wireup to refresh the information that is available in a backlog or a list. When information changes on the widget that has been configured as the publisher (using the datachange event), updates are then pushed to the widget that has been configured as the subscriber.
Wire_SourceSelect	The Wire_SourceSelect action allows a Widget Wireup to load information in a backlog, a burndown chart, or a list that is determined by the selected interval. When the selected interval on the widget that has been configured as the publisher changes (using the sourcechange event), updates are then pushed to the widget that has been configured as the subscriber.
Wire_UpdateRow	The Wire_UpdateRow action allows a Widget Wireup to refresh the details of a single row in a backlog or list. When the details of a work item are updated on the widget that has been configured as the publisher (using the onsave event), updates are then pushed to the widget that has been configured as the subscriber.

The **List** widget can perform the following publish options:

Publish Option	Description
/serena/grid/datachange	The datachange event allows a Widget Wireup to listen for changes to any work item in a backlog. When changes are detected on the widget that has been configured as the publisher, updates are then pushed to the widget that has been configured as the subscriber (using the Wire_Refresh action).
/serena/grid/rowselectchange	The rowselectchange event allows a Widget Wireup to listen for when changes have been made to a specific row in a backlog. When changes are detected on the widget that has been configured as the publisher, updates are then pushed to the widget that has been configured as the subscriber (using the Wire_Refresh action).
/serena/grid/sourcechange	The sourcechange event allows a Widget Wireup to listen for when a specific interval is selected for viewing in a backlog, storyboard, or burndown chart. When the selected interval changes on widget that has been configured as the publisher, the information on the widget that is configured as the subscriber is updated to match the information for the new interval (using the Wire_SourceSelect action).

Properties

The **List** widget has the following properties:

Properties	Description
Allow Drag	The Allow Drag property is used to indicate whether users can move a widget around on a page while they are using it.
CanChangeSource	The CanChangeSource property is used to indicate whether a user can change the source while they are working on the page. Set this property to No to prevent users from changing the source while working on the page.
Default Grid Settings	The DefaultGridSettings property is used to specify whether the designer grid should be displayed, and whether widgets should snap to the grid.
Default Mode	The DefaultMode property is used to specify which layout option will be shown to the user by default. The available layout options are list, table, and tree.
ID	The work type: portfolio, product, release, team, or sprint.
LayoutHeight	The LayoutHeight property is used to specify the height of a control or widget. LayoutHeight can be specified in pixels or as a percentage of the height of the containing pane.

Properties	Description
LayoutWidth	The Layout Width property is used to specify the width of a control or widget. LayoutWidth can be specified in pixels or as a percentage of the width of the containing pane.
Subscriptions	The Subscriptions property is used to list events for which a widget is subscribed.
Title	The Title property is used to specify a title that is visible to team members while using the widget or control.
Totals Row Label	The Totals Row Label property is used to specify the label for a totals row.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

My Work List

The **My Work List** control is used to provide team members with a location from which they can view and access all of any work item to which they are currently assigned.

Overview

The **My Work List** widget is configured from the **Module Designer**. Select a module (or add a new one), then add a tab into which a **My Work List** can be added.

Configuration

Attributes Setup Environment Settings Types Setup View Designer View Management Module Designer

Modules
Home
Rename New Delete

Module-Tabs
Guidance
My Work
Scrum Master Dashboard
Product Owner Dashboard
Stakeholder Dashboard
Rename New Delete Save All

Widgets

Properties

ID	cdl1248138208005
Type	unsourced-grid
Allow Drag	True
Title	My Work
Totals Row Label	Total
Z-Index	
Subscriptions	
Default Grid Settings	
LayoutWidth	100%

```
Publishes: /serena/grid/rowselectchange  
Publishes: /serena/grid/datachange  
Action: Wire_UpdateRow  
Action: Wire_Refresh
```

Properties for the widget can be set on the left-side under **Properties**.

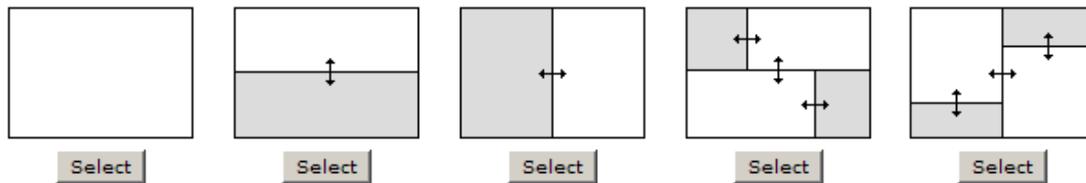
 				
Guidance My Work Scrum Master Dashboard Product Owner Dashboard Stakeholder Dashboard				
Name	Estimated Effort	Remaining Effort	Work State	Estimated Hours
 Add quantity of install licenses to cart for software	3	0	In Review	25
 Defect 10156				4
 Sign up for an Affiliate account	5	5	Not Started	0
 View Affiliate commission balance	8	8	Not Started	0
Total	16	13		29

Add My Work List widget

You can add a **My Work List** widget to any custom view or custom workflow that your organization wants to add to Agile On Demand.

To add the My Work List widget to a view

1. From the application toolbar, click **Setup** and select **Configuration**.
2. In the **Configuration** module, select **Module Designer**.
3. Under **Modules**, select an existing module or click **New** to add a module. (If you click **New**, enter the name at the prompt and click **OK**.)
4. Under **Module-Tabs**, click **New** to add a new tab. At the prompt, enter the name of the view, and then click **OK**.
5. Select the layout type. The most commonly used layout types are single, over-under, and side-by-side. (The fixed-size and fixed-position layout type does not support the Agile On Demand widgets.)



6. Select the **My Work List** widget, click (and hold down) the mouse button, drag it to the layout pane on which you want it added, and then release the mouse button.
7. Set the properties.

Properties	
ID	ctl1248138208005
Type	unsourced-grid
Allow Drag	True
Title	My Work
Totals Row Label	Total
Z-Index	
Subscriptions	
Default Grid Settings	
LayoutWidth	100% %
LayoutHeight	100% %

8. Click **Save All**.

Wireup Options

When you add the **My Work List** widget to a layout pane, you cannot currently use the **Widget Wireup** to synchronize the **My Work List** with another widget.

The **My Work List** widget can perform the following actions:

Action	Description
Wire_Refresh	The Wire_Refresh action allows a Widget Wireup to refresh the information that is available in a backlog or a list. When information changes on the widget that has been configured as the publisher (using the datachange event), updates are then pushed to the widget that has been configured as the subscriber.
Wire_UpdateRow	The Wire_UpdateRow action allows a Widget Wireup to refresh the details of a single row in a backlog or list. When the details of a work item are updated on the widget that has been configured as the publisher (using the onsave event), updates are then pushed to the widget that has been configured as the subscriber.

The **My Work List** widget can perform the following publish options:

Publish Option	Description
/serena/grid/datachange	The datachange event allows a Widget Wireup to listen for changes to any work item in a backlog. When changes are detected on the widget that has been configured as the publisher, updates are then pushed to the widget that has been configured as the subscriber (using the Wire_Refresh action).
/serena/grid/rowselectchange	The rowselectchange event allows a Widget Wireup to listen for when changes have been made to a specific row in a backlog. When changes are detected on the widget that has been configured as the publisher, updates are then pushed to the widget that has been configured as the subscriber (using the Wire_Refresh action).

Properties

The **My Work List** widget has the following properties:

Properties	Description
Allow Drag	The Allow Drag property is used to indicate whether users can move a widget around on a page while they are using it.
Default Grid Settings	The DefaultGridSettings property is used to specify whether the designer grid should be displayed, and whether widgets should snap to the grid.
ID	Read only. The ID property is used to show the unique ID of the design control.
Layout Height	The LayoutHeight property is used to specify the height of a control or widget. LayoutHeight can be specified in pixels or as a percentage of the height of the containing pane.
Layout Width	The Layout Width property is used to specify the width of a control or widget. LayoutWidth can be specified in pixels or as a percentage of the width of the containing pane.
Subscriptions	The Subscriptions property is used to list events for which a widget is subscribed.
Title	The Title property is used to specify a title that is visible to team members while using the widget or control.
Totals Row Label	The Totals Row Label property is used to specify the label for a totals row.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.

Properties	Description
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Summary View

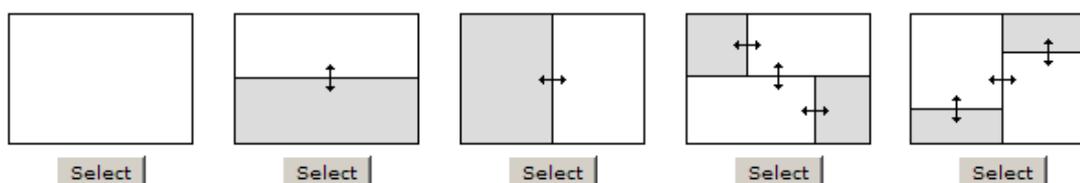
A **Summary View** is used to add summary information to a page in the application. Summary information can be associated with other information, such as lists or backlogs. Summary information can be configured so that changes made to summary data updates any lists to which that summary is associated.

Add Summary View widget

You can add a **Summary View** to any custom view or custom workflow that your organization wants to add to Agile On Demand.

To add the Summary View widget to a view

1. From the application toolbar, click **Setup** and select **Configuration**.
2. In the **Configuration** module, select **Module Designer**.
3. Under **Modules**, select an existing module or click **New** to add a module. (If you click **New**, enter the name at the prompt and click **OK**.)
4. Under **Module-Tabs**, click **New** to add a new tab. At the prompt, enter the name of the view, and then click **OK**.
5. Select the layout type. The most commonly used layout types are single, over-under, and side-by-side. (The fixed-size and fixed-position layout type does not support the Agile On Demand widgets.)



6. Select the **Summary View** widget, click (and hold down) the mouse button, drag it to the layout pane on which you want it added, and then release the mouse button.
7. Set the properties.

Properties	
ID	ctl1255647219896
Type	summaryview
Title	Summary
Z-Index	
Subscriptions	
LayoutWidth	100%
LayoutHeight	100%

8. Click **Save All**.

Wireup Options

When you add the **Summary View** widget to a layout pane, you can use the **Widget Wireup** to synchronize the **Summary View** with another widget, such as **List** or **My Work List**.

The **Summary View** widget can perform the following actions:

Action	Description
Wire_LoadNewObject	The Wire_LoadNewObject action allows a Widget Wireup to load work item summary data into the Summary View widget. When a work item has been selected on the widget that has been configured as the publisher (using the rowselectchange event), updates are then pushed to the widget that has been configured as the subscriber.

The **Summary View** widget can perform the following publish options:

Publish Option	Description
/serena/grid/onsave	The onsave event allows a Widget Wireup to listen for when a team member has made edits to a work item and then clicked save. When the edits are saved on the widget that has been configured as the publisher, updates are then pushed to the widget that has been configured as the subscriber (using the Wire_UpdateRow action).

Properties

The Summary View widget has the following properties:

Properties	Description
ID	Read only. The ID property is used to show the unique ID of the design control.

Properties	Description
Layout Height	The LayoutHeight property is used to specify the height of a control or widget. LayoutHeight can be specified in pixels or as a percentage of the height of the containing pane.
Layout Width	The Layout Width property is used to specify the width of a control or widget. LayoutWidth can be specified in pixels or as a percentage of the width of the containing pane.
Subscriptions	The Subscriptions property is used to list events for which a widget is subscribed.
Title	The Title property is used to specify a title that is visible to team members while using the widget or control.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

URL Container

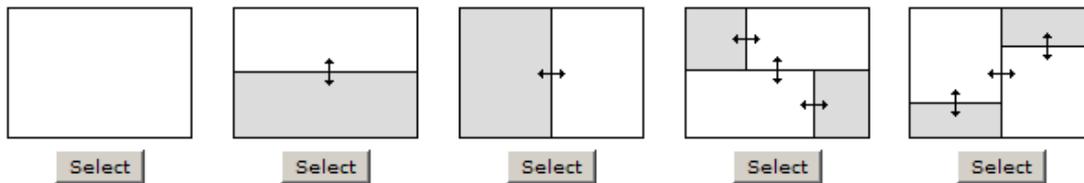
A **URL Container** is used to display information that resides elsewhere inside of your project workspace. A **URL Container** can point to any URL-addressible content, including reports on other internal systems, such as those generated by SAP or by Serena Business Mashups, or to content located on external systems, or to a location on the Internet.

Add URL Container widget

You can add a **URL Container** to any custom view or custom workflow that your organization wants to add to Agile On Demand. A custom **URL Container** can be configured to point to a URL that is accessible by a user, either a fully-qualified URL for a page that is on the Internet or an internal URL for a page that is within your organization's intranet.

To add the URL Container widget to a view

1. From the application toolbar, click **Setup** and select **Configuration**.
2. In the **Configuration** module, select **Module Designer**.
3. Under **Modules**, select an existing module or click **New** to add a module. (If you click **New**, enter the name at the prompt and click **OK**.)
4. Under **Module-Tabs**, click **New** to add a new tab. At the prompt, enter the name of the view, and then click **OK**.
5. Select the layout type. The most commonly used layout type for a **URL Container** is the single pane layout type.



6. Select the **URL Container** widget, click (and hold down) the mouse button, drag it to the layout pane on which you want it added, and then release the mouse button.
7. Set the properties.

Properties	
ID	ctl1255647647935
Type	url-container
Title	Guidance
DefaultUrl	help.serena.com/ac
ShowTitleBar	False
LayoutWidth	100% %
LayoutHeight	100% %

8. Click **Save All**.

Properties

The URL container widget has the following properties:

Properties	Description
Default URL	The DefaultURL property is used to specify the URL that is shown in the URL Container .
ID	Read only. The ID property is used to show the unique ID of the design control.
Layout Height	The LayoutHeight property is used to specify the height of a control or widget. LayoutHeight can be specified in pixels or as a percentage of the height of the containing pane.
Layout Width	The Layout Width property is used to specify the width of a control or widget. LayoutWidth can be specified in pixels or as a percentage of the width of the containing pane.
Show Title Bar	Indicates whether the Title of the URL Container will be shown. If the Title bar is not accessible, then users will not be able to select other URLs from this URL Container.
Title	The Title property is used to specify a title that is visible to team members while using the widget or control.

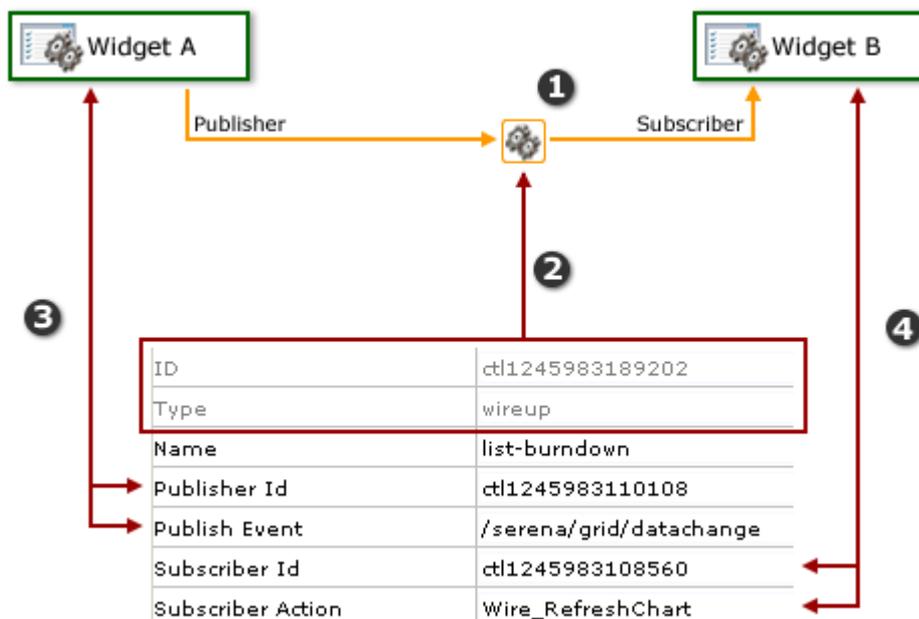
Properties	Description
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.

Widget Wireup

A **Widget Wireup** is used to make associations between widgets. For example, you could use a wireup to associate a **List** widget and a **Summary View** widget so that work item details are opened in a **Summary View** when that work item is selected in a **List**. And then when updated information is saved in the **Summary View**, that data will then be refreshed in the **List**.

Overview

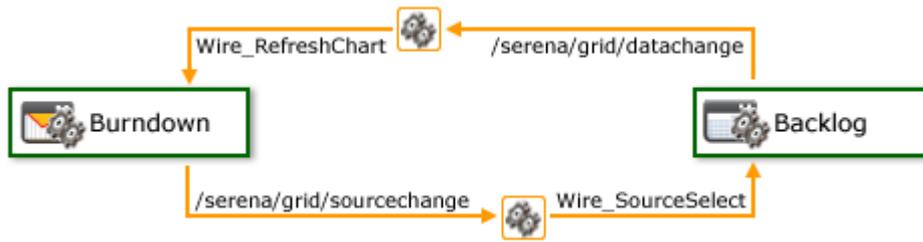
Each wireup is configured as a one-way relationship between two widgets, where the publish event in one widget determines the subscriber action in another.



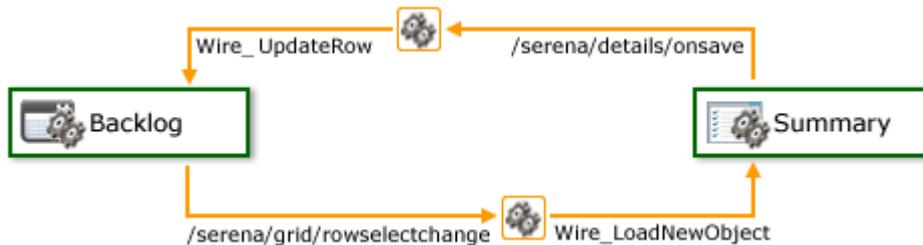
In the diagram above, the numbers correspond to the following:

1. The wireup itself, and the relationship that will be configured.
2. The ID and type of widget.
3. The publisher settings for the wireup. A wireup listens for a specific event (**Publish Event**) that is being broadcast by a specific widget (**Publisher ID**).
4. The subscriber settings for the wireup. A wireup takes a specific action (**Subscriber Action**) on a specific widget (**Subscriber ID**).

Many wireup relationships can be configured as pairs, such as the release, sprint, and task burndowns that are included in the out-of-the-box configuration of Agile On Demand. In these cases, the wireup relationships are configured to show the backlog associated with the selected burndown chart.



For example, a wireup could be added to a **Backlog** widget that is configured to listen for the **onsave** event to be triggered from a **Summary View** widget. When a team member clicks Save in the **Summary View** widget, the wireup will then tell the **Backlog** widget to update the work item (using the **Wire_UpdateRow** publish event).



You can also create multiple wireup relationships between widgets, as long as there isn't more than one configured relationship between widgets for each publish event or subscriber action.



Add Wireup

You can add a **Widget Wireup** to any custom view or custom workflow. A **Widget Wireup** is used to create a relationship between a single action and a single event. Each widget that is available in Agile On Demand has one or more publish events associated with it, as well as one or more subscriber actions. The **Widget Wireup** allows you to define a relationship where the wireup listens to the publishing widget for the defined event, and when that event is triggered, the wireup then tells the subscribing widget to perform the defined action.

For example, a wireup is configured on Widget A (a backlog) to listen to Widget B (a summary view), and then to refresh Widget A when changes made to a work item in Widget B have been saved. When a team member clicks Save, the **onsave** event is triggered. Since the wireup is configured to listen for the **onsave** event, when that event occurs, the wireup will tell Widget A to refresh.

To add the Widget Wireup to a view

1. From the application toolbar, click **Setup** and select **Configuration**.
2. In the **Configuration** module, select **Module Designer**.

3. Under **Modules**, select an existing module.
4. Under **Module-Tabs**, select an existing view (or one that you are currently creating).
5. Select the **Widget Wireup**, click (and hold down) the mouse button, drag it to the layout pane which contains the subscriber widget, and then release the mouse button.
6. Set the properties.

Properties	
ID	ctl1255673606129
Type	wireup
Name	
Publisher Id	ctl1255672166831
Publish Event	/serena/grid/rowselectct
Subscriber Id	ctl1255672166717
Subscriber Action	Wire_UpdateRow
Left	181
Top	239
Width	24
Height	24
Z-Index	100

In order to create the intended relationship between two widgets, the **Publisher ID**, **Publish Event**, **Subscriber ID**, and **Subscriber Action** properties must be set correctly:

Wireup Property	Description
Publisher ID	The Publisher ID property specifies the ID of of the widget from which a Widget Wireup control will listen for a specific publish event.
Publish Event	The Publish Event property specifies the event that the Widget Wireup listens for.
Subscriber ID	The Subscriber ID property is the ID of a widget to which a Widget Wireup will send a configured publish action. The Subscriber ID is always the ID for the widget on which the widget wireup is located.
Subscriber Action	The Subscriber Action property specifies the action that will be sent to the widget specified by the Subscriber ID attribute.

7. Click **Save All**.

Properties

The **Widget Wireup** widget has the following properties:

Properties	Description
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
ID	Read only. The ID property is used to show the unique ID of the design control.
Name	The Name property is used to specify the name of a control or widget.
Publish Event	The Publish Event property specifies the event that the Widget Wireup listens for.
Publisher ID	The Publisher ID property specifies the ID of of the widget from which a Widget Wireup control will listen for a specific publish event.
Subscriber Action	The Subscriber Action property specifies the action that will be sent to the widget specified by the Subscriber ID attribute.
Subscriber ID	The Subscriber ID property is the ID of a widget to which a Widget Wireup will send a configured publish action. The Subscriber ID is always the ID for the widget on which the widget wireup is located.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Fixed Layout Widgets

The **Widgets** box lists the elements that can be in the view such as frames and graphical elements.

For more information, see the following topics:

- [Agile Work Item Assignments \[page 259\]](#)

- [Chart \[page 260\]](#)
- [Datasheet \[page 261\]](#)
- [Group Box \[page 261\]](#)
- [Horizontal Rule \[page 263\]](#)
- [Image \[page 264\]](#)
- [Label \[page 265\]](#)
- [Link Label \[page 267\]](#)
- [Logs \[page 268\]](#)
- [Projects \[page 269\]](#)
- [Reports \[page 269\]](#)
- [Single Object Chart \[page 270\]](#)
- [Task Assignments \[page 271\]](#)
- [URL Viewer \[page 272\]](#)
- [Work Item Assignments \[page 273\]](#)

Agile Work Item Assignments

The **Agile Work Item Assignments** widget is used to show the list of work item that are currently assigned to a user.

Properties

The **Agile Work Item Assignments** widget has the following properties:

Properties	Description
Allow Drag	The Allow Drag property is used to indicate whether users can move a widget around on a page while they are using it.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
ID	Read only. The ID property is used to show the unique ID of the design control.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.

Properties	Description
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Chart

Use the **Chart** control (sometimes referred to as a widget) to display a chart, such as a burndown chart.

Properties

The **Chart** widget has the following properties:

Properties	Description
Allow Drag	The Allow Drag property is used to indicate whether users can move a widget around on a page while they are using it.
Default	The Default property is used to specify the default datasheet that will be available when a team member accesses the page on which this control has been placed.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
ID	Read only. The ID property is used to show the unique ID of the design control.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Datasheet

The **Datasheet** widget is used to show a datasheet.

Properties

The **Datasheet** widget has the following properties:

Properties	Description
Allow Drag	The Allow Drag property is used to indicate whether users can move a widget around on a page while they are using it.
Default	The Default property is used to specify the default datasheet that will be available when a team member accesses the page on which this control has been placed.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
ID	Read only. The ID property is used to show the unique ID of the design control.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Group Box

Use the **Group Box** to group attributes together under a common heading. A **Group Box** is often used to help make it easier for users to work with data by locating common and/or related data in a specific location.

Properties

The **Group Box** widget has the following properties:

Properties	Description
Background-Color	The Background-Color property is used to set the background color of an attribute, control, or widget.
Color	The Color property is used to set the font color of an attribute, control, or widget.
Font-Family	The Font-Family property is used to set the font, such as verdana, courier, or arial.
Font-Size	The Font-Size property is used to set the size of a font.
Font-Style	The Font-Style property is used to set the displayed style of the text: normal, italic, or oblique.
Font-Weight	The Font-Weight property is used to set the displayed weight of the text: normal, bold, or bolder.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
ID	Read only. The ID property is used to show the unique ID of the design control.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Legend	The Legend property is used to specify whether a legend should be displayed on a chart.
TabIndex	The TabIndex property is used to set the navigation order when using the TAB key. When the user tabs through the page, the field with a Tab Index of "1" will be first field, "2" second, and so on. For a read-only field, you should not add a Tab Index . This lets the user skip over this field when tabbing through the page.
Text-Decoration	The Text-Decoration property is used to specify whether text should be displayed normally, underlined, overlined, or with a strikethrough bar.
ToolTip	The ToolTip property is used to add customized tool tips for the control or attribute and over rides the default tool tip.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.

Properties	Description
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Horizontal Rule

A **Horizontal Rule** is used to add a simple horizontal line to any page in the application. A **Horizontal Rule** can be used to help make it easier for users to work with data by providing visual separation between sections of data.

Properties

The **Horizontal Rule** widget has the following properties:

Properties	Description
Background-Color	The Background-Color property is used to set the background color of an attribute, control, or widget.
Color	The Color property is used to set the font color of an attribute, control, or widget.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
ID	Read only. The ID property is used to show the unique ID of the design control.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
TabIndex	The TabIndex property is used to set the navigation order when using the TAB key. When the user tabs through the page, the field with a Tab Index of "1" will be first field, "2" second, and so on. For a read-only field, you should not add a Tab Index . This lets the user skip over this field when tabbing through the page.
ToolTip	The ToolTip property is used to add customized tool tips for the control or attribute and over rides the default tool tip.

Properties	Description
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Image

An **Image** is used to add a static image to a page. The image is set using the **Src** property as a URL to the location of the image on your organization's intranet or to a page on the Internet. You can add use the **Events** property to add JavaScript that is triggered when a user clicks on the image.

The image properties are set using the **Src** property as a URL to the location of the image on your organization's intranet or to a page on the Internet. You can add use the **Events** property to add JavaScript that is triggered when a user clicks on the image.

Properties

The **Image** widget has the following properties:

Properties	Description
Background-Color	The Background-Color property is used to set the background color of an attribute, control, or widget.
Color	The Color property is used to set the font color of an attribute, control, or widget.
Events	The Events property is used to add JavaScript to a page. For the Button and Image elements, click the button associated with the Events property to display the Code Editor dialog. In the Code Editor dialog, you can write code to be executed in association with the element (for example, code that executes when the user clicks a button).
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
ID	Read only. The ID property is used to show the unique ID of the design control.

Properties	Description
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Src	The Src property is used to specify the source URL for an image in an Image control.
TabIndex	The TabIndex property is used to set the navigation order when using the TAB key. When the user tabs through the page, the field with a Tab Index of "1" will be first field, "2" second, and so on. For a read-only field, you should not add a Tab Index . This lets the user skip over this field when tabbing through the page.
ToolTip	The ToolTip property is used to add customized tool tips for the control or attribute and over rides the default tool tip.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Label

A **Label** is used to add a text label to a page in the application.

Properties

The **Label** widget has the following properties:

Properties	Description
Background-Color	The Background-Color property is used to set the background color of an attribute, control, or widget.
Color	The Color property is used to set the font color of an attribute, control, or widget.
Font-Family	The Font-Family property is used to set the font, such as verdana, courier, or arial.

Properties	Description
Font-Size	The Font-Size property is used to set the size of a font.
Font-Style	The Font-Style property is used to set the displayed style of the text: normal, italic, or oblique.
Font-Weight	The Font-Weight property is used to set the displayed weight of the text: normal, bold, or bolder.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
Hyperlink	The Hyperlink property is used to specify the URL for a Link Label widget.
ID	Read only. The ID property is used to show the unique ID of the design control.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
TabIndex	The TabIndex property is used to set the navigation order when using the TAB key. When the user tabs through the page, the field with a Tab Index of "1" will be first field, "2" second, and so on. For a read-only field, you should not add a Tab Index . This lets the user skip over this field when tabbing through the page.
Text-Align	The Text-Align property is used to specify whether text should be right-aligned, left-aligned, centered, or justified.
Text-Decoration	The Text-Decoration property is used to specify whether text should be displayed normally, underlined, overlined, or with a strikethrough bar.
ToolTip	The ToolTip property is used to add customized tool tips for the control or attribute and over rides the default tool tip.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.

Link Label

A **Link Label** is used to add a hyperlink to a page in the application, from which users can link out to that information. For example, you can add an external link to a website, such as Google, an internal link to a page located within your organization's intranet, or to a page that is generated by another application..

Properties

The **Link Label** widget has the following properties:

Properties	Description
Background-Color	The Background-Color property is used to set the background color of an attribute, control, or widget.
Color	The Color property is used to set the font color of an attribute, control, or widget.
Font-Family	The Font-Family property is used to set the font, such as verdana, courier, or arial.
Font-Size	The Font-Size property is used to set the size of a font.
Font-Style	The Font-Style property is used to set the displayed style of the text: normal, italic, or oblique.
Font-Weight	The Font-Weight property is used to set the displayed weight of the text: normal, bold, or bolder.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
Hyperlink	The Hyperlink property is used to specify the URL for a Link Label widget.
ID	Read only. The ID property is used to show the unique ID of the design control.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
TabIndex	The TabIndex property is used to set the navigation order when using the TAB key. When the user tabs through the page, the field with a Tab Index of "1" will be first field, "2" second, and so on. For a read-only field, you should not add a Tab Index . This lets the user skip over this field when tabbing through the page.
Text-Align	The Text-Align property is used to specify whether text should be right-aligned, left-aligned, centered, or justified.

Properties	Description
Text-Decoration	The Text-Decoration property is used to specify whether text should be displayed normally, underlined, overlined, or with a strikethrough bar.
ToolTip	The ToolTip property is used to add customized tool tips for the control or attribute and over rides the default tool tip.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Logs

The **Logs** widget is used to add a log type to a page in the application.

Properties

The **Logs** widget has the following properties:

Properties	Description
Allow Drag	The Allow Drag property is used to indicate whether users can move a widget around on a page while they are using it.
Configuration	The Configuration property is used to specify the attributes shown on a Card Wall widget.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
ID	Read only. The ID property is used to show the unique ID of the design control.

Properties	Description
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Projects

The **Projects** widget is used to add a list of projects to a page in the application.

Properties

The **Projects** widget has the following properties:

Properties	Description
Allow Drag	The Allow Drag property is used to indicate whether users can move a widget around on a page while they are using it.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
ID	Read only. The ID property is used to show the unique ID of the design control.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Reports

The **Reports** widget is used to add a list of reports to a page in the application.

Properties

The **Reports** widget has the following properties:

Properties	Description
Allow Drag	The Allow Drag property is used to indicate whether users can move a widget around on a page while they are using it.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
ID	Read only. The ID property is used to show the unique ID of the design control.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Single Object Chart

A **Single Object Chart** is used to show values in a summary view as a chart. The **Single Object Chart** must be configured using the **BrandXML**, **ConfigureXML**, **Data Processor**, and **Data Processor Assembly** properties.

Properties

The **Single Object Chart** widget has the following properties:

Properties	Description
BrandXML	The BrandXML property is used to control the visual display and color scheme of a chart.
ConfigureXML	The ConfigureXML property is used to control the data displayed on the single object chart.
DataProcessor	The DataProcessor property is used to specify the code that generates a chart. Effectively, this determines the type of chart.

Properties	Description
DataProcessorAssembly	The DataProcessorAssembly property is used to specify the location of a custom chart data processor.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
ID	Read only. The ID property is used to show the unique ID of the design control.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Task Assignments

The **Task Assignments** widget is used to add a list of task assignments to a page in the application.

Properties

The **Task Assignments** widget has the following properties:

Properties	Description
Allow Drag	The Allow Drag property is used to indicate whether users can move a widget around on a page while they are using it.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
ID	Read only. The ID property is used to show the unique ID of the design control.

Properties	Description
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

URL Viewer

The **URL Viewer** widget is used to add a URL to a page in the application.

Properties

The **URL Viewer** widget has the following properties:

Properties	Description
Allow Drag	The Allow Drag property is used to indicate whether users can move a widget around on a page while they are using it.
AppendUsernameToQS	The AppendUsernameToQS property is used to indicate whether to append a username to the query string in a URL Viewer control.
DefaultURL	The DefaultURL property is used to specify the URL that is shown in the URL Container .
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
ID	Read only. The ID property is used to show the unique ID of the design control.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.

Properties	Description
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Work Item Assignments

The **Work Item Assignments** widget is used to add a work item list (and any related assignments) to a page in the application.

Properties

The **Work Item Assignments** widget has the following properties:

Properties	Description
Allow Drag	The Allow Drag property is used to indicate whether users can move a widget around on a page while they are using it.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
ID	Read only. The ID property is used to show the unique ID of the design control.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.

Properties	Description
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

User Synchronization

You can use the **User Synchronization** tab to manage the XML configuration file that contains the field mappings between attributes and a directory service, such as Active Directory or Novell eDirectory. When you create a provider, you have the option of managing some aspects of that provider in the **User Synchronization** tab.

The XML configuration file lives in the Scheduler Service directory, typically C:\Program Files\Serena\Mariner\SchedulerService. The XML configuration file must be called UserResourcesSyncConfig.xml.

If you are using an on-demand version of this application, you do not need to configure user synchronization. User synchronization is only necessary for on-premise customers.

Add

In order to use a provider in the **User Synchronization** tab, you must first add the provider to the view. Once added, select the **Use in Synchronization** option.

To add a user authentication provider

1. In the desktop **System Settings** module, under **Actions**, click **Manage Providers**.
2. In the **Manage Providers** dialog box, click **Add**.

Delete

Authentication providers can only be deleted if there are no users assigned to it.

To delete a user authentication provider

1. In the desktop **System Settings** module, under **Actions**, click **Manage Providers**.
2. In the **Manage Providers** dialog box, select a provider and click **Delete**.

Edit

You can update the information related to a user authentication provider.

To edit a user authentication provider

1. In the desktop **System Settings** module, under **Actions**, click **Manage Providers**.
2. Select an existing provider.
3. Click **OK**.

User Authentication Providers

User authentication is the process of receiving and verifying user credentials and is a key component of identity management and network security. Authentication is implemented through authentication providers. User authentication providers are set up in the **Manage Providers** dialog box.

Four types of user authentication are supported:

- Active Directory
- NDS eDirectory
- Windows
- Application

User authentication is set up per user by selecting the user authentication provider from the **Authentication Provider** list for each user. Using an Lightweight Directory Access (LDAP)-based authentication provider enables you to validate user authentication using existing network directory services. The experience is seamless to users. If you select the Lightweight Directory Access (LDAP) or Microsoft Windows user authentication type, users cannot edit their user password. If you select Microsoft Windows authentication users will not be able to access the application unless they are logged on to the domain. Further, Microsoft Windows authentication will pass through a user's domain credentials when accessing the application. After logging in to the application once, users should not be presented with the log on page on subsequent visits.

To provide additional security, you can set up Lightweight Directory Access (LDAP)-based authentication providers to use a secure connection (SSL) between the application and the directory services provider. This connection requires that the necessary certificates be installed on both the Web server and the directory services server.

Active Directory

Each user account set up uses an authentication provider to facilitate user logon. By default, a predefined **Application** authentication provider is included. Multiple authentication types are supported, including those using the Lightweight Directory Access (LDAP) protocol. You can use the **Manage Providers** dialog box to add, modify or remove an authentication provider that uses Active Directory.

To configure Active Directory authentication

1. In the desktop **System Settings** module, under **Actions**, click **Manage Providers**.
2. In the **Manage Providers** dialog box, click **Add**.
3. In the **Authentication Provider Name** box, type a name.
4. In the **Authentication Type** list, select *Active Directory*.
5. In the **Server** box, type the fully qualified distinguished name (FqDN) of the Active Directory server, for example ad.serena.com.
6. In the **Domain Filter** box, type the Lightweight Directory Access (LDAP) query format for the provider, for example (objectclass=user).
7. Type values for the corresponding boxes (first name, last name, email, and user name). The default values should be correct in most cases for Active Directory.
8. In the **Distinguished Name** box, the field can accept a username (such as username) or a qualified domain name (such as domain\username) in addition to a full Lightweight Directory Access (LDAP) distinguished name.
9. Under **Connect As**, enter a user name and password. This is used to verify that the provider settings have been entered correctly. In Active Directory, the user name can be a simple user name, a qualified domain name, or a full distinguished name.

10. Click **Apply**. This will verify that Active Directory is accessible in the path specified, and that the query returns more than zero users. There is no user validation, as this would require using actual user passwords.
11. If you receive a "Server does not exist" error, modify the provider properties and try again. If no errors return, close the **Manage Providers** dialog.

Application

Each user account set up uses an authentication provider to facilitate user logon. By default, a predefined **Application** authentication provider is included. Multiple authentication types, including those using the Lightweight Directory Access (LDAP) protocol, are supported.

To configure application user authentication

1. In the desktop **System Settings** module, under **Actions**, click **Manage Providers**.
2. In the **Manage Providers** dialog box, click **Add**.
3. In the **Authentication Provider Name** box, type a name.
4. In the **Authentication Type** list, select *Application*.
5. In the **Server** box, type the name of the server hosting the database and then in the **Database Name** box, type the database name.
6. Click **OK**.

Novell eDirectory

Each user account set up uses an authentication provider to facilitate user logon. By default, a predefined **Application** authentication provider is included. Multiple authentication types are supported, including those using the Lightweight Directory Access (LDAP) protocol. You can use the **Manage Providers** dialog box to add, modify or remove an authentication provider that uses Novell eDirectory.

To configure Novell eDirectory authentication

1. In the desktop **System Settings** module, under **Actions**, click **Manage Providers**.
2. In the **Manage Providers** dialog box, click **Add**.
3. In the **Authentication Provider Name** box, type a name.
4. In the **Authentication Type** list, select *NDS eDirectory*.
5. In the **Server** box, type the fully qualified distinguished name (FqDN) of the Novell eDirectory server, for example fully.qualified.serena.com.
6. In the **Domain Filter** box, type the Lightweight Directory Access (LDAP) query format for the provider, for example (objectclass=user).
7. For the fields in the **Field Mapping** group box (first name, last name, email, and user name boxes), type the Lightweight Directory Access (LDAP) directory property that contains the data that best matches the field name. The default values should be correct in most cases for the Novell eDirectory Lightweight Directory Access (LDAP) provider.
8. Under **Connect As**, enter a user name and password. This is used to validate the provider settings. In Novell eDirectory, the user name must be a fully qualified distinguished name (FqDN) with sufficient rights to execute the Lightweight Directory Access (LDAP) filter on the directory services server.

9. Click **Apply**. This will verify that Novell eDirectory is present in the path specified, and that the Lightweight Directory Access (LDAP) query returns more than zero users. There is no user validation.
10. If you receive a "Server does not exist" error, modify the provider properties and try again. If no errors return, close the **Manage Providers** dialog.

Microsoft Windows

Each user account set up uses an authentication provider to facilitate user logon. By default, a predefined **Application** authentication provider is included. Multiple authentication types are supported, including those using the Lightweight Directory Access (LDAP) protocol. You can use the **Manage Providers** dialog box to add, modify or remove an authentication provider that uses Microsoft Windows.

To configure Microsoft Windows authentication

1. In the desktop **System Settings** module, under **Actions**, click **Manage Providers**.
2. In the **Manage Providers** dialog box, click **Add**.
3. In the **Authentication Provider Name** box, type a name.
4. In the **Authentication Type** list, select *Windows*.
5. In the **Domain Filter** box, type the name of your Microsoft Windows domain.
6. For the fields in the **Field Mapping** group box (first name, last name, and email), type the Microsoft Windows directory property that contains the data that best matches the field name. The properties in the default Microsoft Windows directory do not contain explicit properties for first name, last name, or e-mail address, so the default of *FullName* for last name is a reasonable choice.
7. Click **OK**.

View Designer

You can use the **View Designer** tab to modify the layout of financials views and to create custom summary views for use in the **Projects** module. Custom summary views are also used to layout a work item request page.

The **View Designer** tab has five sections:

- **View Layout** This section is used to design the layout of a view. Choose a work item. Select a view. Use a form that is already there, add a new form, or copy a form and use it again.
- **Attributes** This section is used to add attributes to a view layout. Many attributes are named using its system name.
- **Controls** This section is used to add buttons, boxes, rules, images, labels, and so on to a view layout.
- **Properties** This section is used to manage the properties associated with attributes and controls. Properties are only visible for attributes and controls which have been added to the view layout.
- **Pane** The layout pane is a template for designing the view. Click and drag attributes and controls onto the layout pane, and then define the appropriate properties for each. The **View Layout** box defines the work item type that the **Summary** tab is associated with. It contains a list of all the **Summary** tabs, so that you can select

the one that you want to work with. It also contains a list of available forms for the selected view and the buttons needed for working with forms. These forms are the tabs that appear in each **Summary** tab.

Add form

The forms that you create in the **View Designer** tab are the tabs that appear in the associated **Summary** tab. When you create a new form in the **View Designer** tab, the form is displayed in the **Forms** list in the **View Layout** box of the **View Designer** tab, where it is available to be used in **Summary** tabs. When creating forms, you can:

- Create a new form.
- Add blocks of JavaScript code to the form by using the **Script** button.
- Create a new form based on an existing form by using the **Copy** button.
- Rename a form.

To add a form

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **View Designer** tab.
3. Under **View Layout**, click **New**.
4. Name the form and click **OK**.
5. Click and drag the appropriate attributes and controls to the layout pane and modify their properties as necessary.
6. Under **View Layout**, click **Save**.

Add view

You can add custom summary views to your configuration.

To add a view from within the View Designer

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **View Designer** tab.
3. Under **View Layout**, define the view: from the **Investment** list, select the work item type that the summary view will be associated with, from the **Views** list, select a view, and from the **Forms** list, select an existing form or click **New** to create a new form. If you select an existing form, you can click the **Script** button to display the Code Editor dialog box, which can be used to insert blocks of JavaScript code into the form.
4. Under **Attributes**, left-click and drag an attribute onto the layout pane, and position it as desired.
5. Under **Properties**, set or modify the properties for the attribute. Click the button, if available, to make different types of modifications, such as selecting a color or opening a text editor.
6. Under **Controls**, left-click and drag a control onto the layout pane.
7. Under **Properties**, set and modify the properties for the control. Set the properties in the **Properties** box for each element. If you put a work item dependency into the form, you must configure the dependency.

-
8. Click **Save**.

Copy form

You can create new forms by copying existing ones.

To copy a form

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **View Designer** tab.
3. Under **View Layout**, select the summary view that contains the form you want to copy.
4. In **Forms**, select the form and then click **Copy**.

Copy view

You can add new views by copying the settings, properties, and layout of an existing view.

To copy a view

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **View Designer** tab.
3. Under **View Layout**, select the work item type, its associated view, and the form you want to copy.
4. Click **Copy**.
5. In the Copy To dialog box, select the work item type and view that you want to copy, and then click **OK**.
6. Under **View Layout**, click **Save**.

Delete form

If you are not using a form, you can delete it.

To delete a form

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **View Designer** tab.
3. Under **View Layout**, select the summary view that contains the form you want to delete.
4. In **Forms**, select the form and then click **Delete**.

Delete view

If you are not using a view, you can delete it. You cannot delete out-of-the-box, system views.

To delete a view

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **View Management** tab.
3. Select the **Investment Views** tab.

- Under **Investment Views**, select a view and click **Delete**. You cannot delete system views.

Rename form

You can rename any form in any view.

To rename a form

- From the application toolbar, click **Setup**, and then select **Customization**.
- Select the **View Designer** tab.
- Under **View Layout**, select the work item and then the view which contains the form that you want to rename.
- Select the form and click **Rename**.
- Type the new name and click **OK**.

Attributes

An attribute is a single work item that is used to store, present, report on, or track information that is used by team members as they work on their tasks. Some common attributes include **Actual Work**, **Name**, and **Cost**.

The **Attributes** box lists the attributes available for use in the on the selected form. These attributes are populated from the attributes defined in the **System Settings** module. Every attribute shares a common set of properties, as listed below.

Properties	Description
DataKey	The DataKey property is used to specify an attribute by referring to its System Name value.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
ID	Read only. The ID property is used to show the unique ID of the design control.
IsMultiLine	The IsMultiLine property is used to indicate whether text that is displayed in an attribute, control, or widget should wrap. Setting this property to <i>True</i> will cause the text to wrap at the end of lines. For small, single line text fields, set this property to <i>False</i> .
IsRichEditor	The IsRichEditor property is used to indicate whether text that is displayed in an attribute, control, or widget should be saved and rendered as rich text with HTML style formatting. Setting this property to <i>True</i> will cause the text to be saved as rich text. For plain text, set this property to <i>False</i> .

Properties	Description
Max Value	The Max Value property is used to set a maximum number of characters that a user can enter in a field placed on a Summary tab.
Min Value	The Min Value property is used to set a minimum number of characters a user can enter in a field placed on a Summary tab.
Name	The Name property is used to specify the name of a control or widget.
PESNativeType	The PESNativeType property is used to specify the native database type that will be associated with an attribute.
Read Only	The Read Only property is used to indicate whether the information for an attribute is read-only. Values in a read-only field cannot be changed by a user.
Required	The Required property is used to indicate whether an attribute is a required field that forces a user to input information into the field. If the Required property is set to <i>True</i> , the user must enter data. If you want to prevent users from entering data in a required field, set this property to <i>False</i> and the Property property to <i>True</i> .
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Controls

The **Controls** box lists the elements that can be in the view such as frames and graphical elements.

For more information, see the following topics:

- [Audit History \[page 282\]](#)
- [Burndown Chart \[page 283\]](#)
- [Button \[page 284\]](#)

- [Card Wall \[page 285\]](#)
- [Custom Help Link \[page 286\]](#)
- [Document Store \[page 287\]](#)
- [Group Box \[page 288\]](#)
- [Horizontal Rule \[page 289\]](#)
- [Iframe \[page 290\]](#)
- [Image \[page 291\]](#)
- [Item Dependency \[page 293\]](#)
- [Label \[page 295\]](#)
- [Link Label \[page 296\]](#)
- [List \[page 297\]](#)
- [Single Object Chart \[page 298\]](#)
- [Summary View \[page 300\]](#)
- [Widget Wireup \[page 301\]](#)

Audit History

An **Audit History** is used to add the ability to view the history of changes made to specific investments and work types.

Properties

The **Audit History** control has the following properties:

Properties	Description
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
ID	Read only. The ID property is used to show the unique ID of the design control.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.

Properties	Description
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Burndown Chart

A **Burndown Chart** is used to add a burndown chart to a page in the application.

Properties

The **Burndown Chart** control has the following properties:

Properties	Description
Chart Title	The Chart Title property is used to set the title of a chart.
Estimated Story Points	The Estimated Story Points property is used to specify an estimate of work required to complete a story.
Finish Date	The Finish Date property is used to specify the end date for an interval.
ID	Read only. The ID property is used to show the unique ID of the design control.
LayoutHeight	The LayoutHeight property is used to specify the height of a control or widget. LayoutHeight can be specified in pixels or as a percentage of the height of the containing pane.
LayoutWidth	The Layout Width property is used to specify the width of a control or widget. LayoutWidth can be specified in pixels or as a percentage of the width of the containing pane.
Remaining Story Points	The Remaining Story Points property is used to specify an estimate of work not yet completed on a story.
Show Cone of Confidence	The Show Cone of Confidence property is used to specify whether to show a set of lines on a burndown chart that indicate whether a team is likely to complete the work for a sprint. The lines show interpolated estimates based on the +/- Confidence % attribute, and are commonly referred to as the "cone of confidence."
Start Date	The Start Date property is used to specify the start date for an interval.
Story Burn Up	The Story Burn Up property is used to specify the amount of work completed within a sprint.

Properties	Description
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
X Axis Label	The X Axis Label property is used to specify a label for the horizontal axis on a chart.
Y Axis Label	The Y Axis Label property is used to specify a label for the vertical axis on a chart.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.
+/- Confidence %	The +/- Confidence % property is used to set the range above and below the ideal confidence level that is shown in the cone of confidence in a burndown chart.

Button

A **Button** is used to add a button to a page in the application. You can add use the **Events** property to add JavaScript that is triggered when a user clicks on the button.

Properties

The **Button** control has the following properties:

Properties	Description
Background-Color	The Background-Color property is used to set the background color of an attribute, control, or widget.
Color	The Color property is used to set the font color of an attribute, control, or widget.
Events	The Events property is used to add JavaScript to a page. For the Button and Image elements, click the button associated with the Events property to display the Code Editor dialog. In the Code Editor dialog, you can write code to be executed in association with the element (for example, code that executes when the user clicks a button).
Font-Family	The Font-Family property is used to set the font, such as verdana, courier, or arial.
Font-Size	The Font-Size property is used to set the size of a font.
Font-Style	The Font-Style property is used to set the displayed style of the text: normal, italic, or oblique.

Properties	Description
Font-Weight	The Font-Weight property is used to set the displayed weight of the text: normal, bold, or bolder.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
ID	Read only. The ID property is used to show the unique ID of the design control.
TabIndex	The TabIndex property is used to set the navigation order when using the TAB key. When the user tabs through the page, the field with a Tab Index of "1" will be first field, "2" second, and so on. For a read-only field, you should not add a Tab Index . This lets the user skip over this field when tabbing through the page.
Text-Align	The Text-Align property is used to specify whether text should be right-aligned, left-aligned, centered, or justified.
Text-Decoration	The Text-Decoration property is used to specify whether text should be displayed normally, underlined, overlined, or with a strikethrough bar.
ToolTip	The ToolTip property is used to add customized tool tips for the control or attribute and over rides the default tool tip.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Card Wall

A **Card Wall** is used to add a card wall (also known as a storyboard) to a page in the application.

Properties

The **Card Wall** control has the following properties:

Properties	Description
CanChangeSource	The CanChangeSource property is used to indicate whether a user can change the source while they are working on the page. Set this property to No to prevent users from changing the source while working on the page.
Columns	The Columns property is used to specify the item types to be shown in the columns of a Card Wall widget.
Configuration	The Configuration property is used to specify the attributes shown on a Card Wall widget.
ID	Read only. The ID property is used to show the unique ID of the design control.
LayoutHeight	The LayoutHeight property is used to specify the height of a control or widget. LayoutHeight can be specified in pixels or as a percentage of the height of the containing pane.
LayoutWidth	The Layout Width property is used to specify the width of a control or widget. LayoutWidth can be specified in pixels or as a percentage of the width of the containing pane.
Show Totals	The Show Totals property is used to display the total of a column of values.
Title	The Title property is used to specify a title that is visible to team members while using the widget or control.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Work Item Type	The Work Item Type property is used to set the work item type that is used by this widget or control by default.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Custom Help Link

A **Custom Help Link** is used to add a custom link to an external help page from a page in the application. For example, the custom help link widget can be used to link to a page contained in your organization's intranet or to a page located in the Internet.

Properties

The **Custom Help Link** control has the following properties:

Properties	Description
CustomHelpURL	The CustomHelpURL property is used to specify the URL for a custom help page to be displayed when the help link on a page is clicked.
ID	Read only. The ID property is used to show the unique ID of the design control.
LayoutHeight	The LayoutHeight property is used to specify the height of a control or widget. LayoutHeight can be specified in pixels or as a percentage of the height of the containing pane.
LayoutWidth	The Layout Width property is used to specify the width of a control or widget. LayoutWidth can be specified in pixels or as a percentage of the width of the containing pane.
Name	The Name property is used to specify the name of a control or widget.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Document Store

A **Document Store** is used to provide a location in which documents can be stored for specific investments, work types, or log types.

Properties

The **Document Store** control has the following properties:

Properties	Description
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
ID	Read only. The ID property is used to show the unique ID of the design control.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.

Properties	Description
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Group Box

Use the **Group Box** to group attributes together under a common heading. A **Group Box** is often used to help make it easier for users to work with data by locating common and/or related data in a specific location.

Properties

The **Group Box** control has the following properties:

Properties	Description
Background-Color	The Background-Color property is used to set the background color of an attribute, control, or widget.
Color	The Color property is used to set the font color of an attribute, control, or widget.
Font-Family	The Font-Family property is used to set the font, such as verdana, courier, or arial.
Font-Size	The Font-Size property is used to set the size of a font.
Font-Style	The Font-Style property is used to set the displayed style of the text: normal, italic, or oblique.
Font-Weight	The Font-Weight property is used to set the displayed weight of the text: normal, bold, or bolder.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Legend	The Legend property is used to specify whether a legend should be displayed on a chart.

Properties	Description
ID	Read only. The ID property is used to show the unique ID of the design control.
TabIndex	The TabIndex property is used to set the navigation order when using the TAB key. When the user tabs through the page, the field with a Tab Index of "1" will be first field, "2" second, and so on. For a read-only field, you should not add a Tab Index . This lets the user skip over this field when tabbing through the page.
Text-Decoration	The Text-Decoration property is used to specify whether text should be displayed normally, underlined, overlined, or with a strikethrough bar.
ToolTip	The ToolTip property is used to add customized tool tips for the control or attribute and over rides the default tool tip.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Horizontal Rule

A **Horizontal Rule** is used to add a simple horizontal line to any page in the application. A **Horizontal Rule** can be used to help make it easier for users to work with data by providing visual separation between sections of data.

Properties

The **Horizontal Rule** control has the following properties:

Properties	Description
Background-Color	The Background-Color property is used to set the background color of an attribute, control, or widget.
Color	The Color property is used to set the font color of an attribute, control, or widget.

Properties	Description
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
ID	Read only. The ID property is used to show the unique ID of the design control.
TabIndex	The TabIndex property is used to set the navigation order when using the TAB key. When the user tabs through the page, the field with a Tab Index of "1" will be first field, "2" second, and so on. For a read-only field, you should not add a Tab Index . This lets the user skip over this field when tabbing through the page.
ToolTip	The ToolTip property is used to add customized tool tips for the control or attribute and over rides the default tool tip.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Iframe

An **Iframe** is used as a way to display a page from outside the application, as long as that page can be referenced from a URL. For example, you can show a page from your organization's intranet, a link to a report generated by another application, or to a page on the Internet. The default URL used in the **Iframe** is set using the **Src** property.

Properties

The **Iframe** control has the following properties:

Properties	Description
FrameBorder	The FrameBorder property is used to specify the style of a frame border.

Properties	Description
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
ID	Read only. The ID property is used to show the unique ID of the design control.
Src	The Src property is used to specify the source URL for an image in an Image control.
TabIndex	The TabIndex property is used to set the navigation order when using the TAB key. When the user tabs through the page, the field with a Tab Index of "1" will be first field, "2" second, and so on. For a read-only field, you should not add a Tab Index . This lets the user skip over this field when tabbing through the page.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Image

An **Image** is used to add a static image to a page. The image is set using the **Src** property as a URL to the location of the image on your organization's intranet or to a page on the Internet. You can also use the **Events** property to add JavaScript that is triggered when a user clicks on the image.

Properties

The **Image** control has the following properties:

Properties	Description
Background-Color	The Background-Color property is used to set the background color of an attribute, control, or widget.

Properties	Description
Color	The Color property is used to set the font color of an attribute, control, or widget.
Events	The Events property is used to add JavaScript to a page. For the Button and Image elements, click the button associated with the Events property to display the Code Editor dialog. In the Code Editor dialog, you can write code to be executed in association with the element (for example, code that executes when the user clicks a button).
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
ID	Read only. The ID property is used to show the unique ID of the design control.
Src	The Src property is used to specify the source URL for an image in an Image control.
TabIndex	The TabIndex property is used to set the navigation order when using the TAB key. When the user tabs through the page, the field with a Tab Index of "1" will be first field, "2" second, and so on. For a read-only field, you should not add a Tab Index . This lets the user skip over this field when tabbing through the page.
ToolTip	The ToolTip property is used to add customized tool tips for the control or attribute and over rides the default tool tip.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Item Dependency

An **Item Dependency** is used to show a dependency for a work item. This control must be configured using the **Configuration** property.

Properties

The **Item Dependency** control has the following properties:

Properties	Description
Configuration	The Configuration property is used to specify the attributes shown on a Card Wall widget.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
ID	Read only. The ID property is used to show the unique ID of the design control.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Add dependency control

The dependency control is added to a summary form for the each applicable work item type. For each dependency control, you need to create a custom summary form for the **Dependency Creation** dialog; essentially, this dialog is the user interface that is presented to users when they are adding a dependency to the grid.

To add a dependency control

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **View Designer** tab.
3. Under **View Layout**, select the work item type, its associated view, and the form on which the dependency will appear.

4. Under **Controls**, click and drag the Investment Dependency control to the layout pane. Size and position the control as necessary.
5. Under **Properties**, click the button for the Configuration attribute to open the Investment Dependency Configuration dialog box.
6. In the **Side** drop-down, select *Source* or *Target*.
7. In the **Dependency Type** drop-down, select the dependency type that will appear in the view. This list shows only those dependencies whose source or target includes the work item type selected in the view layout.
8. Move the attributes that you want to display in the view under **Column Attributes**.
9. Click **Save**.
10. Under **View Layout**, click **Save**.

Add dependency creation form

A work item dependency control can be added to a summary form for any applicable work item type. For each dependency control, you need to create a custom summary form for the Dependency Creation dialog; essentially, this dialog is the user interface that is presented to users when they are adding a dependency to the grid.

To add a dependency creation form

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **View Designer** tab.
3. Under **View Layout**, from the **Projects** list, select a work item dependency, and then from the **Views** list select **Summary**. Click **New**.
4. Name the form and click **OK**.
5. Click and drag the appropriate attributes and controls to the layout pane and modify their properties as necessary.
6. Under **View Layout**, click **Save**.

Add work item dependency

Configuring work item dependencies involves adding and configuring work item dependency controls and creating dependency-creation forms for each. The types of work item dependencies you can use is set in the **System Settings** module. When you put a work item dependency control on a form in the **View Designer** tab, you must configure the dependency by specifying the dependency type, which attributes are to be displayed, and whether the attributes come from the dependency, source side of the dependency, or target side of the dependency. Once the work item dependency control is configured, you need to create a summary form for users to create dependencies.

To add a work item dependency

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **View Designer** tab.
3. Under **View Layout**, select the work item type, its associated view, and the form on which the dependency will appear.
4. Under **Controls**, click and drag the Investment Dependency control to the layout pane. Size and position the control as necessary.

5. Under **Properties**, click the button for the Configuration attribute to open the Investment Dependency Configuration dialog box.
6. In the **Side** drop-down, select *Source* or *Target*.
7. In the **Dependency Type** drop-down, select the dependency type that will appear in the view. This list shows only those dependencies whose source or target includes the work item type selected in the view layout.
8. Move the attributes that you want to display in the view under **Column Attributes**.
9. Click **Save**.
10. Under **View Layout**, click **Save**.

Label

A **Label** is used to add a text label to a page in the application.

Properties

The **Label** control has the following properties:

Properties	Description
Background-Color	The Background-Color property is used to set the background color of an attribute, control, or widget.
Color	The Color property is used to set the font color of an attribute, control, or widget.
Font-Family	The Font-Family property is used to set the font, such as verdana, courier, or arial.
Font-Size	The Font-Size property is used to set the size of a font.
Font-Style	The Font-Style property is used to set the displayed style of the text: normal, italic, or oblique.
Font-Weight	The Font-Weight property is used to set the displayed weight of the text: normal, bold, or bolder.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
ID	Read only. The ID property is used to show the unique ID of the design control.
Text-Align	The Text-Align property is used to specify whether text should be right-aligned, left-aligned, centered, or justified.

Properties	Description
Text-Decoration	The Text-Decoration property is used to specify whether text should be displayed normally, underlined, overlined, or with a strikethrough bar.
ToolTip	The ToolTip property is used to add customized tool tips for the control or attribute and over rides the default tool tip.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Link Label

A **Link Label** is used to add a hyperlink to a page in the application, from which users can link out to that information. For example, you can add a external link to a website, such as Google, an internal link to a page located within your organization's intranet, or to a page that is generated by another application..

Properties

The **Link Label** control has the following properties:

Properties	Description
Background-Color	The Background-Color property is used to set the background color of an attribute, control, or widget.
Color	The Color property is used to set the font color of an attribute, control, or widget.
Font-Family	The Font-Family property is used to set the font, such as verdana, courier, or arial.
Font-Size	The Font-Size property is used to set the size of a font.
Font-Style	The Font-Style property is used to set the displayed style of the text: normal, italic, or oblique.

Properties	Description
Font-Weight	The Font-Weight property is used to set the displayed weight of the text: normal, bold, or bolder.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
ID	Read only. The ID property is used to show the unique ID of the design control.
TabIndex	The TabIndex property is used to set the navigation order when using the TAB key. When the user tabs through the page, the field with a Tab Index of "1" will be first field, "2" second, and so on. For a read-only field, you should not add a Tab Index . This lets the user skip over this field when tabbing through the page.
Text-Align	The Text-Align property is used to specify whether text should be right-aligned, left-aligned, centered, or justified.
Text-Decoration	The Text-Decoration property is used to specify whether text should be displayed normally, underlined, overlined, or with a strikethrough bar.
ToolTip	The ToolTip property is used to add customized tool tips for the control or attribute and over rides the default tool tip.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

List

A **List** is used to add a work item grid to a page in the application.

Properties

The **List** control has the following properties:

Properties	Description
CanChangeSource	The CanChangeSource property is used to indicate whether a user can change the source while they are working on the page. Set this property to No to prevent users from changing the source while working on the page.
Columns	The Columns property is used to specify the item types to be shown in the columns of a Card Wall widget.
Configuration	The Configuration property is used to specify the attributes shown on a Card Wall widget.
ID	Read only. The ID property is used to show the unique ID of the design control.
LayoutHeight	The LayoutHeight property is used to specify the height of a control or widget. LayoutHeight can be specified in pixels or as a percentage of the height of the containing pane.
LayoutWidth	The Layout Width property is used to specify the width of a control or widget. LayoutWidth can be specified in pixels or as a percentage of the width of the containing pane.
Show Totals	The Show Totals property is used to display the total of a column of values.
Title	The Title property is used to specify a title that is visible to team members while using the widget or control.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Work Item Type	The Work Item Type property is used to set the work item type that is used by this widget or control by default.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Single Object Chart

A **Single Object Chart** is used to show values in a summary view as a chart. The **Single Object Chart** must be configured using the **BrandXML**, **ConfigureXML**, **Data Processor**, and **Data Processor Assembly** properties.

Properties

The **Single Object Chart** control has the following properties:

Properties	Description
BrandXML	The BrandXML property is used to control the visual display and color scheme of a chart.
ConfigureXML	The ConfigureXML property is used to control the data displayed on the single object chart.
DataProcessor	The DataProcessor property is used to specify the code that generates a chart. Effectively, this determines the type of chart.
DataProcessorAssembly	The DataProcessorAssembly property is used to specify the location of a custom chart data processor.
Height	The Height property is used to specify the height (in pixels) of an attribute, control, or widget.
Left	The Left property is used to set the number of pixels from the left side of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
ID	Read only. The ID property is used to show the unique ID of the design control.
Top	The Top property is used to set the number of pixels from the top of a page that an attribute, control, or widget is positioned. Use this property to align the attributes, controls, and widgets on a page.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Width	The Width property is used to specify the width (in pixels) of an attribute, control, or widget.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Add

A single object chart is an XML-based chart type that can be added to summary views and homepages. Using a single object chart, you can quickly and visually represent several types of data for users.

The following visual shows a single object chart inserted into a summary view. The attributes used to render the chart are also placed on the view. The single object chart provides a quick visual reference for the user of this summary view.

The configurations for the single object chart are made in two XML-based properties in the **View Designer** tab:

- **BrandXML** This property controls the visual display and color scheme of the chart.
- **ConfigureXML** This property controls the data displayed on the single object chart.

Example files for both a pie chart and gauge chart type are provided. The files for the pie chart type are PESAlignmentPieSOChartBrand.xml and PESAlignmentPieSOChartConfigure.xml, respectively.

The pie chart type can easily be modified to render several other chart types, such as a bar chart and a radar chart, simply by changing the chart type in the XML.

The files for the gauge chart type are PESSOGaugeChartBrand.xml and PESSOGaugeChartConfigure.xml, respectively.

These files are located in your installation directory, by default at C:\Program Files\Serena\Mariner\Mariner\charts\config. You will need the appropriate files to paste into the Code Editor dialog box and then modify for your purposes.

To add a single object chart

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **View Designer** tab.
3. Under **View Layout**, select a work item and a view to which you are adding a single object chart.
4. Under **Controls**, select the **Single Object Chart** control and drag it to the layout pane.
5. Under **Properties**, select **BrandXML** to open the **Code Editor** dialog box. Add the XML for the chart.
6. Click **Save**.
7. Under **Properties**, select **ConfigureXML** to open the **Code Editor** dialog box. Add the XML for the chart.
8. Click **Save**.
9. Click **Save**.

Summary View

A **Summary View** is used to add summary information to a page in the application. Summary information can be associated with other information, such as lists or backlogs. Summary information can be configured so that changes made to summary data updates any lists to which that summary is associated.

Properties

The **Summary View** control has the following properties:

Properties	Description
ID	Read only. The ID property is used to show the unique ID of the design control.

Properties	Description
LayoutHeight	The LayoutHeight property is used to specify the height of a control or widget. LayoutHeight can be specified in pixels or as a percentage of the height of the containing pane.
LayoutWidth	The Layout Width property is used to specify the width of a control or widget. LayoutWidth can be specified in pixels or as a percentage of the width of the containing pane.
Subscriptions	The Subscriptions property is used to list events for which a widget is subscribed.
Title	The Title property is used to specify a title that is visible to team members while using the widget or control.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

Widget Wireup

A **Widget Wireup** is used to make associations between widgets. For example, you could use a wireup to associate a **List** widget and a **Summary View** widget so that work item details are opened in a **Summary View** when that work item is selected in a **List**. And then when updated information is saved in the **Summary View**, that data will then be refreshed in the **List**.

Properties

The **Widget Wireup** control has the following properties:

Properties	Description
ID	Read only. The ID property is used to show the unique ID of the design control.
LayoutHeight	The LayoutHeight property is used to specify the height of a control or widget. LayoutHeight can be specified in pixels or as a percentage of the height of the containing pane.
LayoutWidth	The Layout Width property is used to specify the width of a control or widget. LayoutWidth can be specified in pixels or as a percentage of the width of the containing pane.
Name	The Name property is used to specify the name of a control or widget.

Properties	Description
Publish Event	The Publish Event property specifies the event that the Widget Wireup listens for.
Publisher ID	The Publisher ID property specifies the ID of of the widget from which a Widget Wireup control will listen for a specific publish event.
Subscriber Action	The Subscriber Action property specifies the action that will be sent to the widget specified by the Subscriber ID attribute.
Subscriber ID	The Subscriber ID property is the ID of a widget to which a Widget Wireup will send a configured publish action. The Subscriber ID is always the ID for the widget on which the widget wireup is located.
Type	Read only. The Type property is used to show the control type. For example, linklabel, button, hr, and so on.
Z-Index	The Z-Index property is used to set the order by which attributes, controls, and widgets are layered on a page. For example, you can layer a form on top of an image.

View Management

You can use the **View Management** tab to manage work item types, log views, and the order in which views appear in modules.

For more information, see the following topics:

- [Item Views \[page 302\]](#)
- [Log Views \[page 303\]](#)
- [View Order \[page 305\]](#)

Item Views

Use the **Investment Views** tab to add views to the **Projects** module. New work item views can be associated with existing work item types from the **Investment Types** tab in the **Types Setup** tab.

Add work item view

Add a new work item view. Once added, work item views will be available when you set views using the **Investment Types** tab in the **Types Setup** tab.

To add a work item view

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **View Management** tab.
3. Select the **Investment Views** tab.
4. Click **New**.

5. Enter a name, a description, and choose an icon.
6. Click **Save**.

Add summary view

Use custom summary views to capture additional work item data in the **Projects** module.

To add a summary view

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **View Management** tab.
3. Select the **Investment Views** tab.
4. Click **New**.
5. Enter a name, a description, and choose an icon.
6. Click **Save**.

Delete

If you don't need a work item view, you can delete it.

To delete a work item view

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **View Management** tab.
3. Select the **Investment Views** tab.
4. Under **Investment Views**, select a view and click **Delete**. You cannot delete a system view.

Log Views

A log type is a simple list of items that are tracked in association with your projects, for example a list of risks, issues, or impediments. Log types can be customized and new log types can be added.

Use the **Log Views** tab to capture additional summary work item data for selected items in the **Projects** module. Log views are fully configurable. They can be renamed, deleted, and modified. New log views can be created, to which you can then associate to work item views. In order for users to access a log view, a log view must be associated with one or more security roles. This can be done from the **Roles** tab in the **Security** tab. Use the **View Designer** tab to design the interface for the new log view.

For example, say you have a log view called **Complaints** that contains a log item describing a common customer problem. Several members of your team contribute discussion points about this log item until the decision is made to convert this log item from a **Complaint** to an **Issue**. After a meeting, the decision is made to create a **Work Item** from the **Issue** to address the problem. The work item is assigned to a resource who then fixes the problem.

To work with a log view or a log item, a user must have the appropriate permissions. Each log view has corresponding permissions to view or edit, and actions such as creating items from a log item (such as discussions, issues, or risks) are also permissioned actions. With the appropriate permissions, users can interact with log views in several ways; they can:

- Create or modify a log item

- Contribute to a conversation about a log item
- Convert a log item to a different log type
- Assign a log item (not enabled for **Discussions**)
- Escalate a log item (not enabled for **Discussions**)
- Create a work item from a log item
- Create a work item from a log item
- Delete a log item

Add log type

Several out-of-the-box log types are included: discussions, risks, and issues. You can add custom log types.

To add a log type

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **View Management** tab.
3. Select the **Log Views** tab.
4. Click **New**.
5. In the **New Log Type** dialog box, name the new log type. Select an icon with which to associate the new log type. You can allow items tracked in the new log view to be escalated, transitioned into work item types, be assigned to resources, and become a work item.
6. If you chose to allow the log view to be transitioned into a work item type, under **Allowed Conversions**, select the work item types into which this log type can be transitioned.
7. Under **Attribute Assignments**, select the attributes that you want to associate with the log view.
8. Click **Save**.

Add log view

Add a new log view. You can allow users in your organization to escalate, to create items based on, to create work items from, and to assign the items in a log view. If these options are enabled, task icons will be available in the log view toolbar. You can also allow items in the log view to be converted into log types.

To add a log view

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **View Management** tab.
3. Select the **Log Views** tab.
4. Click **New**.
5. In the **New Log Type** dialog box, name the new log type. Select an icon with which to associate the new log type. You can allow items tracked in the new log view to be escalated, transitioned into work item types, be assigned to resources, and become a work item.

6. If you chose to allow the log view to be transitioned into a work item type, under **Allowed Conversions**, select the work item types into which this log type can be transitioned.
7. Under **Attribute Assignments**, select the attributes that you want to associate with the log view.
8. Click **Save**.

Delete

If your organization isn't using a log view, you can delete it. You cannot delete a log view that is currently being used by any work item.

To delete a log view

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **View Management** tab.
3. Select the **Log Views** tab.
4. Select a log type and click **Delete**.

Edit

You can change the properties of any existing log view.

To edit a log view

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **View Management** tab.
3. Select the **Log Views** tab.
4. Select a log view.
5. In the lower pane, make your changes.
6. Click **Save**.

View Order

Use the **View Order** tab to configure order in which views are listed in the **Projects**, **Reports**, **Resources**, **Tools**, **System Settings**, and **Customization** modules. Changes to the view order will affect all users in the same way regardless of their user role.

Edit

Views can be shown in any order, from left to right.

To edit the order in which views appear

1. From the application toolbar, click **Setup**, and then select **Customization**.
2. Select the **View Management** tab.
3. Select the **View Order** tab.
4. From the **Module Name** drop-down, select the module in which you want to re-order views.
5. Under **Available Views**, select a view and click **Up** or **Down** for each view you want to move.

6. Click **Save**.

Reference

This section contains reference information about the database, macros, MathML calculations, reporting services, and Web Service.

For more information, see the following topics:

- [Attributes \[page 307\]](#)
- [Data Dictionary \[page 312\]](#)
- [Data Service Macros \[page 341\]](#)
- [Virtual Stored Procedures \[page 349\]](#)
- [Web Services \[page 350\]](#)

Attributes

The following table provides a description for all of the fields that are available in Agile On Demand:

attribute	Description
Acceptance Criteria	The criteria to be completed before a work item can be accepted.
Accepted Effort	The amount of work (in story points or hours) that was required for the work item to be completed and accepted.
Actual Hours	The actual hours required to complete actual work.
Business Value	The business value for a work item.
Concurrency Modified By	The user name of the person (or process) who made the most recent changes to the task, task plan, or work item.
Concurrency Timestamp Date	The date and time on which the most recent concurrent changes were made to the task, task plan, or work item.
Created By	The name of the resource who initially created the task, task plan, work item, and so on.
Created Date	The date on which a task, task plan, work item, and so on, was created.
Dependency Source ID	The unique ID for the work item that is causing a dependency for another work item (the dependency target).

attribute	Description
Dependency Target ID	The unique ID for the work item that is affected by a dependency (the dependency source).
Description	The description of a work item in the application, such as a task, work item, summary, and so on.
Dev Owner	The name of the resource who has been assigned to do the actual work related to the work item.
Dev Partner	The name of the resource who has been assigned to partner with the resource who has been assigned to do the actual work related to the work item. In Agile, this is sometimes called pair programming.
Due Date	The date by which a task or work item should be completed.
Effective End Date	The date by which a task should be finished.
Effective Start Date	The date by which a task should be started.
Estimated Effort	The amount of effort, measured in story points, required to complete all of the work associated with a work item.
Estimated Hours	The amount of effort, measured in actual hours, that are required to complete all of the work that is associated with a work item.
Goal	The goal of a release, sprint, task plan, task, or other interval.
Impediment Owner	The name of the team member who is responsible for resolving any issues related to an impediment.
Interval Capacity	The total number of story points that have been planned for an interval.
Interval End Date	The date on which an interval is scheduled to end.
Interval Start Date	The date on which an interval is scheduled to begin.
Item ID	The unique ID for the work item.
Item Type	The the type of work item. If the work item is task-based, then the list will contain task-based work item types. If the work item is activity-based, then the list will contain activity-based work item types.
JiraFilter	The name of the JIRA filter.

attribute	Description
JiraId	The unique ID for a JIRA defect as it is actually identified in the JIRA repository. For example, DEF-001277.
JiraLink	The link to a JIRA defect in the JIRA repository. For example, http://jira.aod.com/defect/001277 .
JiraProject	The name of the project in JIRA in which the JIRA defects that are associated with this project are contained.
JiraStatus	The current status of the JIRA defect.
Last User Modified By	The user name of the person who made the most recent changes to the task, task plan, or work item.
Last User Modified Date	The date on which the most recent changes were made to the task, task plan, or work item.
Name	The name of a task (or a task plan).
Owning Investment Name	The name of the investment or interval to which a work item belongs.
Owning Item	The work item which belongs to an investment or to an interval.
Parent	The parent of a work item.
Parent ID	The unique ID for the parent task.
Priority	Indicates the importance of the task in relation to other tasks. Values range from 1-5.
Product	The name of the product.
Product ID	The unique ID for the product.
Product Owner	The name of the product owner who has been assigned to approve the work related to the work item.
QA Owner	The name of the tester who has been assigned to do validate the quality of the work related to the work item.
Release	The name of the release.
Release ID	The unique ID of the release.

attribute	Description
Remaining Effort	The amount of effort, measured in story points, required to finish all of the remaining work associated with a work item.
Remaining Hours	The amount of effort, measured in actual hours, that are required to finish all of the remaining work that is associated with a work item.
Repro Steps	The steps by which a defect can be reproduced by other members of a team.
Resource Address1	The address for the location in which a resource is located. Resource Address1, Resource Address2, Resource City, Resource State, and Resource Zip Code are used together to define a resource's complete address.
Resource Address2	The place for additional address information, if needed, for the location in which a resource is located. Resource Address1, Resource Address2, Resource City, Resource State, and Resource Zip Code are used together to define a resource's complete address.
Resource Allocation Skill Set	The skills that a resource is required to have in order for them to be allocated to this work item.
Resource Alternate Name	The alternate name for a resource, such as a nickname.
Resource City	The city in which a resource is located. Resource Address1, Resource Address2, Resource City, Resource State, and Resource Zip Code are used together to define a resource's complete address.
Resource Email	The email address of a resource.
Resource First Name	The first name of a resource.
Resource IsInactive	Indicates whether a resource is an active resource. An active resource must have an application license.
Resource Last Name	The last name of a resource.
Resource Primary Skill Set	The name of the skill to which a resource is most often associated.

attribute	Description
Resource Primary Skill Set ID	The unique ID of the skill to which a resource is most often associated.
Resource State	The state in which a resource is located. Resource Address1, Resource Address2, Resource City, Resource State, and Resource Zip Code are used together to define a resource's complete address.
Resource Type	The type of resource.
Resource User ID	The unique ID for the resource.
Resource Username	The username of a resource.
Resource Zip Code	The zip code in which a resource is located. Resource Address1, Resource Address2, Resource City, Resource State, and Resource Zip Code are used together to define a resource's complete address.
Risk	The name of the risk.
Sprint	The name of the sprint.
Sprint ID	The unique ID for a sprint.
Task State	The state of a task.
Task Status	The current status of a work item, task, or project.
Team	The group of individual resources who comprise a SCRUM team, typically a single product owner, several engineers and testers, and (occasionally) other resources, such as support, documentation, and sales.
Team Dev Lead	The name of the individual resource who is the engineering lead responsible for the team that performs the actual work related to any work item completed in the sprint.
Team ID	The unique ID for the group of resources who comprise a SCRUM team.
Team QA Lead	The name of the individual resource who is the quality assurance lead responsible for ensuring that any work item completed in the sprint are done to the quality standards expected by the team.

attribute	Description
Team Scrum Master	The name of the individual resource who lead an Agile team during a sprint, including running daily standup, tracking velocity, and dealing with impediments that may have been identified by team members.
Team Velocity	The total number of story points that represents the team's velocity for the sprint.
Technical Notes	The information about this work item that has been entered by team members.
Theme	The name of the theme that is associated with a work item.
Traffic Status	The current, overall status of the project. In Agile, simple colors (much like a traffic light) are used to convey the current status of the project. Use red for blocked, yellow for partially-blocked, and green for not blocked. For example, if the nightly build failed or if a certain number of automated tests failed, then the traffic status may be yellow (indicating that people need to look at the nightly build reports and work quickly to address the build issues). Or, if the nightly build has failed for two or more consecutive days, then the traffic status may be red, indicating that all available persons should work together to find a resolution.
User Assigned To	The name of the resource to whom a task or work item has been assigned.
User Assigned To ID	The unique ID of the resource to whom a task or work item has been assigned.
Work State	The current state of a work item, such as Not Started, In Development, In Testing, Ready for Review, and Accepted.
Work Status	Indicates whether a work item is blocked.

Data Dictionary

All data and metadata is stored in a Microsoft SQL Server database. The database schema defines the structure of the database, including tables, data types, fields, and associated relationships. The schema is fixed upon release and does not change based upon your usage. The database schema may change from release to release, but these changes are usually additive in nature.

Each customer's configuration is unique and can vary widely. This is achieved within the context of the database by populating two different kinds of tables: Metadata and Instance data tables. Both table types will be used for constructing meaningful queries to retrieve data for custom reports, external data stores, Microsoft Excel, or any other system which needs to interact with data.

The database schema has been documented for the purposes of direct, read-only access to the database. We strongly recommend you do not perform any direct writes to the tables. The data in the metadata tables and instance data tables are subject to consistency checks and business logic processing by the application. Attempts to bypass the application will likely corrupt the database and result in a non-supportable situation for your company.

For more information, see the following topics:

- [Metadata Tables \[page 313\]](#)
- [Instance Data Tables \[page 313\]](#)
- [User and Security Tables \[page 313\]](#)
- [Data Access Component \(Data Services\) \[page 314\]](#)
- [Macros \[page 314\]](#)
- [Schema Changes Between Releases \[page 314\]](#)
- [Data Types \[page 314\]](#)
- [Metadata Table Summary \[page 315\]](#)
- [Instance Data Table Summary \[page 320\]](#)
- [User and Security Table Summary \[page 340\]](#)

Metadata Tables

Metadata tables contain information about your configuration, such as custom attributes, allowable item types, or the different ways a person can view monetary data. Some metadata tables are fixed with each release, and some change depending on the customer.

When you use the administration module to import data to or export data, you are in fact importing or exporting the metadata that is contained in these tables.

Instance Data Tables

Instance data tables contain the actual data that a customer inputs. Examples include a customer's financial information year to year, summary information about a portfolio, and a task plan for an individual project. In many cases, instance data is stored within a binary field of a particular table. This is part of the flexible architecture that allows the customer to interact with and affect large amounts of data in real time as well as have the ability to configure his system in any way imaginable without having to wait for a processing job to occur overnight or dynamically changing the schema of the database.

Retrieving instance data out the application requires the use of the data access component, also referred to as data services. In addition to accessing data, using the data access component allows for the application of business logic such as dynamically changing the layout of financial data, enforcement of user security, and prevents any unauthorized writing to the tables outside of the application.

User and Security Tables

The User and Security tables contain information about the users on your system. For the purposes of this document, only one such table is exposed.

Data Access Component (Data Services)

The Data Access Component is part of the a work item, which can be installed on any client machine that needs to access data. It works by passing SQL through to the application server, which then parses the SQL, processes the data, and returns it to the client, where it can then be displayed by any client that supports the OLE DB standard for retrieving data. Examples of these are: Microsoft Excel, Crystal Reports, and SQL Server Reporting Services.

Using the OLE DB to access data ensures data consistency, enforces user security, and prevents unauthorized writing to the database. Only users with the Manage Reports (View/Edit) permission can download the OLE DB Provider.

Download OLE DB Provider

Only users with the Manage Reports (View/Edit) permission can download the OLE DB Provider.

To download the OLE DB Provider

1. In the toolbar, select Settings from the drop-down next to your user name.
2. In the **Settings** dialog box, click Install OLE DB Provider, and then save the OLE DB Provider to a local computer.

Macros

Because the custom attributes are stored in binary fields in the tables of the database, special commands are required to retrieve this data. These special commands are called data services macros. Macros work by wrapping T-SQL statements. The Data Services layer parses the macros, performs the appropriate processing to create a temporary table to which the requested binary data is extracted; data in this temporary table is passed off to SQL Server for normal T-SQL processing.

Macros sometimes take additional parameters to perform other business logic such as normalizing timephased (business case) data, filtering the temporary table for optimization, and selecting custom attributes for inclusion in the temporary table. Further, some macros serve as convenient methods for reporting. All macros are detailed as data services.

Schema Changes Between Releases

In general, the schema changes are additive between releases. This means that new features tend to require the addition of tables and fields while existing fields typically remain unchanged. This allows for increased compatibility between releases. However, this is a general guideline, not a guarantee. At any release (major or patch), we reserve the right to change the schema without any written or implied notice. Also be aware the Reports written by Professional Services are not guaranteed between releases.

Data Types

Each table listed in the summary above is detailed below, including columns, data types, and descriptions. The data type refers type of value that each column can contain. The following data types are used in the table details below:

Data Type	Description
-----------	-------------

int	This data type stores an integer. Often used for object IDs. The int value stores 4 bytes of data.
smallint	This data type stores an integer. The smallint value stores 2 bytes of data.
nvarchar(n)	This data type stores strings of varying lengths; the parenthetical numeric value is the maximum length allowed in the column. In addition to text, the string can include digits and symbols; the field supports both single- and double-byte characters.
bit	This data type stores Boolean values. Typically a value of "1" is true, while a "0" is false.
uniqueidentifier	This data type stores a GUID value.
image	This data type stores data in binary blobs. This data cannot be viewed using traditional methods and must be extracted using data services macros.
ntext	This data type stores text strings and supports both single- and double-byte characters.
datetime	This data type stores a time and date stamp for the data, based on your locale settings. By default, this format is "m/dd/yyyy" or "h:m:s". Quotes (") are used to enclose dates and times.
smalldatetime	This data type stores a date stamp for the data, based on your locale settings, but does not include a time stamp. By default, this format is "m/dd/yyyy". Quotes (") are used to enclose dates and times.
float	This data type stores a varying numeric value.

Metadata Table Summary

Metadata is essentially the "data about the data." Metadata provides the structure for your organization's instance data. The following table summarizes the database tables containing metadata.

Table Name	Column Prefix
PES_Class	cls_
PES_Attribute	att_
PES_Dimension	dim_
PES_StorageUnit	stu_

PES_Timescale	tis_
PES_List	lst_
PES_ListItem	li_

For more information, see the following topics:

- [PES_Class \[page 316\]](#)
- [PES_Attribute \[page 317\]](#)
- [PES_Dimension \[page 318\]](#)
- [PES_StorageUnit \[page 318\]](#)
- [PES_Timescale \[page 318\]](#)
- [PES_List \[page 319\]](#)
- [PES_ListItem \[page 319\]](#)

PES_Class

The PES_Class table contains type information for various object types. Specifically, it contains the definitions for each item type. These definitions contain various properties which govern system behavior.

Column	Data Type	Description
cls_XMLName	nvarchar(60)	Each type has a unique name which can be used to identify it.
cls_UID	int	Every type has a unique identifier. Many other tables reference this field.
cls_Name	nvarchar(50)	The name of a particular type.
cls_IsActive	bit	Specifies an active object that will be available in various screens and operations. A value of "1" indicates that the object is active.
cls_IsCreatable	bit	Specifies whether a new instance of the type can be created by a user. A value of "1" indicates that the object is creatable.
cls_CanSelfAllocate	bit	Specifies whether this item type allows self-allocation. Security still applies on the instance of the item. A value of "1" indicates that users can self allocate to this item type, by default.

cls_CanSelfAssign	bit	Specifies whether this item type allows self-assignment. Security still applies on the instance of the item. A value of "1" indicates that users can self assign to this object, by default.
cls_InheritAllocations	bit	Specifies whether this item type inherits its allocations from a parent item or whether direct allocation is allowed. A value of "1" indicates that this item inherits allocations.

PES_Attribute

This table contains type information for the attributes defined in the system.

Column	Data Type	Description
att_UID	int	A unique identifier. Every record in the table has a unique ID. Many other tables reference this field.
att_XMLName	nvarchar(50)	Each attribute has a unique name which can be used to identify it. When using macros, you will reference custom attributes by this field.
att_Name	nvarchar(50)	The friendly name of a particular attribute. The View Designer view gets its default label name from this attribute.
att_IsDimensioned	bit	Specifies whether an attribute is dimensioned.
att_IsCalculated	bit	Specifies whether an attribute derives its value from a calculation.
lst_UID	int	Specifies whether the attribute is mapped to a list. When mapped to a list, this value will be the unique ID of a list from the PES_List table.
atype_UID	int	Specifies the data type of the attribute based on the PES_AttributeType table.

Tables in the database that refer to an attribute use the att_UID for the reference key. However, when specifying a custom attribute in a macro, use the att_XMLName, which is usually much more readable. When an attribute is dimensioned, you must reference the dimension when retrieving the value via a macro.

MACRO: PES_MACRO_INVESTMENT. For example:

```
SELECT att_UID, att_IsDimensioned, att_XMLName FROM PES_Attribute
```

PES_Dimension

This table contains type information for the dimensions defined in the system.

Column	Data Type	Description
dim_UID	int	A unique identifier. Every record in the table has a unique ID. Many other tables reference this field.
dim_XMLName	nvarchar(32)	The unique name of the dimension, such as Plan. When using macros, you will reference custom dimensioned attributes by this field.
dim_Name	nvarchar(50)	The friendly name of a particular dimension. It can be (and often is) the same as the dim_XMLName.
dim_Locked	bit	A locked dimension cannot accept new attribute values in screens or operations.

Tables in the database which refer to a dimension use the dim_UID for the reference key. However, when specifying a custom dimensioned attribute in a macro, you will use the dim_XMLName, which is usually much more readable. When an attribute is dimensioned, you must reference the dimension when retrieving the value via a macro. For example:

```
SELECT * FROM PES_MACRO_PROJECT_TASK(task, ,tsd_Start@Plan)
```

PES_StorageUnit

This table contains the information about all the valid timephased attribute storage units in the system. The storage unit specifies how timephased data is displayed. (Currency, Units, Hours, FTEs).

Column	Data Type	Description
stu_UID	int	A unique identifier. Every record in the table has a unique ID.
stu_Name	nvarchar(255)	Each storage unit has a name, such as "FTE". This name is used in the various macros to display an attribute in a given storage unit.

PES_Timescale

This table contains the information about all the valid timephased attribute timescales in the system. The timescale specifies how the product will display timephased data. (Years, Quarters, Months, Days, Fiscal Years, Fiscal Quarters, Fiscal Months).

Column	Data Type	Description
tis_UID	int	A unique identifier. Every record in the table has a unique ID.
tis_Name	nvarchar(50)	Each timescale unit has a name, such as "Fiscal Year". This name is used in the various macros to display an attribute in a given timescale.

The values in these two tables are primarily used when specifying the timescale in a macro to display a timephased attribute. For example:

```
SELECT * FROM PES_MACRO_TIMEPHASE_ATTRIBUTES_TIMESCALE (tmp, obj_UID = 281, Currency,
```

PES_List

This table contains the information about all the valid list types defined in the system. A list holds a number of valid items, which are stored in the PES_ListItem table.

Column	Data Type	Description
lst_UID	int	A unique identifier. Every record in the table has a unique ID. An attribute that derives its values from a list will point to this key.
lst_Name	nvarchar(50)	The name of the list that will appear in the Administration module.
atype_UID	int	Specifies the data type of the list based on the PES_AttributeType table.

PES_ListItem

This table contains the information about all the valid list items defined in the system.

Column	Data Type	Description
li_UID	int	A unique identifier. Every record in the table has a unique ID.
li_Name	nvarchar(50)	The display name of the list item.
lst_UID	int	The ID of the list in which this item appears. This is the list value stored in the PES_List table.
li_Precedence	int	The display order of items in a list. When you select from a list drop-down, the list items appear in the order specified.

li_IsOrphan	int	An orphan item is a list item that is no longer valid for selection in a list drop-down.
--------------------	-----	--

PES_List and PES_ListItem contain information about lists and their respective items. When you remove a list item, it becomes orphaned. Attributes which referred to this value continue to keep it, but the list item is no longer selectable in drop downs throughout. For example:

```
SELECT * FROM PES_List lst JOIN PES_ListItem li ON li.lst_UID = lst.lst_UID WHERE li.
```

Instance Data Table Summary

Instance data is the data that is entered by your organization. This includes task plans, items, resources, timesheet data, and so on. The following table lists the database tables that store instance data.

Table Name	Column Prefix
PES_Object	obj_
PES_ObjectAssociation	oa_
PES_Dependency	obj_
PES_TimephaseAttributes	tpa_
PES_TimephaseAttributeDetails	tpd_
PES_ProjectTask	tsk_
PES_ProjectTaskDimension	tsd_
PES_ProjectAssignment	tsk_
PES_ProjectAssignmentDimension	tsd_
PES_WorkItemTask	tsk_
PES_WorkItemTaskDimension	tsd_
PES_WorkItemAssignment	tsk_
PES_WorkItemAssignmentDimension	tsd_
PES_ConfigurableLog	obj_
PES_TimesheetDetailsPending	tsl_
PES_TimesheetLineItem	tsl_

PES_Resource	res_
PES_ResourceAllocation	ral_
PES_ResourceAllocationContour	ralc_
PES_SkillSet	sks_

For more information, see the following topics:

- [PES_Object \[page 321\]](#)
- [PES_ObjectAssociation \[page 322\]](#)
- [PES_Dependency \[page 323\]](#)
- [PES_TimephaseAttributes \[page 324\]](#)
- [PES_TimephaseAttributeDetails \[page 324\]](#)
- [PES_ProjectTask \[page 325\]](#)
- [PES_ProjectTaskDimension \[page 327\]](#)
- [PES_ProjectAssignment \[page 327\]](#)
- [PES_ProjectAssignmentDimension \[page 329\]](#)
- [PES_WorkItemTask \[page 330\]](#)
- [PES_WorkItemTaskDimension \[page 331\]](#)
- [PES_WorkItemAssignment \[page 332\]](#)
- [PES_WorkItemAssignmentDimension \[page 333\]](#)
- [PES_ConfigurableLog \[page 334\]](#)
- [PES_TimesheetDetailsPending \[page 335\]](#)
- [PES_TimesheetLineItem \[page 336\]](#)
- [PES_Resource \[page 336\]](#)
- [PES_ResourceAllocation \[page 338\]](#)
- [PES_ResourceAllocationContour \[page 339\]](#)
- [PES_SkillSet \[page 339\]](#)

PES_Object

This table contains item and resource team information. The resource teams are identified by having a cls_UID of 6. If the database was migrated from Portfolio Edge, the cls_UID may be a value other than 6, and defined in the PES_Class table.

Column	Data Type	Description
---------------	------------------	--------------------

obj_UID	int	A unique identifier. Every record in the table has a unique ID. It will be used often in JOIN statements to retrieve related information.
obj_ParentUID	int	The ID of an object's immediate parent.
obj_HasChildren	bit	Indicates whether the item or resource team has any children.
cls_UID	smallint	Identifies the item type of a particular row entry. The item type appears in the PES_Class table.
obj_Name	nvarchar(100)	The name of a particular item.
obj_BinData	image	Contains all the custom attribute data for an item. This data is stored in binary and requires a macro to extract it.
obj_Description	ntext	The description of a particular item.
obj_LastChange	datetime	Last time the object was changed by a user or the system (includes system).
obj_LastChangeBy	int	The ID of the user who last changed the object (includes system).
obj_LastUserChangeDate	datetime	The last time the object was changed by a user (excludes system).
obj_LastUserChangeBy	int	The ID of the user who last changed the object (excludes system).

Name and Description (obj_Name and obj_Description) can be retrieved without using a macro as they are both predefined fields in the system.

MACRO: PES_MACRO_INVESTMENT. For example:

```
SELECT * FROM PES_MACRO_INVESTMENT(inv, obj_UID = 100, Project_Status)
```

PES_ObjectAssociation

This table manages the hierarchical relationship among items and resource teams.

Column	Data Type	Description
---------------	------------------	--------------------

oa_AncessorUID	int	The ID of the ancestor object.
oa_DescendantUID	int	The ID of the descendant object.
oa_Level	smallint	The number of levels down in the item hierarchy the descendant is from the ancestor.

For example:

```
SELECT oa_DescendantUID FROM PES_ObjectAssociation WHERE oa_AncessorUID IN (1)
```

This table is often used in a MACRO's inner filter clause to bring back all items at a certain level and lower. For example:

```
SELECT * FROM PES_MACRO_INVESTMENT(inv, obj_UID IN (SELECT oa_DescendantUID FROM PES_C
```

PES_Dependency

This table contains information related to item dependencies.

Column	Data Type	Description
obj_UID	int	A unique identifier. Every record in the table has a unique ID.
obj_SourceUID	int	The ID of the dependency's source item.
cls_UID	smallint	Identifies the dependency type of a particular row entry. The type appears in the PES_Class table.
obj_TargetUID	int	The ID of the dependency's target item.
obj_LastChange	datetime	The last time the object was changed by a user or the system (includes system).
obj_BinData	image	Contains all the custom attribute data for a dependency. Use a macro to extract it.
obj_Description	ntext	The description of a particular item.
obj_LastChangeBy	int	The ID of the user who last changed the object (includes system).
obj_LastUserChangeDate	datetime	The last time the object was changed by a user (excludes system).
obj_LastUserChangeBy	int	The ID of the user who last changed the object (excludes system).

MACRO: PES_MACRO_DEPENDENCY. For example:

```
SELECT source.obj_Name as Source, target.obj_Name as Target, dep.obj_Name as Dependence
FROM PES_MACRO_DEPENDENCY(dep, ,Name)
JOIN PES_Object source ON dep.obj_SourceUID = source.obj_UID
JOIN PES_Object target ON dep.obj_TargetUID = target.obj_UID
```

PES_TimephaseAttributes

This table contains data for the timephased attributes.

Column	Data Type	Description
obj_UID	int	A unique identifier. Every record in the table has a unique ID.
dim_UID	tinyint	The ID of the dimension that this row's data belongs to. Can join to PES_Dimension table.
att_UID	int	The ID of the attribute that this row's data belongs to. Can join to PES_Attribute table.
tpa_BinData	image	Contains all the timephased attribute data for a given attribute / dimension combination. This data is stored in binary and requires a macro to extract it.

MACRO: PES_MACRO_TIMEPHASE_ATTRIBUTES_TIMESCALE. For example:

```
SELECT * FROM PES_MACRO_TIMEPHASE_ATTRIBUTES_TIMESCALE (tmp, obj_UID = 281, Currency,
```

PES_TimephaseAttributeDetails

This table stores detail attributes associated with each timephased attribute entry. These details are custom attributes that attached to a timephased attribute.

Column	Data Type	Description
obj_UID	int	A unique identifier. Every record in the table has a unique ID.
obj_InvestmentUID	int	The ID of the item that this attribute detail record belongs to. Can be used to JOIN back to related item.
obj_Description	int	The description of a particular attribute. This is a default detail attribute on each BCV entry. You do not need a macro to get at this.

obj_BinData	image	Contains all the timephased detail attribute data for a given attribute. This data is stored in binary and requires a macro to retrieve it.
--------------------	-------	---

MACRO: PES_MACRO_TIMEPHASE_ATTRIBUTE_DETAIL. For example:

```
SELECT self.Value, detail.obj_Name, detail.obj_Description
FROM PES_MACRO_TIMEPHASE_ATTRIBUTES_SELF_CONTRIBUTION (self, obj_UID = 281 and att_UID = 281)
LEFT OUTER JOIN PES_TimephaseAttributeDetails detail ON self.obj_BucketUID = detail.obj_BucketUID
WHERE self.obj_InvestmentUID = 281
```

or

```
SELECT self.Value, detail.Description, detail.obj_Description
FROM PES_MACRO_TIMEPHASE_ATTRIBUTES_SELF_CONTRIBUTION (self, obj_UID = 281 and att_UID = 281)
LEFT OUTER JOIN PES_MACRO_TIMEPHASE_ATTRIBUTE_DETAIL(detail, obj_InvestmentUID = 281, obj_UID = 281)
```

PES_ProjectTask

This table contains information about the tasks that are part of an item's task plan.

Column	Data Type	Description
obj_UID	int	A unique identifier. Every record in the table has a unique ID.
obj_Name	nvarchar(100)	The display name of a particular task.
obj_ParentUID	int	The ID of a task's immediate parent.
obj_HasChildren	bit	Indicates whether the task has any children. A value of "1" indicated that it does.
obj_ProjectUID	int	The ID of the item to which the task belongs.
prv_Published	bit	Specifies the current state of the task plan wherein the task appears. A value of "1" indicates the task belongs to a checked in plan. A value of "0" means it belongs to a checked out plan.
obj_BinData	image	Contains all the custom attribute data for a task. This data is stored in binary and requires a macro to extract it.

obj_Description	ntext	The description of a particular task.
obj_LastChange	datetime	The last time the object was changed by a user or the system.
obj_LastChangeBy	int	The ID of the user who last changed the object (includes system).
obj_LastUserChangeDate	datetime	The last time the object was changed by a user (excludes system).
obj_LastUserChangeBy	int	The ID of the user who last changed the object (excludes system).
tsk_Completed	bit	Indicates whether or not a resource has marked the item as completed. A value of "1" indicates the item has been marked as completed.
tsk_PMCompleted	bit	Indicates whether or not a project manager has marked the item as completed. A value of "1" indicates the item has been marked as completed.
tsk_CapEx	bit	Indicates that the task is marked as a Capital expense. A value of "1" indicates that the item is a capital expense; a value of "0" means that it is not.
tsk_RemainingWork	float	Calculates the value of remaining work (Plan Work minus Actual Work).
tsk_PercentWorkComplete	float	Calculates the value of percent work complete (Actual Work v. Plan).

With tasks, you can select directly off the tables when looking for the system attributes specified above. If you have custom attributes, you will need to use the macro. The parent_UID for the root task is -6. This can be used to select the summary task.

This is useful for reporting on a rolled up value such as total planned work, total actual work, duration, whether the entire task plan has been marked PM completed, and so on.

MACRO: PES_MACRO_PROJECT_TASK. For example:

```
SELECT * FROM PES_MACRO_PROJECT_TASK(task, obj_ProjectUID = 281, Description, tsk_Comp
```

PES_ProjectTaskDimension

This table contains data for dimensioned attributes of a task, such as Start, Finish, and Work.

Column	Data Type	Description
obj_UID	int	A unique identifier that specifies the ID of the task. This value appears in the PES_ProjectTask table.
dim_UID	int	Specifies the ID of the dimension. This value appears in the PES_Dimension table.
tsd_Duration	float	The duration of a particular task.
tsd_Start	datetime	The start date of a task.
tsd_Finish	datetime	The finish date of a task.
tsd_Work	float	The amount of work (labor and non-labor) for a particular item.
tsd_Cost	float	The labor cost for a particular item.
tsd_NonLaborCost	float	The non-labor cost for a particular item.
tsd_TotalCost	float	The combined labor and non-labor cost for a particular item.

With tasks, you can select directly off the tables when looking for the system attributes specified above. If you have custom attributes, you will need to use the macro. If you are selecting both dimensioned and non-dimensioned attributes, you may find it easier to use a macro rather than joining the tables together.

The parent_UID for the root task is -6. This can be used to select the summary task. This is useful for reporting on a rolled up value such as total planned work, total actual work, duration, whether the entire task plan has been marked PM completed, and so on.

MACRO: PES_MACRO_PROJECT_TASK. Use the "@" symbol to specify the dimension from which you want to display task data. For example:

```
SELECT * FROM PES_MACRO_PROJECT_TASK(task, obj_ProjectUID = 281, Description, tsk_Comp
```

PES_ProjectAssignment

This table contains information about the assignments that are associated with an item.

Column	Data Type	Description
obj_UID	int	A unique identifier. Every record in the table has a unique ID.

obj_Name	nvarchar(100)	The name of a particular assignment.
obj_ProjectUID	int	The ID of the item to which this assignment belongs.
obj_TaskUID	int	The ID of the task to which an assignment belongs.
obj_AllocationUID	int	The ID of the allocation that an assignment is part of. This can be used in a join to find out the allocation and resource.
prv_Published	bit	A value of "1" means this particular assignment belongs to a checked in plan. A value of "0" means it belongs to a checked out plan.
obj_BinData	image	Contains all the custom attribute data for a task assignment. This data is stored in binary and requires a macro to extract it.
obj_Description	ntext	The description of a particular assignment.
obj_LastChange	datetime	The last time the object was changed by a user or the system.
obj_LastChangeBy	int	The ID of the user who last changed the object (includes system).
obj_LastUserChangeDate	datetime	The last time the object was changed by a user (excludes system).
obj_LastUserChangeBy	int	The ID of the user who last changed the object (excludes system). May be the same value as obj_LastChangeBy.
tsk_Completed	bit	Indicates whether or not a resource has marked the item as completed. A value of "1" indicates the item has been marked as completed.

tsk_PMCompleted	bit	Indicates whether or not a project manager has marked the item as completed. A value of "1" indicates the item has been marked as completed.
tsk_RemainingWork	float	Calculates the value of remaining work (Plan Work minus Actual Work).
tsk_PercentWorkComplete	float	Calculates the value of percent work complete (Actual Work v. Plan).

With assignments, you can select directly off the tables when looking for the system attributes specified above. If you have custom attributes, you will need to use the macro.

MACRO: PES_MACRO_PROJECT_ASSIGNMENT. For example:

```
SELECT * FROM PES_MACRO_PROJECT_ASSIGNMENT (assn, obj_ProjectUID = 281, Description, t
```

PES_ProjectAssignmentDimension

This table contains data for dimensioned attributes of an assignment.

Column	Data Type	Description
obj_UID	int	A unique identifier that specifies the ID of the assignment. This value appears in the PES_ProjectAssignment table.
dim_UID	int	Specifies the ID of the dimension. This value appears in the PES_Dimension table.
tsd_Duration	float	The duration of an assignment.
tsd_Start	datetime	The start date of an assignment.
tsd_Finish	datetime	The finish date of an assignment.
tsd_Work	float	The amount of work for an assignment.
tsd_Cost	float	The cost for a particular assignment.

With assignments, you can select directly off the tables when looking for the system attributes specified above. If you have custom attributes, you will need to use the macro. If you are selecting both dimensioned and non-dimensioned attributes, you may find it easier to use a macro rather than joining the tables together.

MACRO: PES_MACRO_PROJECT_ASSIGNMENT. Use the "@" symbol to specify the dimension from which you want to display assignment data. For example:

```
SELECT * FROM PES_MACRO_PROJECT_ASSIGNMENT(assn, obj_ProjectUID = 281, Description, ts
```

A resource is allocated to an item through an allocation. Every assignment is associated with this allocation. You can join across tables to retrieve this information. For example:

```
SELECT assn.tsd_Work@Actual, assn.tsd_Work@Plan, resource.obj_Name as Resource FROM PE
LEFT OUTER JOIN PES_ResourceAllocation alloc ON assn.obj_AllocationUID = alloc.obj_UI
LEFT OUTER JOIN PES_Resource resource ON alloc.obj_ResourceUID = resource.obj_UI
```

PES_WorkItemTask

This table contains information about the work items that are associated with an item.

Column	Data Type	Description
obj_UID	int	A unique identifier. Every record in the table has a unique ID.
obj_Name	nvarchar(100)	The name of a particular assignment.
obj_ProjectUID	int	The item to which this assignment belongs.
obj_BinData	image	Contains all the custom attribute data for a task assignment. This data is stored in binary and requires a macro to extract it.
obj_Description	ntext	The description of a particular assignment.
obj_LastChange	datetime	Last time the object was changed by a user or the system.
obj_LastChangeBy	int	ID of the user that the object was last changed by (includes system).
obj_LastUserChangeDate	datetime	Last time the object was changed by a user (excludes system).
obj_LastUserChangeBy	int	ID of the user that the object was last changed by (excludes system).
tsk_Completed	bit	Indicates whether or not a resource has marked the item as completed. A value of "1" indicates the item has been marked as completed.

tsk_PMCompleted	bit	Indicates whether or not a project manager has marked the item as completed. A value of "1" indicates the item has been marked as completed.
tsk_CapEx	bit	Indicates that the task is marked as a Capital expense. A value of "1" indicates that the item is a capital expense.
tsk_RemainingWork	float	Calculates the value of remaining work (Plan Work minus Actual Work).
tsk_PercentWorkComplete	float	Calculates the value of percent work complete (Actual Work v. Plan).

With work items, you can select directly off the tables when looking for the system attributes specified above. If you have custom attributes, you will need to use the macro.

MACRO: PES_MACRO_WORK_ITEM_TASK. For example:

```
SELECT * FROM PES_MACRO_WORK_ITEM_TASK(work, obj_ProjectUID = 281, Description, tsk_C
```

PES_WorkItemTaskDimension

This table contains data for dimensioned attributes of a work item.

Column	Data Type	Description
obj_UID	int	A unique identifier that specifies the ID of the task. This value appears in the PES_WorkItemTask table.
dim_UID	int	Specifies the ID of the dimension. This value appears in the PES_Dimension table.
tsd_Duration	float	The duration of a work item.
tsd_Start	datetime	The start date of a work item.
tsd_Finish	datetime	The finish date of a work item.
tsd_Work	float	The amount of work for a work item.
tsd_Cost	float	The cost for a particular work item.

With work items, you can select directly off the tables when looking for the system attributes specified above. If you have custom attributes, you will need to use the macro.

If you are selecting both dimensioned and non-dimensioned attributes, you may find it easier to use a macro rather than joining the tables together.

MACRO: PES_MACRO_WORK_ITEM_TASK. Use an "@" symbol to specify the dimension from which you want to display work item task data. For example:

```
SELECT * FROM PES_MACRO_WORK_ITEM_TASK(work, obj_ProjectUID = 281, Description, tsk_C
```

PES_WorkItemAssignment

This table contains information about the work item assignments that are associated with an item.

Column	Data Type	Description
obj_UID	int	A unique identifier. Every record in the table has a unique ID.
obj_Name	nvarchar(100)	The name of a particular assignment.
obj_ProjectUID	int	The item to which this assignment belongs.
obj_TaskUID	int	The ID of the work item to which an assignment belongs.
obj_AllocationUID	int	The ID of the allocation that an assignment is part of. This can be used in a join to find out the allocation and resource.
obj_BinData	image	Contains all the custom attribute data for a work item. This data is stored in binary and requires a macro to extract it.
obj_Description	ntext	The description of a particular assignment.
obj_LastChange	datetime	The last time the object was changed by a user or the system.
obj_LastChangeBy	int	The ID of the user who last changed the object (includes system).
obj_LastUserChangeDate	datetime	Last time the object was changed by a user (excludes system).
obj_LastUserChangeBy	int	The ID of the user who last changed the object (excludes system).

tsk_Completed	bit	Indicates whether or not a resource has marked the item as completed. A value of "1" indicates the item has been marked as completed.
tsk_PMCompleted	bit	Indicates whether or not a project manager has marked the item as completed. A value of "1" indicates the item has been marked as completed.
tsk_RemainingWork	float	Calculates the value of remaining work (Plan Work minus Actual Work).
tsk_PercentWorkComplete	float	Calculates the value of percent work complete (Actual Work v. Plan).

With work item assignments, you can select directly off the tables when looking for the system attributes specified above. If you have custom attributes, you will need to use the macro.

MACRO: PES_MACRO_WORK_ITEM_ASSIGNMENT. For example:

```
SELECT * FROM PES_MACRO_WORK_ITEM_ASSIGNMENT(work, obj_ProjectUID = 281, Description,
```

PES_WorkItemAssignmentDimension

This table contains data for dimensioned attributes of a work item.

Column	Data Type	Description
obj_UID	int	A unique identifier. Every record in the table has a unique ID.
dim_UID	int	The ID of a dimension. This value appears in the PES_Dimension table.
tsd_Duration	float	The duration of a particular work item.
tsd_Start	datetime	The start date of a work item.
tsd_Finish	datetime	The finish date of a work item.
tsd_Work	float	The amount of work for a particular item.
tsd_Cost	float	The cost for a particular item.

With work item assignments, you can select directly off the tables when looking for the system attributes specified above. If you have custom attributes, you will need to use the

macro. If you are selecting both dimensioned and non-dimensioned attributes, you may find it easier to use a macro rather than joining the tables together.

MACRO: PES_MACRO_WORK_ITEM_ASSIGNMENT. Use an "@" symbol to specify the dimension from which you want to display assignment data. For example:

```
SELECT * FROM PES_MACRO_WORK_ITEM_ASSIGNMENT(work,
obj_ProjectUID = 281, Description, tsk_Completed, tsk_PMCompleted,
tsk_RemainingWork, tsk_PercentWorkComplete, tsd_Duration@Plan,
tsd_Start@Plan, tsd_Finish@Plan, tsd_Work@Plan, tsd_Cost@Plan,
tsd_Duration@Actual, tsd_Start@Actual, tsd_Finish@Actual,
tsd_Work@Actual, tsd_Cost@Actual)
```

PES_ConfigurableLog

This table contains data for the various configurable log items.

Column	Data Type	Description
obj_UID	int	A unique identifier. Every record in the table has a unique ID. It will be used often in JOIN statements to retrieve related information.
obj_OwningInvestment	int	The ID of the item to which the log belongs.
cls_UID	smallint	Identifies the log type of a particular row entry. The log types appears in the PES_Class table.
obj_Name	nvarchar(100)	The name of a particular log item.
obj_LastChange	datetime	The last time the object was changed by a user or the system (includes system).
obj_BinData	image	Contains all the custom attribute data for an item. This data is stored in binary and requires a macro to extract it.
obj_Description	ntext	The description of a particular item.
obj_LastChangeBy	int	The ID of the user who last changed the object (includes system).
obj_LastUserChangeDate	datetime	The last time the object was changed by a user (excludes system).
obj_LastUserChangeBy	int	The ID of the user who last changed the object (excludes system).

usr_AssignedTo	int	The ID of the user that this particular log item has been assigned to.
obj_LogStatus	int	The ID of the list item value that indicating the current status of a log item.
obj_LogPriority	int	The ID of the list item value indicating the current priority of a log item.

All attributes above can be accessed without a macro as they are predefined fields in the system. However, custom attributes must be accessed via the macro. In addition, list items will be automatically resolved without the need for a further table lookup when using the macro.

There are different log types just as there are different item types. To group your returns by specific log types, you can order by log type using the `cls_UID`.

MACRO: `PES_MACRO_CONFIGURABLE_LOG`. For example:

```
SELECT * FROM PES_MACRO_CONFIGURABLE_LOG(log, obj_OwningInvestment = 281
AND cls_UID = 10, Description, obj_LogPriority, obj_LogStatus)
ORDER BY cls_UID
```

PES_TimesheetDetailsPending

This table contains data for every timesheet entry in the system.

Column	Data Type	Description
tsl_UID	int	A unique identifier. Every record in the table has a unique ID. This value associates a timesheet entry with the PES_Timesheet LineItem.
tsl_Date	smalldatetime	This is the date of an entry.
tsl_Hours	float	This is the number of hours for an entry.

A record exists for every timesheet entry in the system. If you do not use timesheet details, you can access this table directly. If you need access to detail items, you will need to use a macro.

MACRO: `PES_MACRO_TIMESHEET_DETAIL_PENDING`. For example:

```
SELECT * FROM PES_TimesheetDetailsPending
WHERE (tsl_Date > '1/01/2006')
AND (tsl_Date < '12/31/2006')
```

The macro uses slightly different field names. The `tdl_Duration` corresponds to the `tsl_Hours` and the `tdl_Day` corresponds to the `tsl_Date` in the above table. For example (using the macro):

```
SELECT * FROM PES_MACRO_TIMESHEET_DETAIL_PENDING(tdp, tdl_Day >= '1/01/2006'
AND tdl_Day <= '12/31/2006', tdl_Duration,tdl_Day,Description
```

PES_TimesheetLineItem

This table contains some internal structures for maintaining timesheets. In addition, it contains the key for getting from the timesheet entry to the task, work item, or activity allocation.

Column	Data Type	Description
tsl_UID	int	A unique identifier. Every record in the table has a unique ID.
obj_AssignmentGUID	uniqueidentifier	This identifier ties a line item to an obj_VersionIndependentUID in either the PES_ProjectAssignment, PES_WorkItemAssignment or PES_ResourceAllocation tables.

This table can be used as an intermediary table to get from the timesheet entry to the appropriate assignment. The assignment can be to a task, work item, or activity. The GUID is found in each of the corresponding tables. For example:

```
SELECT assn.obj_Name AS Task, tdp.tsl_Date, tdp.tsl_Hours
FROM PES_TimesheetDetailsPending tdp JOIN PES_TimesheetLineItem tli ON tdp.tsl_UID=
assn.obj_VersionIndependentUID WHERE (tdp.tsl_Date > '2006-01-01' AND tdp.tsl_Date< '2006-12-31'
AND tli.tsl_UID LEFT OUTER JOIN PES_ProjectAssignment assn ON tli.obj_AssignmentGUID=
12-31' AND assn.prv_Published = 1)
```

PES_Resource

This table contains data for all the resources in the system.

Column	Data Type	Description
obj_UID	int	A unique identifier. Every record in the table has a unique ID.
obj_ParentUID	int	This is the ID of the owning resource team (found in PES_Object table).
obj_Name	nvarchar(100)	This is the full name of the resource.
cls_UID	int	The ID of the class (resource) type. This is found in the PES_Class table.

usr_UID	int	The ID of the corresponding user. Every named resource has a user record in the system (excluding generic resources). This value appears in the PES_User table.
obj_BinData	image	Contains all the custom attribute data for a resource. Use a macro to extract it.
obj_Description	ntext	The description of a resource.
res_AlternateName	nvarchar(255)	An alternate name for a resource.
res_Address1	nvarchar(255)	The first line of the resource's address.
res_Address2	nvarchar(255)	The second line of the resource's address.
res_City	nvarchar(255)	The resource's city.
res_State	nvarchar(255)	The resource's state.
res_ZipCode	nvarchar(255)	The resource's zip code.
res_PrimarySkillSet	int	The ID of the default Resource Role that this resource has. When allocated to an item, this is the default Role for the subsequent allocation.
res_EffectiveStart	datetime	The date which the resource became active. At any time before this date the resource's capacity will be 0.
res_EffectiveEnd	datetime	The date which the resource became inactive. At any time after this date the resource's capacity will be 0.
obj_LastChange	datetime	The last time the resource was changed by a user or the system.
obj_LastChangeBy	int	The ID of the user who last changed the resource (includes system).
obj_LastUserChangeDate	datetime	The last time a user changed the resource (excludes system).
obj_LastUserChangeBy	int	The ID of the user who last changed the resource (excludes system).

Resources are either first class resource or generic resources. In general, first class resources have a cls_UID of 2, where generic resources have a cls_UID of 8. However, this is not always guaranteed if you came from a Portfolio Edge migration. Make sure to check your PES_Class table before making that assumption for retrieving data. Every resource belongs to a resource team, which are defined in the PES_Object table.

With resources, you can select directly off the tables when looking for the system attributes specified above. If you have custom attributes, you will need to use the macro.

MACRO: PES_MACRO_RESOURCE. For example:

```
SELECT peso.obj_Name as ResourceTeam, resource.obj_Name as Resource FROM PES_Object
peso INNER JOIN PES_Resource resource ON peso.obj_UID = resource.obj_ParentUID ORDER
BY peso.obj_Name, resource.obj_Name
```

PES_ResourceAllocation

This table contains data for all the resource allocations in the system. Each resource allocation maps a resource to an item. An allocated resource can then be assigned to tasks or work items. In addition, resource allocations have other properties associated with them such as resource roles and contours.

Column	Data Type	Description
obj_UID	int	A unique identifier. Every record in the table has a unique ID.
obj_ResourceUID	int	The ID of the resource. This value appears in PES_Resource table.
obj_ProjectUID	nvarchar(100)	The ID of the item to which the resource is allocated.
sks_SkillSetUID	int	The ID of Resource Role that corresponds to this resource or allocation. This value appears in the PES_SkillSet table.
obj_BinData	image	Contains all the custom attribute data for an allocation. This data is stored in binary and requires a macro to extract it.

MACRO: PES_MACRO_RESOURCE_ALLOCATION. For example:

```
SELECT * FROM PES_MACRO_RESOURCE_ALLOCATION(alloc, ,Name)
```

or

```
SELECT inv.obj_Name as Investment, res.obj_Name as Resource FROM PES_ResourceAllocation
JOIN PES_Resource res on alloc.obj_ResourceUID = res.obj_UID
JOIN PES_Object inv on alloc.obj_ProjectUID = inv.obj_UID
```

PES_ResourceAllocationContour

This table contains data for all the resource allocation contours in the system. A contour describes the dates that a resource is allocated to an item or activity, and at what percentage.

Column	Data Type	Description
ralc_UID	int	A unique identifier. Every record in the table has a unique ID.
obj_UID	int	The ID of the resource allocation.
ralc_Value	float	The allocation percentage for a time period.
ralc_Start	datetime	The start of the time period of the contour.
ralc_Finish	datetime	The end of the time period of the contour.
ralc_Comment	nvarchar(1000)	The comment that is attached to the contour.

There can be multiple contours per allocation. For example:

```
SELECT resource.obj_Name, ralc_Start, ralc_Finish, ralc_Value
FROM PES_ResourceAllocationContour contour
INNER JOIN PES_ResourceAllocation alloc on alloc.obj_UID = contour.obj_UID
INNER JOIN PES_Resource resource ON resource.obj_UID = alloc.obj_ResourceUID WHERE al
```

PES_SkillSet

This table contains data for all the resource roles in the system.

Column	Data Type	Description
sks_UID	int	A unique identifier. Every record in the table has a unique ID.
sks_Name	nvarchar(50)	The display name of the role, such as Developer.
sks_Description	nvarchar(250)	The description of the role.

Every resource has a primary role on an item to which they are allocated. For example:

```
SELECT resource.obj_Name as Resource, role.sks_Name as Role,
       inv.obj_Name as Investment
FROM PES_ResourceAllocation alloc
JOIN PES_SkillSet role on role.sks_UID = alloc.sks_SkillSetUID
JOIN PES_Resource resource on resource.obj_UID =
       alloc.obj_ResourceUID
JOIN PES_Object inv on inv.obj_UID = alloc.obj_ProjectUID
```

User and Security Table Summary

The user and security tables contain data for each user in the system. This section deals with only the PES_User table. There is only one User and Security table exposed in the schema.

Table Name	Column Prefix
PES_User	usr_

For more information, see the following topics:

- [PES_User \[page 340\]](#)

PES_User

This table contains data for all the users in the system. Users are people that are allowed access into the system. Access levels are determined by security roles and permissions.

Column	Data Type	Description
usr_UID	int	A unique identifier. Every record in the table has a unique ID.
usr_UserName	nvarchar(100)	The login name of the user. This name must be unique in the system.
usr_IsInactive	bit	Specifies whether a user is not active in the system and not allowed to login. An inactive user has a value of "1." An active user has a value of "0".
usr_FirstName	nvarchar(300)	The first name of the user.
usr_LastName	nvarchar(300)	The last name of the user.
usr_Domain	nvarchar(100)	The domain to which the user belongs (if applicable).
usr_EmailName	nvarchar(300)	The email address of the user.
usr_SendEmailNotifications	bit	Indicates whether or not the user can receive email notifications.
usr_DistinguishedName	nvarchar(1024)	If using LDAP, this is the distinguished name of the user.

For example:

```
SELECT usr_UserName, usr_isInactive FROM PES_User
```

Data Service Macros

Data service macros are provided as an alternative to using virtual stored procedures. Data services macros provide a greater degree of flexibility when accessing data, allowing more control over the data set you are working with. These macros require expertise in Microsoft SQL Server and enable you to access and manipulate data using SQL SELECT statements. Data is stored in binary format in the database, and is generally inaccessible when accessed directly. The SELECT statement can use several data services macros that enable you to extract select binary data and render it in a temporary table in SQL.

To execute SQL statements through data services, a user must be granted the Direct Data Access permission in the Administration module. This permission can be assigned through a security role, or can be assigned to a particular user or set of users. It is recommended that this access be granted using a group that belongs to a security role.

For more information, see the following topics:

- [Data Services Macro Syntax \[page 341\]](#)
- [Multi-Currency Query Parameters \[page 342\]](#)
- [Object Macros \[page 342\]](#)

Data Services Macro Syntax

Data services macros pass specifically defined parameters using SQL Select statements. The syntax for these operations must be precise.

All macros have the same first 2 parameters. The first parameter is the temporary table's alias name. The requested data is placed into this temporary table when extracted from the database. The name for the temporary table must be unique. This is important when you need to prefix a column name with the table name. For example:

```
SELECT * FROM NAME_OF_MACRO
```

The second parameter is a WHERE clause. Using a WHERE clause enables you to narrow the scope of the data extraction, thus reducing the amount of binary data that is parsed. This is the most critical factor in the overall performance of data services macros. For example:

```
SELECT * FROM PES_MACRO_INVESTMENT(tmp, cls_UID = 1, Budget)
```

is calling for the budget attribute of portfolio. PES_MACRO_INVESTMENT is the name of the data services macro, tmp is the name of the temporary table in SQL, and cls_UID = 1 is a WHERE clause that reduces the amount of work data services must perform by parsing only the portfolio binaries. This parameter can be left blank to return back all the rows from the table.

Macros can also be embedded into another macro's WHERE clause. The following example is a macro that returns back all the project tasks whose owning item is active. For example:

```
SELECT * FROM PES_MACRO_PROJECT_TASK(task, obj_ProjectUID IN
```

or:

```
(SELECT obj_UID FROM PES_MACRO_INVESTMENT(inv, , Active) WHERE inv.Active = 1), Comple
```

Once the macro is processed and the temporary table is created and filled with data, data services replace the macro with the table name along with the alias that was used in the first parameters. Once all macros are processed, the original SQL statement, with the macro replaced with temporary table names, is passed on to SQL Server to process. This gives the ability to use SQL to process further into the desired results.

Multi-Currency Query Parameters

If your organization has enabled support for multi-currencies, accessing currency information data using data services macros requires two additional query parameters. These query parameters must be prefixed to any query intended to return multi-currency data. The parameters are:

- # currency
- # currency_effective_date

For example, if you run the a SQL SELECT statement calling PES_MACRO_INVESTMENT and want to return currency values in Yen, the query would be prefixed as follows:

```
# currency = JPY
# currency_effective_date = 1/1/2004
SELECT * FROM PES_MACRO_INVESTMENT(tmp, cls_UID = 1, Budget)
```

Specifying a currency value as part of running a virtual stored procedure should not cause an error if there is no currency information available. If multi-currency support is not enabled, you do not need to prefix your query with the parameters above.

Object Macros

The macros described in this section extract attribute data from the binary data used to store custom attributes. These macros operate using the same parameters, but return data from different tables.

Each of the macros in the table below use these parameters:

- Temporary table name
- WHERE clause applied to the table containing the binary blob
- List of system attribute key names to add as columns in the temporary table

Anytime a system attribute key name is used as a column in the temporary table certain rules have to be applied. The first rule is that the `.` used as the dimension delimiter is replaced by the `@` symbol. The second rule is that `'-` are replaced with `'_`.

Anytime the # StripHTML attribute is used at the beginning of the macro, rich text formatting of the query results will be enabled (# StripHTML=false) or disabled (# StripHTML=true). Rich text formatting is enabled by default.

This is done so that the system attribute name will be a compatible database column name.

Macro Database	Table Where Data is Extracted
PES_MACRO_AGILE_WORK_ITEM	PES_AgileWI
PES_MACRO_CONFIGURABLE_LOG	PES_ConfigurableLog
PES_MACRO_DEPENDENCY	PES_Dependency
PES_MACRO_INVESTMENT	PES_Object
PES_MACRO_PROJECT_ASSIGNMENT	PES_ProjectAssignment
PES_MACRO_PROJECT_NONLABOR	PES_ProjNonLaborAsgn
PES_MACRO_PROJECT_TASK	PES_ProjectTask
PES_MACRO_RESOURCE	PES_Resource
PES_MACRO_RESOURCE_ALLOCATION	PES_ResourceAllocation
PES_MACRO_TIMEPHASE_ATTRIBUTE_DETAIL	PES_TimephaseAttributeDetails
PES_MACRO_TIMESHEET_DETAIL_APPROVED	PES_TimesheetDetailsApproved
PES_MACRO_TIMESHEET_DETAIL_PENDING	PES_TimesheetDetailsPending
PES_MACRO_WORK_ITEM_ASSIGNMENT	PES_WorkItemAssignment
PES_MACRO_WORK_ITEM_TASK	PES_WorkItemTask

The following example shows a select statement that returns the Budget and plan start milestones for all projects in the system.

```
SELECT * FROM PES_MACRO_INVESTMENT(tmp, cls_UID = 6, Budget, StartMS@Plan)
```

Each of the macros in the table above can be called using a similarly structured SQL SELECT statement. The macros in the following sections are more complicated and are treated separately.

The following example shows using the StripHTML attribute to disable rich text formatting in a report's output:

```
# StripHTML=true
SELECT * FROM PES_MACRO_INVESTMENT(tmp, cls_UID = 6, Budget, StartMS@Plan)
```

For more information, see the following topics:

- [PES_MACRO_CURRENT_RESOURCE \[page 344\]](#)
- [PES_MACRO_CURRENT_USER \[page 344\]](#)
- [PES_MACRO_DATES \[page 344\]](#)

- [PES_MACRO_EXPAND_MULTIPLE_OBJECT_ID \[page 345\]](#)
- [PES_MACRO_REMAINING_RESOURCE_ALLOCATION_FROM_ASSIGNMENT \[page 345\]](#)
- [PES_MACRO_REMAINING_RESOURCE_CAPACITY_FROM_ALLOCATION \[page 345\]](#)
- [PES_MACRO_REMAINING_RESOURCE_CAPACITY_FROM_ASSIGNMENT \[page 346\]](#)
- [PES_MACRO_RESOURCE_ALLOCATION_TIMESCALE \[page 346\]](#)
- [PES_MACRO_RESOURCE_CAPACITY_TIMESCALE \[page 347\]](#)
- [PES_MACRO_TIMEPHASE_ATTRIBUTES_SELF_CONTRIBUTION \[page 348\]](#)
- [PES_MACRO_TIMEPHASE_ATTRIBUTES_TIMESCALE \[page 348\]](#)
- [PES_MACRO_VSPROC \[page 349\]](#)

PES_MACRO_CURRENT_RESOURCE

`PES_MACRO_CURRENT_RESOURCE` returns the id of the current session resource if there is one, null if no resource for current user:

```
SELECT obj_UID FROM PES_Resource WHERE obj_UID = PES_FUNCTION_CURRENT_RESOURCE()
```

PES_MACRO_CURRENT_USER

`PES_MACRO_CURRENT_USER` returns the id of the current session user.

```
SELECT obj_UID FROM PES_Object WHERE obj_CreatedBy = PES_FUNCTION_CURRENT_USER()
```

PES_MACRO_DATES

`PES_MACRO_DATES` returns a set of dates as columns in the results set for the specified time scale and date range. This is useful when getting dates for column headers of reports.

The parameters for this macro are:

- Temporary table name
- Time scale; the possible values are 'Calendar Year', 'Calendar Quarter', 'Calendar Month', 'Calendar Week', 'Calendar Day', 'Fiscal Year' and 'Fiscal Quarter'
- Start date; the entire bucket containing the start date will be included. For example, if 1/16/2006 is specified and Calendar Month is requested then the entire month of January is returned
- Finish date; similar to Start Date the entire bucket containing this date will be included

The following example shows this macro querying for dates between January and April by calendar month:

```
SELECT * FROM PES_MACRO_DATES(tmp, Calendar Month, 1/1/2006, 4/30/2006)
```

PES_MACRO_EXPAND_MULTIPLE_OBJECT_ID

PES_MACRO_EXPAND_MULTIPLE_OBJECT_ID returns a comma-separated list of object IDs for a given list of items or resource team IDs; the returned list can also include child objects, if specified. In the format '2;45;69:true' return comma separated list of ids, including children ids if true is passed, if last parameter is not passed true is the default.

```
SELECT obj_UID FROM PES_Object WHERE obj_UID
IN PES_FUNCTION_INVESTMENT_IDS_FORMATTER(2;3;4:true)
```

PES_MACRO_REMAINING_RESOURCE_ALLOCATION_FROM_ASSIGNMENT

PES_MACRO_TIMEPHASE_ATTRIBUTES_TIMESCALE shows remaining resource assignments (based on total allocations) per resource for the requested timescale and storage unit. The output value of this macro is calculated as [allocation - assignment].

The parameters for this macro are:

- Temporary table name
- Dimension; the possible values are 'Actual', 'Plan', and 'Timephased'.
- Storage unit; the possible values are 'FTE', 'Currency', 'Hours', 'Units'. (Note: only attributes that are coercible to this storage unit are returned.)
- Time scale; the possible values are 'Calendar Year', 'Calendar Quarter', 'Calendar Month', 'Calendar Week', 'Calendar Day', 'Fiscal Year' and 'Fiscal Quarter'
- Start date; the entire bucket containing the start date will be included. For example, if 1/16/2006 is specified and Calendar Month is requested then the entire month of January is returned
- Finish date; similar to Start Date the entire bucket containing this date will be included
- Use date format; the possible values are true and false. If true then the column names for the buckets will be yXXXX_mXX_dXX. If false then the column names for the buckets will be PX

The following example shows a call to get remaining resource allocations for assigned resources (in hours) for the Actual dimension between May 17, 2008 and May 17, 2009

```
SELECT * FROM PES_MACRO_REMAINING_RESOURCE_ALLOCATION_FROM_ASSIGNMENT(tmp, ,Actual,
Hours, Calendar Month, 2008-03-17, 2009-03-17, 1)
```

PES_MACRO_REMAINING_RESOURCE_CAPACITY_FROM_ALLOCATION

PES_MACRO_REMAINING_RESOURCE_CAPACITY_FROM_ALLOCATION shows remaining allocation capacity per resource for the requested timescale and storage unit. The output value of this macro is calculated as [capacity - allocation].

The parameters for this macro are:

- Temporary table name
- Storage unit; the possible values are 'FTE', 'Currency', 'Hours', 'Units'. (Note: only attributes that are coercible to this storage unit are returned.)

- Time scale; the possible values are 'Calendar Year', 'Calendar Quarter', 'Calendar Month', 'Calendar Week', 'Calendar Day', 'Fiscal Year' and 'Fiscal Quarter'
- Start date; the entire bucket containing the start date will be included. For example, if 1/16/2006 is specified and Calendar Month is requested then the entire month of January is returned
- Finish date; similar to Start Date the entire bucket containing this date will be included
- Use date format; the possible values are true and false. If true then the column names for the buckets will be yXXXX_mXX_dXX. If false then the column names for the buckets will be PX

The following example shows a call to get remaining resource capacity for allocations (in hours) for the Actual dimension between May 17, 2008 and May 17, 2009

```
SELECT * FROM PES_MACRO_REMAINING_RESOURCE_CAPACITY_FROM_ALLOCATION(tmp, , Hours,
Calendar Month, 2008-03-17, 2009-03-17, 1)
```

PES_MACRO_REMAINING_RESOURCE_CAPACITY_FROM_ASSIGNMENT

PES_MACRO_REMAINING_RESOURCE_CAPACITY_FROM_ASSIGNMENT the remaining assignment capacity per resource for the requested timescale and storage unit. The output value of this macro is calculated as [capacity - assignment].

The parameters for this macro are:

- Temporary table name
- Dimension; the possible values are 'Actual', 'Plan', and 'Timephased'.
- Storage unit; the possible values are 'FTE', 'Currency', 'Hours', 'Units'. (Note: only attributes that are coercible to this storage unit are returned.)
- Time scale; the possible values are 'Calendar Year', 'Calendar Quarter', 'Calendar Month', 'Calendar Week', 'Calendar Day', 'Fiscal Year' and 'Fiscal Quarter'
- Start date; the entire bucket containing the start date will be included. For example, if 1/16/2006 is specified and Calendar Month is requested then the entire month of January is returned
- Finish date; similar to Start Date the entire bucket containing this date will be included
- Use date format; the possible values are true and false. If true then the column names for the buckets will be yXXXX_mXX_dXX. If false then the column names for the buckets will be PX

The following example shows a call to get remaining resource capacity (in hours) for the Actual dimension between May 17, 2008 and May 17, 2009.

```
SELECT * FROM PES_MACRO_REMAINING_RESOURCE_CAPACITY_FROM_ASSIGNMENT(tmp, ,Actual, Hours,
Calendar Month, 2008-03-17, 2009-03-17, 1)
```

PES_MACRO_RESOURCE_ALLOCATION_TIMESCALE

PES_MACRO_RESOURCE_ALLOCATION_TIMESCALE helps you view resource allocation data, similar to how resource allocation is viewed in the Allocation and Team Roster views.

The parameters for this macro are:

- Temporary table name
- WHERE clause applied against the PES_ResourceAllocation table so only those allocations are normalized.
- **Storage unit** The possible values are 'FTE', 'Currency', 'Hours'. (Note: only attributes that are coercible to this storage unit are returned.)
- **Time scale** The possible values are 'Calendar Year', 'Calendar Quarter', 'Calendar Month', 'Calendar Week', 'Calendar Day', 'Fiscal Year' and 'Fiscal Quarter'.
- **Finish date** Similar to Start Date the entire bucket containing this date will be included.
- **Use date format** The possible values are true and false. If true then the column names for the buckets will be yXXXX_mXX_dXX. If false then the column names for the buckets will be PX.

The following example shows how to find the cost of all resource allocations made from a single resource team during the month of April, 2008:

```
SELECT * FROM PES_MACRO_RESOURCE_ALLOCATION_TIMESCALE(ra, obj_ResourceUID
IN (SELECT resource.obj_UID FROM PES_Object peso JOIN PES_Resource resource
ON peso.obj_UID = resource.obj_ParentUID and resource.obj_ParentUID
in (SELECT oa_DescendantUID FROM PES_ObjectAssociation WHERE oa_AncessorUID = 3)),
Currency, Calendar Year, 4/1/2008,4/30/2008, true)
```

PES_MACRO_RESOURCE_CAPACITY_TIMESCALE

PES_MACRO_RESOURCE_CAPACITY_TIMESCALE shows resource capacity for the requested timescale and storage unit.

The parameters for this macro are:

- Temporary table name
- Storage unit; the possible values are 'FTE', 'Currency', 'Hours', 'Units'. (Note: only attributes that are coercible to this storage unit are returned.)
- Time scale; the possible values are 'Calendar Year', 'Calendar Quarter', 'Calendar Month', 'Calendar Week', 'Calendar Day', 'Fiscal Year' and 'Fiscal Quarter'
- Start date; the entire bucket containing the start date will be included. For example, if 1/16/2006 is specified and Calendar Month is requested then the entire month of January is returned
- Finish date; similar to Start Date the entire bucket containing this date will be included
- Use date format; the possible values are true and false. If true then the column names for the buckets will be yXXXX_mXX_dXX. If false then the column names for the buckets will be PX

The following example shows a call to get resource capacity (in hours) for the Actual dimension between May 17, 2008 and May 17, 2009.

```
SELECT * FROM PES_MACRO_RESOURCE_CAPACITY_TIMESCALE(tmp, , Hours,
Calendar Month, 2008-03-17, 2009-03-17, 1)
```

PES_MACRO_TIMEPHASE_ATTRIBUTES_SELF_CONTRIBUTION

`PES_MACRO_TIMEPHASE_ATTRIBUTES_SELF_CONTRIBUTION` is used to get all the self-contributing buckets for the time phase attributes in the system converted into the requested storage unit (i.e. currency, hours, FTE or units). This macro is different from `PES_MACRO_TIMEPHASE_ATTRIBUTE_DETAIL` in that it returns all the self-contributing buckets (`PES_MACRO_TIMEPHASE_ATTRIBUTE_DETAIL` only returns self-contributing buckets that have been promoted to the detail object).

The parameters for this macro are:

- Temporary table name
- WHERE clause applied against the `PES_TimephaseAttributes` table such that only the binary data is extracted for timephased attributes
- Storage unit; the possible values are 'FTE', 'Currency', 'Hours', 'Units'

This example shows how to join with `PES_MACRO_TIMEPHASE_ATTRIBUTE_DETAIL` to show detail data along with all the self contribution values.

```
SELECT self.Start, self.Finish, self.Value, detail.Description
FROM PES_MACRO_TIMEPHASE_ATTRIBUTES_SELF_CONTRIBUTION (self, obj_UID = 49, Currency)
LEFT OUTER JOIN
PES_MACRO_TIMEPHASE_ATTRIBUTE_DETAIL (detail, obj_InvestmentUID = 49,
Description) ON self.obj_BucketUID = detail.obj_UID
```

PES_MACRO_TIMEPHASE_ATTRIBUTES_TIMESCALE

`PES_MACRO_TIMEPHASE_ATTRIBUTES_TIMESCALE` converts the timephased attributes into the requested timescale and storage unit.

The parameters for this macro are:

- Temporary table name
- WHERE clause applied against the `PES_TimephaseAttributes` table so only those timephased attributes' blobs are expanded
- Storage unit; the possible values are 'FTE', 'Currency', 'Hours', 'Units'. (Note: only attributes that are coercible to this storage unit are returned.)
- Time scale; the possible values are 'Calendar Year', 'Calendar Quarter', 'Calendar Month', 'Calendar Week', 'Calendar Day', 'Fiscal Year' and 'Fiscal Quarter'
- Start date; the entire bucket containing the start date will be included. For example, if 1/16/2006 is specified and Calendar Month is requested then the entire month of January is returned
- Finish date; similar to Start Date the entire bucket containing this date will be included
- Use date format; the possible values are true and false. If true then the column names for the buckets will be yXXXX_mXX_dXX. If false then the column names for the buckets will be PX

The following example shows a call to get all the attributes that can be shown in Currency in Calendar Month for the year 2005 for item id 49.

```
SELECT * FROM PES_MACRO_TIMEPHASE_ATTRIBUTES_TIMESCALE(tmp, obj_UID = 49, Currency,  
Calendar Month, 1/1/2005, 12/31/2005, true)
```

PES_MACRO_VSPROC

PES_MACRO_VSPROC wraps the output of a virtual stored procedure into a macro, which allows the results to be manipulated by traditional SQL operations.

The parameters for this macro are:

- Temporary table name
- VSPROC Query surrounded by parenthesis, such as (SPGetPESObject1)
- List of columns from the vsproc to be return back by the macro. If the column name from the vsproc is not a valid name for column in database then the as operator must be used to give a different name. For example if a column for the vsproc is "Column With Space" you query might look like this "SELECT CWS FROM PES_MACRO_VSPROC(tmp, (SPGetPESObject 1), Column With Space as CWS).

Virtual Stored Procedures

Data services allow reporting tools to take advantage of data and security models. Because reporting tools traditionally report on relational data, an extension is included that allows data to be accessed as a client of an OLE DB Provider. The data is accessed through virtual stored procedures, which show up in your reporting tool as stored procedures. This solution requires that the OLE DB Provider be installed on any client machine that is used for reporting.

When calling these stored procedures, you must supply your user name and password along with the name of your database connection stored in the web.config file on the application server.

For more information, see the following topics:

- [Error Logging \[page 349\]](#)
- [SPGetScoreCard and SPGetNotesGrid \[page 349\]](#)

Error Logging

In general, the two most common reporting problems are:

- Invalid parameters passed to the stored procedure (for example, an attribute ID or object ID that does not correspond to an attribute or object in the database).
- The requesting user does not have the appropriate permissions.

These types of errors are all returned to the OLE DB client with the same error message. For more detailed information about the problem, consult the log file log.txt. This file is written to the machine on which the OLE DB Provider is installed. The default path is: C:\Program Files\Serena\Mariner\Reporting

SPGetScoreCard and SPGetNotesGrid

SPGetScoreCard and **SPGetNotesGrid** are extensions of the summary view. Since the scorecard and notes grid contain specially formatted data that can't be easily broken down into name/attribute pairs for viewing in the summary view, they have been given their

own stored procedures, which return reports that are closer to the format seen on the corresponding tabs in the application. A user must have permissions to see the view on which these tabs reside on.

Parameters	Data Type	Required	Description
ObjectId	System.Int32	Yes	The ID of the item that supplies the data.
AttributeId	System.Int32	Yes	The ID of the attribute of interest.

Web Services

This section details Serena On Demand Web services.

For more information, see the following topics:

- [Agile Work Item \[page 350\]](#)
- [Demand Management \[page 353\]](#)

Agile Work Item

This section details the methods and parameters for the Agile Work Item Web Service. The Agile Work Item Web Service is available at the URL **http://<appserver>/agile/webservices/agileworkitem.asmx**, where <appserver> is the application server. The WSDL for the Agile Work Item Web Service are available at the URL **http://<appserver>/agile/webservices/agileworkitem.asmx?wsdl**.

Several of the methods use a parameter called **attribute[]**. This is an array of key/value pairs where the key is the XML name of the attribute, and the value is the string representation of the value. The value string will need to be formatted in such a way that it can be converted into the correct type to match the attribute type.

Date types should be in ISO 8061 format and will be assumed to be in UTC.

List attributes can be set by supplying the list item name for the value.

URL Link attributes are a composite made up of three parts: **URL**, **DisplayName**, and **UseDisplayName**. If an attribute key is specified by using its XML name, then the URL and DisplayName portions will be set to the value supplied. You may get/set any part of a URL Link by appending ",part=<part>" to the XML name of the attribute key. For example:

- My-Link
- My-Link,part=URL
- My-Link,part=DisplayName
- My-Link,part=UseDisplayName

For more information, see the following topics:

- [Connect \[page 351\]](#)
- [CreateAgileWorkItem \[page 351\]](#)
- [GetAgileWorkItems \[page 351\]](#)
- [EditAgileWorkItem \[page 352\]](#)

- [DeleteAgileWorkItem \[page 352\]](#)

Connect

This method is required to create an authenticated Web service session. It must be called before any other method. This method returns a token which is supplied to all of the other methods. The parameters for the **Connect** method are:

Parameter	Datatype	Description
username	string	The user name of the user who is logging in.
password	string	The password associated with the username .
dbtitle	string	The connection name of the database to connect to.
machineip	string	The IP address of the machine making the request. For example, "127.0.0.1".

CreateAgileWorkItem

This method creates a work item under the item identified by **parentId**. The integer value returned is the ID of the newly created work item. The parameters for the **CreateAgileWorkItem** method are:

Parameter	Datatype	Description
token	string	The token returned by the Connect method.
awiType	string	The type of agile work item to be created.
parentId	integer	The ID of the parent agile work item under which the agile work item is being created.
name	string	The name for the agile work item to be created.
owningInvestmentID	string	The ID of the item under which the agile work item should be created.
fields	attribute[]	The key/value pairs of the attributes associated with the new agile work item.

GetAgileWorkItems

This method retrieves the specified data from the item identified by **owningInvestmentId**. The parameters for the **GetAgileWorkItem** method are:

Parameter	Datatype	Description
token	string	The token returned by the Connect method.
owningInvestmentId	integer	The ID of the item under which the agile work item is located.
parentType	string	The XML name of the parent item type of the agile work item.
workItemTypes	attribute[]	The type of agile work item. Reserved for future use.
attributeKeys	string[]	A list of XML names for the desired attributes to be returned.
includeChildren	boolean	Indicates whether valid children of the agile work item are included. Reserved for future use.

EditAgileWorkItem

This method updates one or more attributes for the specified work item. The parameters for the **EditAgileWorkItem** method are:

Parameter	Datatype	Description
token	string	The token returned by the Connect method.
awiId	integer	The ID of the agile work item you are editing.
baseProperties	attribute[]	The key/value pairs of the attributes to associate with the agile work item. The keys must be Name , ParentID , or OwningInvestmentID .
fields	attribute[]	The key/value pairs of the attributes associated with the agile work item.

DeleteAgileWorkItem

This method deletes an agile work item (and all of its child attributes). The parameters for the **DeleteAgileWorkItem** method are:

Parameter	Datatype	Description
token	string	The token returned by the Connect method.
awiId	integer	The ID of the agile work item you are deleting.

Demand Management

This section details the methods and parameters for the Demand Management Web Service. The Demand Management Web Service is available at the URL **http://<asppserver>/Mariner/WebServices/DemandManagement.asmx**, where <asppserver> is the application server. The WSDL for this set of methods can be retrieved at the URL **http://<asppserver>/Mariner/WebServices/DemandManagement.asmx?wsdl**.

Several of the methods use a parameter called **attribute[]**. This is an array of key/value pairs where the key is the XML name of the attribute, and the value is the string representation of the value. The value string will need to be formatted in such a way that it can be converted into the correct type to match the attribute type.

Date types should be in ISO 8061 format and will be assumed to be in UTC.

List attributes can be set by supplying the list item name for the value.

URL Link attributes are a composite made up of three parts: **URL**, **DisplayName**, and **UseDisplayName**. If an attribute key is specified by using its XML name, then the URL and DisplayName portions will be set to the value supplied. You may get/set any part of a URL Link by appending ",part=<part>" to the XML name of the attribute key. For example:

- My-Link
- My-Link,part=URL
- My-Link,part=DisplayName
- My-Link,part=UseDisplayName

For more information, see the following topics:

- [AddTaskAssignments \[page 354\]](#)
- [AddWorkItemAssignment \[page 354\]](#)
- [AssociateTasks \[page 354\]](#)
- [Connect \[page 355\]](#)
- [CreateInvestment \[page 355\]](#)
- [CreateWorkItem \[page 356\]](#)
- [GetInvestment \[page 356\]](#)
- [GetTaskPlan \[page 357\]](#)
- [GetWorkItem \[page 358\]](#)
- [GetWorkItemAssignments \[page 359\]](#)
- [SubmitTime \[page 359\]](#)
- [UpdateInvestment \[page 360\]](#)
- [UpdateTaskAssignment \[page 360\]](#)
- [UpdateWorkItem \[page 360\]](#)
- [UpdateWorkItemAssignment \[page 360\]](#)

AddTaskAssignments

This method creates a resource assignment on a task in a task plan. The method returns the string ID of the assignment that is created. The parameters for the **AddTaskAssignments** method are:

Parameter	Datatype	Description
token	string	The token returned by the Connect method.
taskId	string	The ID of the task to assign.
resourceName	string	The user name of the resource to assign.
attributes	attribute[]	The key/value pairs of the attributes to associate with the new task assignment.

AddWorkItemAssignment

This method creates a resource assignment on a work item. The method returns the string ID of the assignment that is created. The parameters for the **AddWorkItemAssignment** method are:

Parameter	Datatype	Description
token	string	The token returned by the Connect method.
workItemId	integer	The ID if the work item to assign.
resourceName	string	The user name of the resource to assign.
attributes	attribute[]	The key/value pairs of the attributes to associate with the new task assignment.

AssociateTasks

This method is used to set mapping between tasks in a task plan and objects in an external application. The external IDs are returned in the **GetTaskPlan** method as part of each task object. The parameters for the **AssociateTasks** method are:

Parameter	Datatype	Description
token	string	The token returned by the Connect method.
sourceName	string	The identifier of the external system.

Parameter	Datatype	Description
mapping	idMap[]	A list of mapping objects: <ul style="list-style-type: none"> ▪ sourceId <i>string</i> The ID of the object in the external system. ▪ targetId <i>string</i> The task ID of the task.

Connect

This method is required to create an authenticated Web services session. It must be called before any other method. This method returns a token which is supplied to all of the other methods. The parameters for the **Connect** method are:

Parameter	Datatype	Description
username	string	The user name of the user who is logging in.
password	string	The password associated with the username .
dbtitle	string	The connection name of the database to connect to.
machineip	string	The IP address of the machine making the request. For example, "127.0.0.1".

CreateInvestment

This method creates an item of type **className** under the parent item identified by **parentId**. Any attributes in **fields** will be set if possible (attempts to set non-existent attributes will not cause the method to fail). The integer value returned is the ID of the newly created item. The parameters for the **CreateInvestment** method are:

Parameter	Datatype	Description
token	string	The token returned by the Connect method.
className	string	The XML name of the item type for the item you want to create.
name	string	The name for the item to create.
parentId	integer	The item ID for the parent item (under which this item will be created).
fields	attribute[]	The key/value pairs of the attributes associated with the new item.

CreateWorkItem

This method creates a work item under the item identified by **parentId**. The integer value returned is the ID of the newly created work item. The parameters for the **CreateWorkItem** method are:

Parameter	Datatype	Description
token	string	The token returned by the Connect method.
name	string	The name for the work item to create.
parentId	integer	The ID of the item where the work item should be created.
fields	attribute[]	The key/value pairs of the attributes associated with the new work item.

GetInvestment

This method retrieves the specified data from the item identified by **investmentId**. It returns a structure of type item, which contains the following fields:

Field	Datatype	Description
id	integer	The item ID.
parent	integer	The item ID of the parent item.
title	string	The title of the item.
investmentType	string	The XML name of the item type.
attributes	attribute[]	The key/value pairs of the attributes requested in the attributeKeys parameter of the method call.

The parameters for the **GetInvestment** method are:

Parameter	Datatype	Description
token	string	The token returned by the Connect method.
investmentId	integer	The ID of the desired item.
sourceName	string	Deprecated.
attributeKeys	string[]	A list of XML names for the desired attributes to be returned.

GetTaskPlan

This method retrieves tasks and assignments for a project task plan associated with an item. It returns an array of type `task`, which contains the following fields:

Field	Datatype	Description
id	string	The task ID.
parent	string	The task ID of the parent task.
path	string	Identifies the task's hierarchy in the task plan.
externalId	string	The ID from an external system which is set by the AssociateTasks method.
title	string	The title of the task.
attributes	attribute[]	The key/value pairs of the attributes requested in the taskAttributeKeys parameter of the method call.
assignments	assignment[]	<p>List of assignments for the task which match the filter supplied in the assignmentFilter parameter of the method call. The assignments are of the form:</p> <ul style="list-style-type: none"> ▪ assignmentId <i>string</i> The assignment ID. ▪ taskId <i>string</i> The task ID. ▪ resource <i>string</i> The user name of the resource assigned to the task. ▪ attributes <i>attribute[]</i> The key/value pairs of the attributes requested in the assignmentAttributeKeys parameter of the method call. <p>Task and assignment IDs are strings, not integers as in items and work items.</p>

The parameters for the **GetTaskPlan** method are:

Parameter	Datatype	Description
token	string	The token returned by the Connect method.
sourceName	string	Name of external application used in AssociateTasks method. Passing a <code>sourceName</code> will cause the associated set of external IDs to be retrieved with the tasks.

Parameter	Datatype	Description
investmentId	integer	The item ID of task plan.
taskAttributeKeys	string[]	A list of XML names for the desired task attributes to be returned.
assignmentAttributeKeys	string[]	A list of XML names for the desired assignment attributes to be returned.
taskFilter	filterRule[]	Filter for which tasks should be returned.
assignmentFilter	filterRule[]	Filter for which assignments should be returned.

FilterRules are structures of the form:

Field	Datatype	Description
key	string	XML Name of the attribute to filter on.
op	string	<p>The comparison operator. If multiple filter rules are specified, they are Ored together. If the filter value is null, then the attribute will be tested for nullity. The comparison operators can be as follows:</p> <ul style="list-style-type: none"> ▪ eq, =, == <i>EQUAL</i> The filter value matches the attribute value exactly. ▪ ne, !=, <> <i>NOT EQUAL</i> The filter value does not match the attribute value. ▪ lt, < <i>LESS THAN</i> The attribute value is less than the filter value. ▪ gt, > <i>GREATER THAN</i> The attribute value is greater than the filter value. <p>String, list, and URL attributes should only be used with the EQUAL and NOT EQUAL filter rules.</p>
value	string	The attribute value to compare.

GetWorkItem

This method retrieves the specified data from the work item identified by **investmentId**. It returns an array of type assignment (see **GetInvestment**). The parameters for the **GetWorkItem** method are:

Parameter	Datatype	Description
token	string	The token returned by the Connect method.

Parameter	Datatype	Description
investmentId	integer	The ID of the desired work item.
sourceName	string	Deprecated.
attributeKeys	string[]	A list of XML names for the desired attributes to be returned.

GetWorkItemAssignments

This method retrieves the specified data from the assignments on the work item identified by **workItemId**. It returns an array of type assignment (see **GetTaskPlan**). The parameters for the **GetWorkItemAssignments** method are:

Parameter	Datatype	Description
token	string	The token returned by the Connect method.
workItemId	integer	The ID of the desired work item.
sourceName	string	Deprecated.
attributeKeys	string[]	A list of XML names for the desired attributes to be returned.

SubmitTime

This method records time in a resource's timesheet for a given assignment. The time reported is spread over the working days (as defined by the company calendar) between **startDate** and **endDate**, inclusive. In order to conform to the business rules for reporting time (i.e., no more than 24 hours in a day), it is possible that time for the assignment will be reported for days before the start date. If **startDate** and **endDate** are the same, then all of the time will be entered for that assignment on that date, unless it violates the business rules, then the method will work backwards a day at a time to try to allocate the time. If any time has been reported for this assignment, it will be overwritten by the time reported by this method. The parameters for the **SubmitTime** method are:

Parameter	Datatype	Description
token	string	The token returned by the Connect method.
assignmentId	string	The ID of the assignment to update.
startDate	datetime	Start of time period to report hours in.
endDate	datetime	End of time period to report hours in.
hours	double	The number of hours to report.

Parameter	Datatype	Description
completed	boolean	Whether to mark the assignment as complete.

UpdateInvestment

This method updates one or more attributes for the specified item. The parameters for the **UpdateInvestment** method are:

Parameter	Datatype	Description
token	string	The token returned by the Connect method.
investmentId	integer	The ID of the item to update.
updates	attribute[]	The attribute list.

UpdateTaskAssignment

This method updates one or more attributes for the specified task assignment. The parameters for the **UpdateTaskAssignment** method are:

Parameter	Datatype	Description
token	string	The token returned by the Connect method.
assignmentId	string	The ID of the assignment to update.
attributes	attribute[]	A list of attributes to set on the assignment.

UpdateWorkItem

This method updates one or more attributes for the specified work item. The parameters for the **UpdateWorkItem** method are:

Parameter	Datatype	Description
token	string	The token returned by the Connect method.
workitemId	integer	The ID of the work item you are updating.
updates	attribute[]	The attribute list.

UpdateWorkItemAssignment

This method updates one or more attributes for a resource assignment in a task plan. The method returns the string ID of the assignment that will be updated. The parameters for the **UpdateWorkItemAssignment** method are:

Parameter	Datatype	Description
token	string	The token returned by the Connect method.
assignmentId	string	The ID of the assignment to update.
attributes	attribute[]	A list of attributes to set on the assignment.