



SERENA BUSINESS MASHUPS

Getting Started with Serena Business Mashups
2009

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Part number: MA-MUINTR-003 Product version: 2009 R1

Publication date: 2009-07-17

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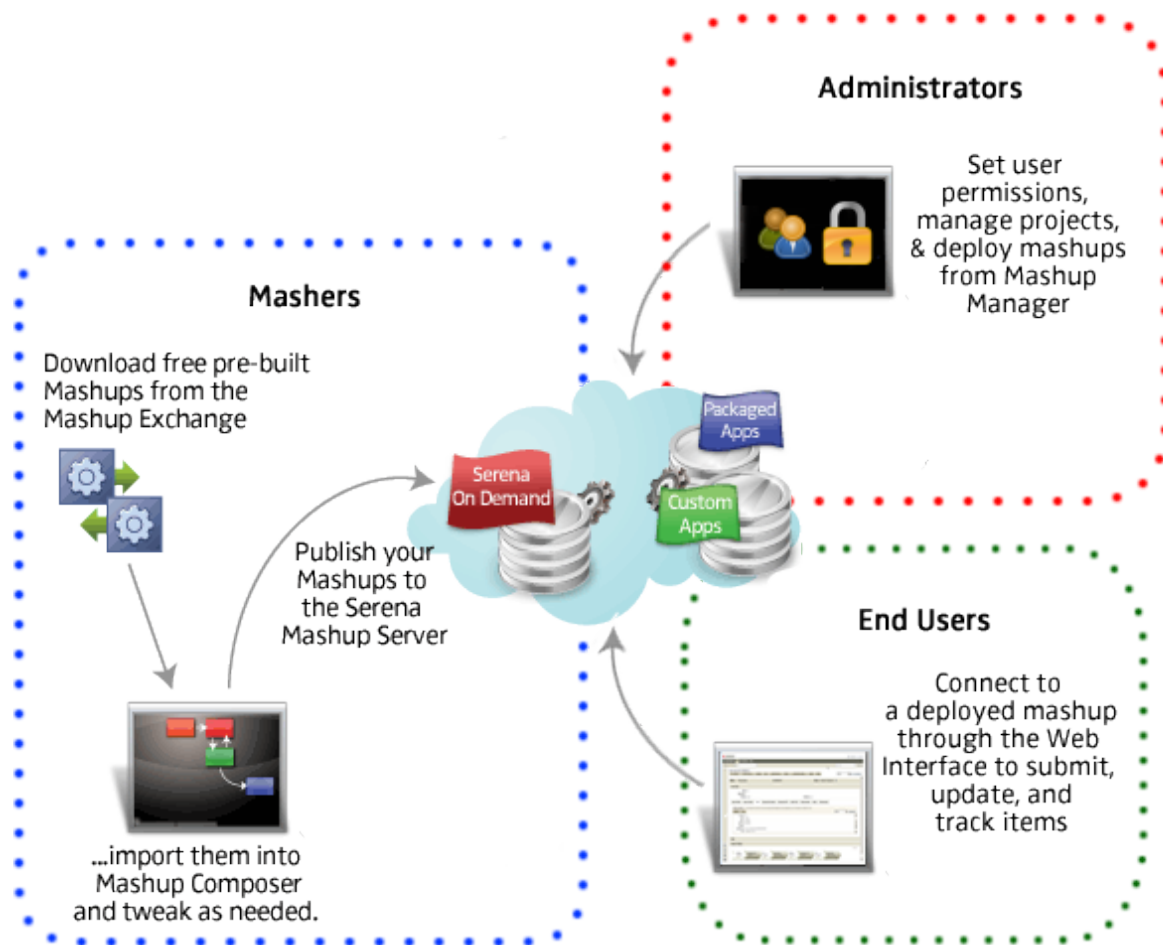
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Getting Started with Business Mashups

Serena Business Mashups is business productivity software for rapid definition, deployment, and management of process-driven Web applications. Serena Business Mashups promotes a process-focused approach to productivity. It coordinates processes across teams and systems and provides repeatability, traceability, and auditability.

Business Mashups gives you both power and flexibility, enabling you to create business processes for teams to work together more productively.



Business mashups allow you to combine visual and data elements from multiple sources within a process-driven framework. Business mashups keep your processes flowing smoothly and provide the data and visual elements you need when you need them. This access to data enhances communication with customers, vendors, and partners, thus enabling collaboration at every level.

How do I use Serena Business Mashups?

The easiest way to understand how to use Serena[®] Business Mashups is to divide the activities that you perform into three functional groups. A user's activities can fall into one or more of the groups:

- **End Users** - This role is involved in the regular use of a deployed mashup solution. This user is the one who submits items, transitions items, and runs reports on existing items. The user accesses Serena[®] Business Mashups through the Web interface.
- **Mashers** - This role is principally involved in design-time activities using Mashup Composer. Example tasks include adding states or transitions to a workflow or modifying an orchestration.

-
- **Administrators** - This role is principally involved in run-time configuration activities using Mashup Manager and Mashup Administrator tools (if on-premise) or Web Admin tool (if on-demand). Example tasks include adding users, assigning privileges, or configuring projects.

Each of the tabs has information related to each of the roles described above.

What is a Business Mashup?



Note: This topic gives a high level overview of a business mashup. It talks about business problems that business mashups solve. See [Understanding Mashups, Applications, and Orchestrations \[page 7\]](#) for a description of the parts of a mashup in Serena® Business Mashups.

A **Business Mashup** is a new breed of Process-Driven Web Application that drives business productivity through the delivery of the right information to the right people at the right time. It ties together your people, process, and data.



Business Mashups represent fully functional web applications with data models, business processes, roles & access rights, and connectivity to enterprise assets. They provide support for definition and execution of business processes that coordinate people and system interactions.

Information collected in a Business Mashup can be persisted across user sessions to support long running activities that span multiple audiences inside and outside the enterprise. Business Mashups support a wide range of interaction channels—such as Email, Web Browser, Mobile device, IM, and so forth—to accommodate the channel preferences for audiences interacting with the Mashup. In addition, role-aware Business Mashups can act on that information in compliance with the company rules, policies, and regulations to complete the business activity.

Business Mashup Applications provide native traceability and audit trail of the activities performed by roles or automated systems participating in the Mashups. This audit trail history is persisted and can be accessed to analyze the lifecycle of business activities to improve operational efficiencies or comply with industry regulations.

A Business Mashup Application runs in any browser and can be hosted inside a Serena Mashups Browser Shell or embedded inside a Portal shell, a home-grown Intranet or website. This capability allows enterprises to extract more value from their portal framework investments bringing application and transactional content to what was previously only simple content aggregation.

Understanding Mashups, Applications, and Orchestrations

To understand and use Business Mashups, you have to understand mashups, applications, and orchestrations. Each of these concepts denotes containers or collection of elements, and each performs a specific function to help you effectively manage your projects.

- **Mashup**-- A mashup can contain multiple applications and orchestrations, which emit mashup events that execute activities in other tools or applications. A mashup

may also contain the Global Application, which contains core database elements, such as system auxiliary tables, and design elements that are not unique to a single mashup, such as JavaScripts.

- **Application**--A collection of elements that work together to solve a business requirement, such as managing a team's work tasks or tracking customer support calls. Applications typically contain workflows, fields, forms, roles, projects, reports, and notifications. Once applications are deployed as part of a mashup, they can be configured for your runtime environment using Mashup Administrator. Applications can reference *orchestrations*.
- **Orchestration**--Orchestrations define the interaction of systems and Web services. System-based operations, such as BPEL processes, can be arranged using Serena Mashup Composer into an orchestration workflow. Orchestration workflows can then be linked to *mashup events* and called by transitions in *applications*.

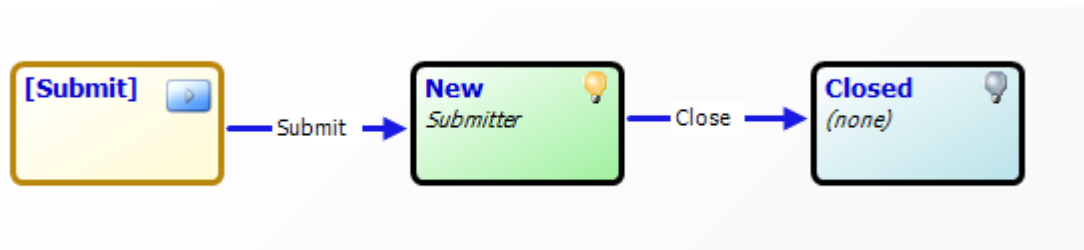
In essence, a mashup is a container for multiple applications and orchestrations. Storing multiple applications in a single mashup eases the process of creating and maintaining relationships between applications. For example, you may create relational fields between two applications, which means that these two applications are related and should be treated as a single unit. Using a mashup lets you be sure to deploy the two applications simultaneously.

What is a Workflow?

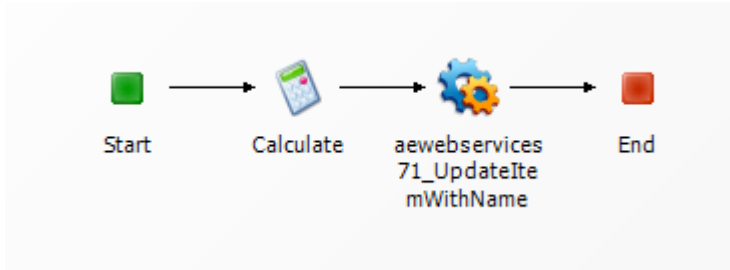
A workflow defines the movement of items or processes in Business Mashups.

Both applications and orchestrations have workflows, which define the movement of items and processes. The two workflows are designed in Serena Mashup Composer, and they are different in their purpose.

The *application workflow* is a human process workflow, which consists of a collection of states, transitions, and fields that define the process of the item. Items are moved through the various states in the workflow by invoking the transitions. Each transition and state has fields that gather information about the item as it progresses through the workflow.



An *orchestration workflow* is an arrangement of Web service calls for a specific purpose, designed using Serena Mashup Composer. Designers can define flow control constructs such as loops and decision branches and define the way data is mapped between calls. The final arrangement is saved as one or more BPEL processes, which can be executed by a supported *BPEL engine*. The execution of the processes is invoked when the matching *mashup event* is received by the *Event Manager*.



Understanding the Mashup Design Process

Serena[®] Business Mashups introduces a new robust process for creating and maintaining mashups and applications. Applications are synonymous with solutions in TeamTrack; mashups are a bundle of one or more applications and orchestrations. (Orchestrations coordinate the interaction of external systems using Web service calls and Business Process Execution Language (BPEL) files.)

In previous versions of TeamTrack, you created and managed solutions in TeamTrack Administrator and all changes were immediately available in the Browser interface. TeamTrack did not store any previous versions of your solutions. If you wanted to undo changes that you made, you would have to manually undo the changes using the TeamTrack Administrator.

With Business Mashups, all design changes to a solution, now referred to as an application, are manually deployed to your runtime server, which hosts the Web interface. This offers many benefits, including the ability to aggregate many changes and deploy them at once. Testing changes is also easier because you can deploy your changes to a test environment before deploying changes into your production environment.

There are five main steps to the new process: design, publish, deploy, configure, and use. Each of these steps occurs in a specific Business Mashups component.

The first step is **design**. All design tasks take place in Serena Mashup Composer. Application designers, or mashers, use Mashup Composer to create and edit existing applications. All tables, workflows, fields, states, transitions, and scripts are added in Mashup Composer. You can also add custom forms to your applications. Orchestrations that integrate with external systems or other applications can also be added to your mashup during the design phase.

After designing your mashup, you **publish** the mashup. This step is performed from Mashup Composer. Publishing takes the completed mashups, moves them into the Mashup Repository, and makes the mashup visible in Mashup Manager. The published mashup is versioned in the database, meaning that the particular set of changes is saved in the database as one version. Depending on their privileges, mashers or administrators can decide which of these versions of a mashup to deploy to the server. This additional versioning feature provides the ability to roll back to previous version in case a change has an undesired effect.

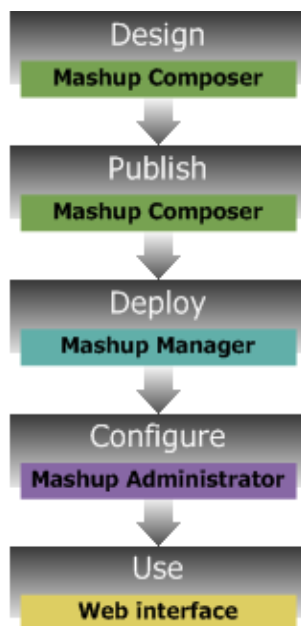
After a mashup is published, you can **deploy** it to move the mashup and its applications to Serena Mashup Server, also known as the runtime environment. Deployment activates the mashup in the Web interface, pushing the changes made in Mashup Composer to users. Depending on how you configure your environments, you can deploy directly from Mashup Composer or from Mashup Manager.

In the **configure** phase, you can use Mashup Administrator, formally known as the TeamTrack Administrator, to configure the deployed mashup. Configurations include four

main aspects: user and group management, project configuration, field overrides, and notification management. System administration, such as configuring system authentication and other system settings, is still performed in Mashup Administrator as well.

After the mashup is configured on the server with the correct projects and permissions, the applications in the mashup are ready for **use**. Users can access the mashup through the Business Mashups Web interface.

The following diagram shows the mashup workflow:



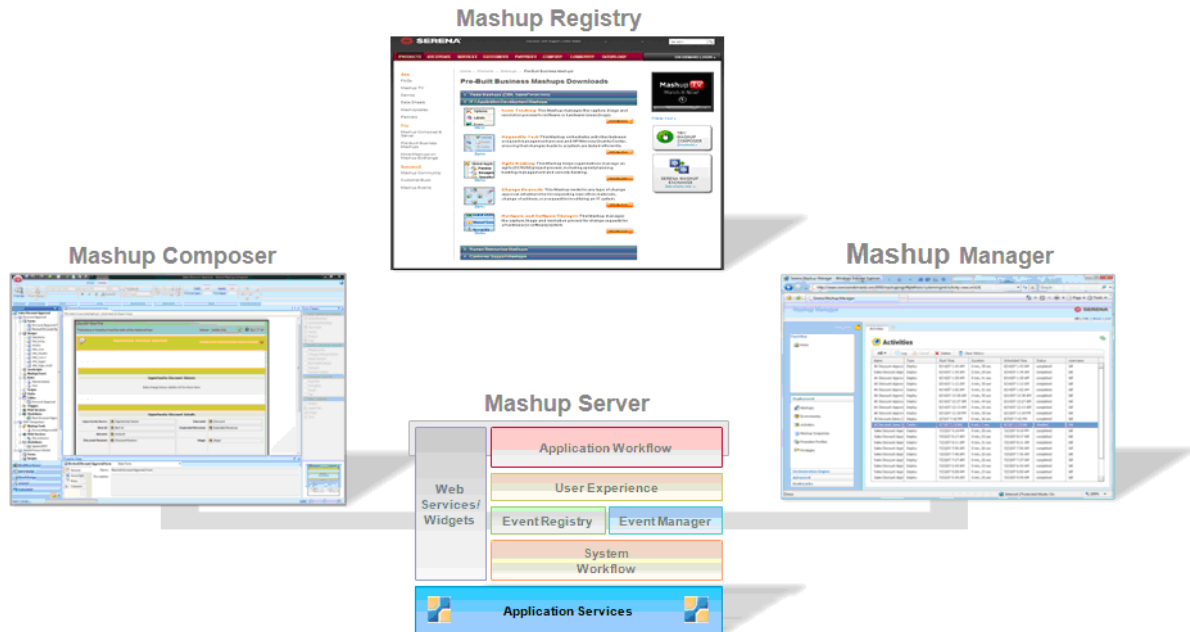
Business Mashups Clients

Serena Business Mashups includes the following clients and components:

- **Web Interface** –The end-user interface, which is accessed from a Web browser. The Web interface is used to manage auxiliary tables, enter and track primary items, report on these items, and perform limited administrative tasks.
- **Mashup Composer** – Fully integrated visual environment where mashers create and deploy their orchestrations and applications.
- **Mashup Manager** – Designed for IT and Mashup Administrators, Mashup Manager is an Interactive web-based application for management of application versioning, deployment, promotion, and permission grants.
- **Mashup Administrator** (On-Premise Only) – The Windows client application used to configure the Application Engine. Mashup Administrator is used to add and edit projects and notifications, manage user accounts and authentication settings, assign users and groups to roles, and configure system settings.
- **Web Administrator** – The Serena Web Administrator enables users with administrative privileges to perform configuration tasks, including adding projects

and assigning them to workflows (On-Demand only), creating user accounts and assigning them to roles and groups (On-Premise can only assign users to groups), and more.

- **Mashup Server** – A collection of application services for runtime execution of Business Mashups. The Mashup Server includes the engines required for runtime execution of mashups (for example, the application engine, the orchestration engine, the event manager, and Single Sign-On).
- **Mashup Registry** (Introduced in Serena Business Mashups 2009 R1)– A collection of Business Mashup blueprints and the associated documentation. The Mashup Registry is accessible from Mashup Composer.



Working with Values for Selection Fields

Business Mashups offers many different field types for gathering information about primary and auxiliary items in your system. Many "selection" field types are available, with each type offering flexibility to users as they work with items. *User*, *Single Selection*, *Multi-Selection*, and *Single Relational* fields are examples of selection-type fields.

Values for selections fields are added in different clients, depending on the field type.

Selections for the following field types are added in Mashup Administrator:

- User
- Multi-User
- Multi-Group
- Folder



Note: You can add roles as selections for *User*, *Multi-User*, and *Multi-Group* fields in Mashup Composer. User and group selections are added in Mashup Administrator.

Selections for the following field types are added in Mashup Composer:

- Single Selection
- Multi-Selection
- Binary/Trinary

Selections for the following field types are added in Web interface:

- Single Relational
- Multi-Relational

Refer to the Mashup Composer and Mashup Administrator online help for detail information on setting selection and default values for fields.



Note: Default values for *User*, *Multi-User*, *Multi-Group*, *Folder*, *Single Relational*, and *Multi-Relational* fields are set in Mashup Administrator. Default values for all other field types are set in Mashup Composer, but can be overridden for fields in projects and in states and transitions in projects in Mashup Administrator.

Chapter 2: End User

This section discusses frequently performed procedures that new and existing end users perform when they begin using Business Mashups.

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- [Web Interface \[page 14\]](#)
- [Working with Primary Items \[page 16\]](#)
- [Searching for Items \[page 16\]](#)
- [Creating Reports in the Web Interface \[page 18\]](#)

Getting Started as an End User

The **end user** is the Serena Business Mashup user who uses Serena Business Mashups to accomplish their work. They work with items in the deployed mashup. They connect to Serena Business Mashups through the **Serena Web Interface**.



Tip: End users will find using Serena Business Mashups easier when they understand some key terms such as items, transitions, states, and workflows.

- Definitions of Key End User Terms
 - **Item** -A generic term for primary and auxiliary items. See also Primary Item and Auxiliary Item.
 - **Transitions** - A key element of workflows, transitions activate a primary item's movement from state to state in the workflow process.
 - **States** - A key element of a workflow, states are positions that a primary item resides in while moving through the workflow process. States can also be considered a stopping point along a workflow's path.
 - **Workflow** - A collection of states, transitions, and fields that define an organization's tracking process.

Typical tasks for the end user include:

- Submitting, transitioning, and updating primary items.
- Searching for items.
- Creating and running reports on existing items.



Note: The tasks that the user can performed are based on the privileges that the user is assigned by the Administrator.

For information on user tasks, refer to the **Online Help** found in the Serena Web Interface.

Web Interface

The Serena® Business Mashups Web interface is the end-user interface, which you access from a Web browser. The Web interface reflects your organization's tracking processes, which are represented by applications. Applications enable you to track items in a workflow process, gather information for auxiliary items that support but do not follow that process, generate reports, and more. Examples of applications are *Issue Defect Management* and *Incident Management*.

The information and features to which you have access are determined by your administrator. For example, your administrator can grant you privileges to submit and update items in certain projects.

Common tasks in the Web interface include:

- Submit, transition, and update primary items.
- Manage auxiliary table information.
- Create, edit, and run reports related to both primary and auxiliary items.
- Attach files, notes, and e-mail messages to items.
- Link Business Mashups items together.
- Send e-mail associated with items or their attachments.
- Send links to reports through e-mail.
- Organize your frequently accessed items and reports in folders.
- Search for items that you have privileges to view.
- Modify your user profile.
- Subscribe to e-mail notifications for specific items.
- Self-register (external users only).
- Access the Business Mashups Knowledge Base (on-premise customers only).
- Perform limited administrative tasks.

Logging on to the Web Interface

To log on to the Serena® Business Mashups Web interface:

1. In the **Address Bar** of your browser, type the URL provided by your mashup administrator. An example of the URL is `http://serverName/tmtrack/tmtrack.dll?`

- Depending on the authentication settings specified by your administrator, you may be prompted to log on to the Web interface. In the **User ID** box, type your login name. In the **Password** box, type your password.



Note: If SSO is enabled, you see a **Request password reset** link below the **Log In** button. To reset your password, click this link, enter your user name in the **User ID** field, and then click **Submit**. You will receive an e-mail message containing a link to verify your request. After you click this link, you will receive another e-mail message containing a temporary password.

- Click **Log In**.



Note: Users who have logged on with a temporary password must enter a new password.

The Web interface opens to the **Task** page or home page report for your preferred application.

Parts of the Web Interface

The Web interface is divided into these main parts.

The screenshot shows the Serena web interface. At the top, there is a navigation bar with tabs for 'IDT', 'Incident Mgmt', 'Product Backlog', and 'More...'. Below the navigation bar, there is a header area with a 'Welcome, Bill Admin' message, an 'ID Search...' input field, and a 'Quick Links' section. The main content area is divided into two columns. The left column contains a 'Search' sidebar with 'Basic Tasks' (Search by Keyword(s), Search by Submitter) and 'Advanced Tasks' (Advanced Search, Global Search) sections. Below the search sidebar are buttons for 'Submit', 'Search', 'Reports', 'Favorites', 'Public Folders', and 'Knowledge Base'. The right column displays 'Search Results' for 'Product Backlog 1 - 8 of 8', sorted by 'Project (Hierarchy)'. It shows a table of backlog items with columns for 'Backlog Id' and 'Title'. The table contains 7 items, including 'BUG00100' (Server stops responding when trying to update a user record) and 'CHG00107' (Apply new branding to Framis product). Below the table are controls for 'Check All', 'Uncheck All', and 'Requery', and a 'Create Link in -->' dropdown menu.

Backlog Id	Title
<input type="checkbox"/> BUG00100	Server stops responding when trying to update a user record
<input type="checkbox"/> BUG00101	IE7 crashes when accessing home page
<input type="checkbox"/> BUG00102	View does not refresh after adding a new element
<input type="checkbox"/> BUG00103	Installer gets hung on license agreement page
<input type="checkbox"/> BUG00104	Searching on text fields takes more than 10 seconds to return results
<input type="checkbox"/> BUG00105	Safari browser has problems displaying calendar widget
<input type="checkbox"/> CHG00106	The browser interface needs to be made 508 compliant
<input type="checkbox"/> CHG00107	Apply new branding to Framis product

1. **Web interface toolbar** – The main toolbar provides commands that pertain to the entire Web interface.
2. **Application tabs and toolbar** – Business Mashups applications are organized into tabs. The toolbar commands on the tabs generally apply to the selected application.
3. **Navigation pane** – The navigation pane provides easy access to submit, search, and reporting features. Depending on your privileges, you can also access items in favorites, public, and Knowledge Base folders.
4. **Content pane** – The content pane typically contains a list of items that appear as links. When you click a link, the content pane displays details about the item.

Working with Primary Items

Primary items, such as issues and incidents, are records that are tracked by an application. Primary items are organized in projects, which are assigned to a workflow. You submit primary items into a specific project, and those items follow the project's workflow to completion.

What You Can Do with Primary Items

Depending on your privileges and the application design, you can:

- Submit primary items
- Transition primary items through the workflow
- Update information in primary items
- Copy primary items
- Perform special transitions, such as posting items to the Knowledge Base
- Send e-mail messages from primary items
- Update, transition, or delete multiple primary items at once

You can also perform additional tasks from within an existing primary item, such as adding notes, attaching files, and linking principal items and subtasks.

Searching for Items

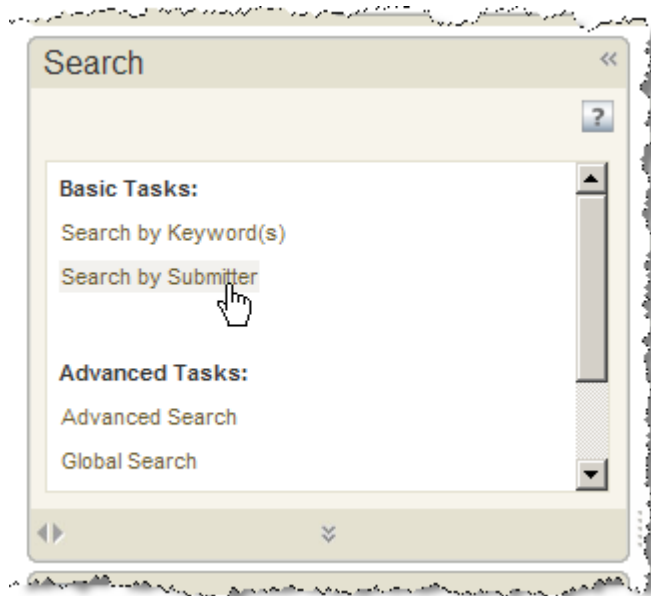
Searching allows you to search by keyword or by submitter in one or more projects within an application.



Tip: Serena Business Mashups offers two ways to find items, searching and reporting.

To perform a search:

1. Click the **Application** tab that contains the primary items that you want to find.
2. From the navigation pane, click the **Search** link, and then click **Search by Keyword** or **Search by Submitter**.



The **Search by Keyword** or **Search by Submitter** page opens.

3. Use the following options to filter your search:

- **Keyword(s)**

Use the **Keyword** box to search for information in *Text* fields that are set up for keyword searching by your administrator. Keyword searches typically apply to the *Title* and *Description* fields, but may include other fields as well. For multiple keywords, separate each word with a space. To find an exact phrase, enclose the phrase with quotation marks. To find all items, leave the box empty. Asterisks (*) and percent signs (%) serve as wildcard characters. A wildcard character matches zero or more consecutive characters.

- **Match All**

Select this option to search for a match to all the keywords that you typed. This is also referred to as an "and" search, meaning that if you type in two keywords, items containing both those keywords are returned.

- **Match Any**

Select this option to search for a match on any of the keywords that you typed. This is also referred to as an "or" search, meaning that if you type in two keywords, items containing at least one of those keywords is returned.

- **Submitter**

The *Submitter* field contains all users who have privileges to submit items to any project in the system. Use this option to find items submitted by a particular user. Enter the search criteria, such as a user's name, part of a user's name, or an asterisk, and then click the **Find** button to perform the **Submitter** search. Any matches populate the drop-down list for you to make a selection.

- **Project(s)**

You must select a project or multiple projects that contain the items that you are searching for. You can use the **SHIFT** and **CTRL** keys to select multiple projects in the list. The **Project(s)** list contains a full list of projects to which you have view privileges, or a list of preferred projects. If you are viewing your preferred projects list, the projects are listed alphabetically.

- **Search in Sub-projects**

Select this check box to include subprojects of the selected project in the query. If one of your preferred projects is a parent project but its subprojects are not in your preferred projects list, subprojects of the parent are searched if this check box is set.

- **Show All Projects/Show My Projects**

If you have specified preferred projects, your preferred project list appears by default. Click **Show All Projects** to view the full list of projects that you can view. When the full project list is displayed, click **Show My Projects** to view your preferred projects. Note that the **Show My Projects** link is disabled if you have not specified preferred projects for the selected application.

- **Manage My Projects**

Click this link to open the **Application Settings** page to the **My Projects** tab. You can then modify your preferred projects list as needed. When you are finished managing your projects, you are returned to the search page.

- **Active/Inactive**

This applies to all primary tables that contain an *Active/Inactive* field. Select **Both** to search for active and inactive items; select **Active** to search for active items; or select **Inactive** to search for inactive items.



Tip: For more search options, click the **Advanced Search** link on the **Search** view to open the **Advanced Search** page.

4. Click **Search**. Items matching your search criteria are listed on the **Search Results** page.

After executing your search, click the **Back to Search** link to return to the search page and modify your search criteria as needed. Each time you return to the search page after performing a search, the page contains criteria from your previous search.

For more information on searching, refer to the **Online Help** in the Serena Web Interface.

Creating Reports in the Web Interface

Reports are key feature in Serena[®] Business Mashups. With reports, you can find a variety of information about your items:

- The items assigned to a user.
- The items in a particular project.
- The items submitted over time.

Using the **Create a Report** page in the Web interface, you can create common reports, such as Listing and Trend reports.

To create a report:

1. From the **Type** drop-down list in the **Create a Report** page, select one of the following options:
 - **Distribution** – Summarize two categories of items and display them in tabular or graphical format.
 - **Duration** – Provide historical trends of primary items over a specified duration.
 - **Listing** – Return textual lists of items based on the search, display, and sorting options you select. This is the most commonly used report type and is the default selection.
 - **Trend** – Provide historical totals or submittal rates of primary items over days, weeks, months, and quarters. Report results can be displayed in tabular or graphical format.
 - **Other Reports** – Select this option to create advanced report types, such as **Change History**, **Multi-View**, or **Summary** reports.
2. Click **Next**. If you are creating a **Distribution**, **Duration**, **Listing**, or **Trend** report, the appropriate form opens. If you select **Other Reports**, the **Create Advanced Reports** page opens.
3. After providing content, sorting, and additional options for your report, click one of the following buttons:
 - **Preview** – Click this button to view your results before saving the report. After previewing your results, click **Back** to modify the report, or click **Save** to save the report.
 - **Save** – Click this button to open the **Save As** form.
 - **Cancel** – Click this button to close the report form without saving any changes.

After creating and saving the report, you can run it any time. For more information on creating reports, consult the **Online Help** in the Serena Web Interface.

Chapter 3: Mashers

This section discusses frequently performed procedures that mashers perform when they begin using Business Mashups.

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Getting Started as a Masher

Mashers are responsible for creating and modifying mashups. The main tool for mashers is Mashup Composer.

Typical tasks for mashers include:

- Adding states or transitions to the workflow.
- Add auxiliary tables and fields to manage data within a mashup.
- Changing the layout of forms used.
- Creating and modifying orchestrations.



Tip: The following terms are necessary to understand the process and activities of a masher.

- Key Terms for Mashers
 - **Mashup**- A mashup comprises one or more applications and orchestrations.
 - **Blueprint File**- A file that is created by Mashup Composer and contains mashup design elements. It contains roles, scripts, icons, tables, workflows, and orchestrations. This file is deployable to any other database.
 - **Orchestration**- A container to collect related orchestration workflows as part of a mashup.
 - **Application** - A collection of elements that work together in an interactive business process to solve a business requirement, such as managing a team's work tasks or tracking customer support calls. Applications typically contain workflows, fields, forms, roles, projects, reports, and notifications. Applications can include orchestrations that emit events that execute activities in other tools or applications. Orchestrations can be used to combine applications and create mashups.
 - **Role** - A collection of application-related privileges. Roles provide one way to assign multiple Business Mashups privileges to users and groups. Users and groups may have different roles in different projects, and a user or group can be assigned to multiple roles. Examples of the types of permissions associated with a role are the ability to read and update fields; the ability to perform specified actions on items, attachments, notes, and reports; and the ability to specify access to, or restriction from, certain transitions. Designers create roles in Mashup Composer as part of a mashup, which can comprise multiple applications. The roles span the applications within the mashup.
 - **Forms** - The pages in the Web interface in which users submit, transition, and update items. Designers can use quick forms or create custom forms for states and transitions.
 - **Transitions** - A key element of workflows, transitions activate a primary item's movement from state to state in the workflow process.
 - **States** - A key element of a workflow, states are positions that a primary item resides in while moving through the workflow process. States can also be considered a stopping point along a workflow's path.
 - **Workflow** - A collection of states, transitions, and fields that define an organization's tracking process.
 - **Deployment** - The process by which a developer or an administrator makes a mashup defined in Mashup Composer available on a host environment. The deployment can be performed from Mashup Composer or Mashup Manager.

- **Mashup Repository** - A Serena Mashup Manager component that provides versioning capabilities, including check in, check out, and labeling for design elements and mashups created in Serena Mashup Composer. Version management capabilities allow application designers to collaborate on the creation of design elements. See also Undo Check Out, Get Latest, and Publish.

If you need more advanced information on creating and modifying business mashups, the following options are available:

- Serena Business Mashups Documentation and Online Help
- [Serena Mashup Composer demos](#)
- [Serena Education](#)

Mashup Composer

You use Mashup Composer to design the structure of a mashup and its constituent applications (referred to in earlier versions of TeamTrack as solutions). This includes defining the tables, workflows, roles, overrides, and forms in the application. Multiple applications can be combined in each mashup that you define in Mashup Composer.

In addition, mashups defined in Mashup Composer can optionally include orchestrations, which you use to coordinate web service-enabled systems to extend the standard behavior of applications to integrate with other systems in your environment. For example, you could define an orchestration that responds to the creation of an item in the Application Engine by calling a web service to update an in-house requirements management system, portal, or third-party component. Mashup Composer's orchestrations coordinate web services using a wide variety of steps, including decision, while, for each, throw, scope, and compensate, to control flow and manipulate data.

Multiple Mashup Composer users can collaborate to create or modify designs independent of the runtime environment. The designed mashups can then be deployed to the end-user runtime using either Mashup Composer or Mashup Manager.

Logging In to Serena Mashup Composer

Prerequisites:

You must install Serena Mashup Composer on your machine before you can launch it. You can install Serena Mashup Composer either by running the Serena Mashup Composer installer or the Serena Mashup Server installer with the Custom option.

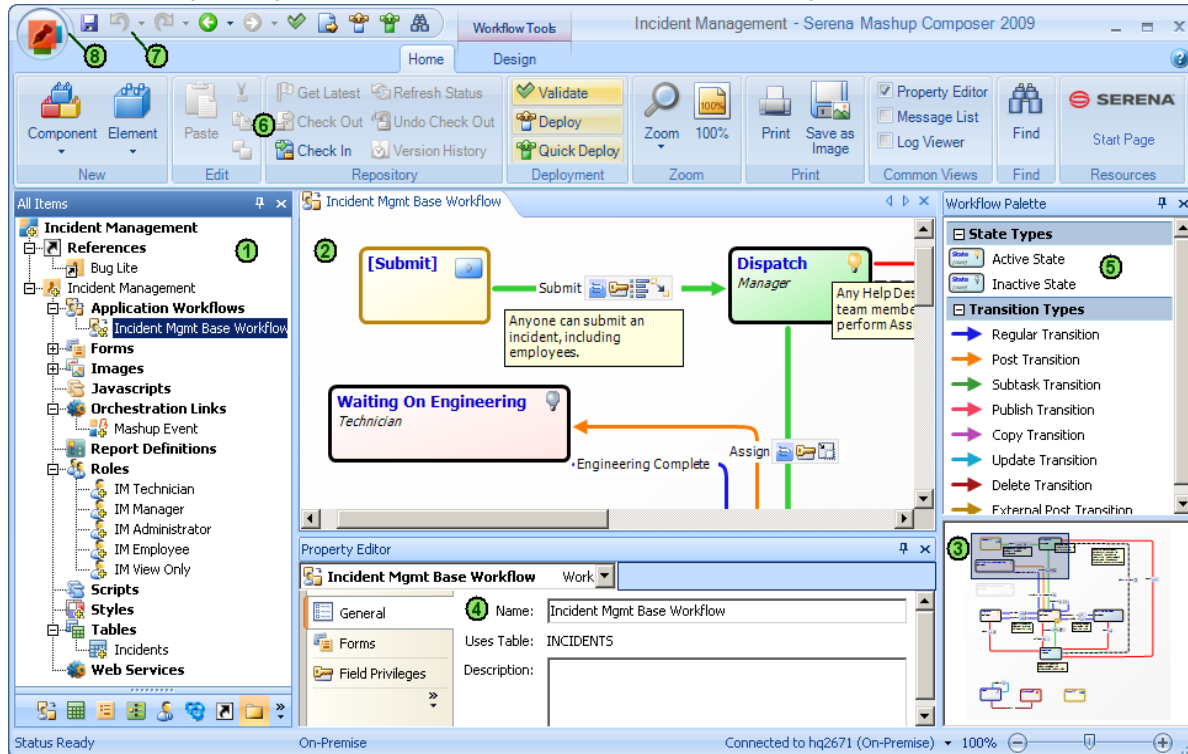
To log in to Serena Mashup Composer :

1. Launch Serena Mashup Composer by selecting the program under the Microsoft Windows **Start** menu.
2. If it is the first time that you have logged in to Serena Mashup Composer, you will be prompted that you have not set up a connection to the remote repository. You will be prompted to either:
 - **Connect Now** - Select this option to access the mashups and applications in the repository. See the following step for information on configuring connection information to the repository.

- **Work Offline** - Select this option to work on a mashup locally. This would mean that you would either import an existing mashup file or create a new mashup. You will not have access to any of the mashups in the Mashup Repository.
3. If you chose to **Connect Now**, the Repository panel of the Options dialog appears. Enter the log in information for your Mashup Repository including the URL, user name, and password. The Mashup Repository URL will look like the following `http://your_server:port/mashupmgr/services/AppRepositoryService` where the default port number is **8085**.
 4. After Serena Mashup Composer opens, you can choose to open, check out, or create a mashup from the main menu.

Parts of the Serena Mashup Composer Interface

Serena Mashup Composer window is divided into these main parts.





1. **Mashup Explorer** – The Mashup Explorer represents the open mashup as a hierarchical "tree" of items. The mashup itself is the uppermost level of the tree.
2. **Editor Pane** – The editor pane appears in the center of the Mashup Composer window. The content of this area changes depending on the element that you are editing.
3. **Zoom Preview** – For the form and workflow editors, a zoom preview appears in the lower right of the Mashup Composer window. The shaded rectangle represents the portion of the total form or workflow that is visible in the editor window; you can drag the rectangle to move to a different part of the form or workflow.
4. **Property Editor** – The property editors appear at the bottom of the Mashup Composer window, beneath the design element being edited. Forms, roles, tables,

and the other design elements have different properties, and the corresponding property editor groups those properties in tabs that appear at the left edge of the property editor.

5. **Palette** – For the form, table, and workflow editors, a palette of related objects appears to the right of the Mashup Composer window. You can drag these objects onto the form, table, or workflow in the editor pane.
6. **Ribbon Bar** – The ribbon bar, near the top of the Mashup Composer window, provides a central location for the commands you use to perform design tasks. The ribbon bar contains commands appropriate to the design element you are editing. The commands in the ribbon bar are grouped into the Home, Design, Annotation, and Script tabs.
7. **Quick Access Toolbar** – The quick access toolbar, at the top of the Mashup Composer window, contains commonly used commands.
8. **Main Menu** – The main menu (similar to the File menu in other programs) contains a set of common commands and a list of recently opened mashups. You open the main menu by clicking the Mashup Composer button in the upper left corner of the Mashup Composer window.

Mashups

The mashup is a container which holds all the information for the applications, orchestrations, roles, tables, and forms. While working with a mashup, you will perform the following actions on the mashup:

- **Import** - Importing a mashup brings the mashup into your Mashup Composer where you can modify it before you choose to deploy it to your Mashup Server. Note that what you import is specifically known as a **mashup blueprint**. To import the mashup blueprint, select **Import from File** from the main menu.
- **Check in** - Serena Business Mashups has version control to manage your mashups. The mashups are checked in to central archive called the *Mashup Repository*. Other mashers can then check out the entire mashup or particular parts of the mashup to work on. The mashup is locked in the repository, preventing problems that would result from other mashers from working on the same components at the same time. The Check In, Check Out, Undo Check Out, Get Latest Version, and View History commands are all available from the main menu.
- **Publish** - Publishing is the act of packaging a mashup that you created in Mashup Composer and making it available in Mashup Manager. Publish a mashup from Mashup Composer by clicking on  **Publish**.
- **Deploy** - Deploying a mashup makes it available on an Mashup Server. If enabled, you can deploy directly from Mashup Composer by clicking on  **Deploy**. Deploying a mashup invokes an automatic check in and publish of the mashup. For more information on deployment, see the *Serena® Mashup Manager Guide*.



Note: For Mashup Composer 2008 (R1 - R3), the mashup must not have any new (undefined) target servers. If there are, you must use Mashup Manager to deploy the mashup before the mashup can be deployed from Mashup Composer.



Tip: Watch the <http://www.serena.com/mashups/demos/Mashup-Minutes/Publish-Deploy/Publish-Deploy.htm> on publishing and deploying. This brief video gives you a tutorial of how to publish and deploy a mashup.

Mashup Repository

Business Mashups includes a repository for the design elements that you create in Mashup Composer. While it is not intended to be a full-featured source control manager, it does support basic features, such as limited versioning and patching. After you create a mashup in Mashup Composer, you can check it in to the repository where others with design responsibilities can open it and check out design elements they need to modify.

The repository operations that are available when you right-click a design element in Mashup Explorer are Check In, Get Latest, Check out, Undo Check Out, and Show History.

Working Offline

Use the control near the bottom right corner of the Mashup Composer window to toggle the connection to the configured repository. Your connection status shows you as either "Offline" or "Connected to *ServerName (ServerType)*" (where *ServerType* indicates whether you are connected to an on-demand or on-premise server).

The ability to toggle this setting makes it possible to work on your mashup without a network connection. However, if you work offline, you cannot check design elements in or out, open mashups in the repository, or publish and deploy mashups.

If you switch to working offline while a mashup is open, Mashup Composer gives you the opportunity to download any design elements that are not yet saved to the Local Cache.

Local Cache

This special area on the file system of your computer is where Mashup Composer stores design elements while you work on them, both before you check them in to the repository and any time they are checked out. Initially, Mashup Composer creates the Local Cache in the directory allocated by Windows for the Windows login ID that was in effect when you installed Mashup Composer. If you need to specify a different location, you can do so on the **Repository** tab of the Mashup Composer Options dialog box.

Switching Repositories

Each mashup you check in to a repository is associated with that repository. For example, the mashup only appears in the **Open Mashup** dialog box if that repository is specified in the Mashup Composer **Options** dialog box. This is true even if you are working offline. For your convenience, Mashup Composer retains the connection information you specify for multiple repositories, so you can switch among them as needed.

Fields

The core of the Business Mashups infrastructure is the Business Mashups database. The database consists of two types of tables: **primary** tables and **auxiliary** tables. Both types hold records of information, called items. **Fields** in your primary and auxiliary tables hold specific type of information within the item. You add fields to the tables to allow your application to track the information.

Understanding the difference between the two tables lets you understand where you should add fields to store information.



Tip: Watch the <http://www.serena.com/mashups/demos/Mashup-Minutes/Customizing-Data/Customizing-Data.htm> on publishing and deploying. This brief video gives you a tutorial of how to publish and deploy a mashup.

Primary Tables

Primary tables store primary items, which are routed through workflows. Each application has one primary table in the Business Mashups database. The primary table is created automatically when you add an application to a mashup.

A primary table stores a record for each item that follows the corresponding workflow. Primary tables contain a combination of required system fields, optional system fields, and custom fields. These fields are used to collect data as the primary item progresses through the workflow. Workflows depend on the primary table to hold the fields and actual records created by progress through the workflow.

When Business Mashups Web interface users with the proper privileges submit, transition, update, and perform other operations on primary items, they update the corresponding records in the primary table.

Auxiliary Tables

Auxiliary tables store auxiliary items, typically information related to primary items. Auxiliary items support the progression of tracked items, but they do not follow a

workflow. Examples of auxiliary items include company and contact records. The Business Mashups database includes system auxiliary tables (Companies, Contacts, Problems, Resolutions, and others).

Auxiliary items typically contain information that is collected once and used repeatedly. Auxiliary tables allow this information to be stored separately from primary items, making it easily shared and reusable across multiple applications.

Because auxiliary tables typically store static information, they are often used to create relationships between tables. Relational fields can be added to any auxiliary or primary table to reference information contained in auxiliary tables. This is the basis for field dependencies, which let you populate selection lists in a selection or relational field type, based on selections in another field.

Forms

Forms are pages in the Web interface in which users submit, transition, update, and view items. In Mashup Composer, you specify which forms appear for items in an application. You can choose the automatically generated forms, called *quick forms*, or create custom forms for primary and auxiliary items.

For primary items, each application workflow has a default state form and a default transition form. The state form provides a read-only view of the field values of a primary item as the primary item resides in a particular state. The transition form enables users to update primary items when they execute a transition, such as submit, copy, or update. All states and transitions in the application workflow use the default forms unless you override them for an individual state or transition.

For auxiliary items, each auxiliary table is associated with a view form and an edit form. The view form provides a read-only view of the field values for an auxiliary item. The edit form lets users submit and update auxiliary items.



Tip: Watch the <http://www.serena.com/mashups/demos/Mashup-Minutes/Customizing-Forms/Customizing-Forms.htm> on publishing and deploying. This brief video gives you a tutorial of how to publish and deploy a mashup.

To edit an existing form in your pre-built mashup:

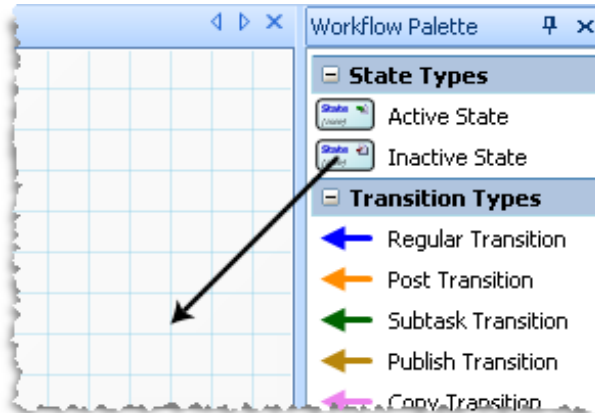
1. In the Visual Designer display of Mashup Composer, select the form to edit. It will appear in the editor.
2. Create visual sections on the form by draggin container controls (Expander, GroupBox, Panel, and Tab) onto the form, configuring the rows and columns of the containers as needed.
3. Drag field controls, detail controls, and other controls onto the form as needed. Each field control and detail control can be used only once on the form.
4. Use the tabs in the form **Property Editor** to view and modify the various aspects of the selected form:
5. To view a mockup of the form, click **Preview** on the Design tab of the ribbon.

Adding a State

You can add states to an application workflow or sub-workflow. Primary items in your system are either active or inactive when they reside in each state.

To add a state:

1. From the workflow palette, drag **Active State** or **Inactive State** to the workflow editor.



The state name field is displayed.

2. Type a name for the state, and press Enter.
3. To reposition the state, drag it to a new location in the window.

Adding a Transition

You can add transitions between states in an application workflow or sub-workflow.

To add a transition between states:

Note: These steps do not apply to Copy or Update transitions.

1. From the workflow palette, drag a transition type onto the state in which you want the new transition to begin.
2. Release the mouse button.
3. Click on the state in which you want the new transition to end.
4. Type a name for the state, and press Enter.

To add a Copy or Update transition to a state:

1. From the workflow palette, drag the Copy or Update transition onto the state.
2. Type a name for the state, and press Enter.

Chapter 4: Administrators

This section discusses frequently performed procedures that administrators perform when they begin using Business Mashups.

- [Getting Started as an Administrator \[page 31\]](#)
- [Managing Changes to Mashups \[page 32\]](#)
- [Mashups and Snapshots \[page 32\]](#)
- [Project Configuration \[page 41\]](#)
- [Setting Field Values \[page 44\]](#)
- [Overview of Users and Groups \[page 47\]](#)
- [Mashup Manager \[page 51\]](#)
- [Web Administrator \[page 52\]](#)
- [Mashup Administrator \[page 52\]](#)

Getting Started as an Administrator

The **administrator** is responsible for the daily running of Serena Business Mashups. The tools that the administrator uses are primarily Mashup Manager and either Web Administrator (for On-Demand) or Mashup Administrator (for On-Premise).

Key tasks that administrators perform on this mashup include:

- Assigning users to roles
- Assigning default values to fields for a project
- Adding new projects
- Assigning privileges to a user



Tip: For additional information on administering Serena Business Mashups, the following resources are available:

- Serena Business Mashups Documentation and Online Help
- Serena Mashup Composer <http://www.serena.com/mashups/demos.html>
- <http://www.serena.com/services/education/> with Serena Business Mashup classes

Managing Changes to Mashups

Prerequisites:

To be able to move your changes to production, you must have the appropriate permissions. These permissions are set for each mashup level in Mashup Manager and on the Deployment tab in Mashup Administrator.

After you have updated a mashup or application, you will want to move these changes to your Application Engine Web Server. The following procedure discusses the routes to move your changes to production.

The steps to move your changes into production depend on your installation:

1. If a masher has made the changes to a mashup in Serena Mashup Composer, they must publish the mashup before you can deploy the changes to Mashup Repository.
2. After the mashup has been published to Mashup Repository, deploy the changes to the Application Engine Web Server. If you are using a staging or test server to verify the changes before moving into production, you would deploy the changes to that server. If you are using only a production server, you would deploy the changes directly to production.



Note: Mashers can perform a deploy operation directly from Serena Mashup Composer. This requires that they have the correct permissions and set up. See the Serena Mashup Composer documentation for more information. The deploy operation will perform a check in and publish automatically.

3. If you are using a staging or testing environment, promote the tested mashup to your production Application Engine Web Server using Mashup Manager. Promotion takes a snapshot and then promotes that snapshot to the production server.

If you use a different Mashup Manager for your testing environment and your production environment, you must save the snapshot to a file and then import the snapshot file into your production Mashup Manager. Here is the complete procedure:

- a. Take a snapshot of the deployed mashup in the staging environment.
- b. Save the snapshot to a file.
- c. Copy that file to a network location accessible by your production environment's Mashup Manager.
- d. Load the file into Mashup Manager.
- e. Promote the snapshot to your production Application Engine Web Server.

Mashups and Snapshots

There are two ways to transfer information about business mashups, a mashup or a mashup snapshot.

A **mashup** is the container for one or more applications and orchestrations that address specific business requirements. Mashups, applications and orchestrations are designed in *Mashup Composer*. Mashups are published into the *Mashup Repository* where they can be deployed or edited by other mashers.

A **mashup snapshot** is only available in on-premise installations. A snapshot captures a mashup that is running on an Application Engine server at a particular moment in time, including configuration entities such as users, projects, and reports. Snapshots are used to save or transfer configuration information from one system to another, such as from a testing system to a production system. Note that the use of snapshot requires that the two systems be identical.

Refer to Serena Business Mashups Documentation for information on how to use mashups and mashup snapshots for your environment.

Configuring Mashups

After you deploy a mashup to the Serena Mashup Server, use the following steps to configure applications included in the mashup.



Note: Managed Administrators must be granted the appropriate privileges before they can configure applications they deploy.

To configure applications after they have been deployed, perform the following steps in Mashup Administrator:

1. Depending on the size of the mashup you have deployed to the Application Engine, it may take several minutes before you can view the mashup's applications and other elements in Mashup Administrator. To view newly deployed mashups, select **Refresh Views** from the **View** menu.
2. Add projects and assign them to the application workflow:
 - a. On the Projects tab, select the position within the project hierarchy to place the new project.
 - b. Click **Add**. The Add Project dialog box opens to the General tab.
 - c. Complete the fields in the Add Project dialog box, selecting the application workflow as the **Workflow Name** from the drop-down list.
 - d. Click **OK** when you are done making your selections in the Add Project dialog box. Your new project appears in the project hierarchy.
3. Add user accounts as needed, and assign them to roles included in the application, or to groups. Verify that these users have the privileges they need to access the projects, work with data, and transition items.
4. Edit the application workflow and add selections to user-type fields:
 - a. On the **Workflows** tab, select the application workflow and click **Edit**.
 - b. On the **Default Fields** tab, select the field to add selections, and then click Edit. The Edit Field Properties dialog box opens.
 - c. On the **Attributes** tab, select the Allow Override check box.
 - d. On the **Options** tab, click Add, and then make the following selections:
 - For User and Multi-User fields, select individual users or members of particular groups as selections. If the user selections needed for the field are members of a group, you may ease long-term maintenance by selecting Member of: Group rather than individual user selections.

- For Multi-Group fields, select one or more group names from the list.
- e. Save your changes to the field and the workflow.
 5. Edit auxiliary tables associated with the application and add selections to user-type fields.
 6. Configure your project as necessary, such as enabling submits and setting overrides.
 7. Log in to the Web interface and test your work. The typical URL for the Web interface is `http://serverName/tmtrack/tmtrack.dll?` .

See the *Serena[®] Mashup Administrator Guide* for detailed information on configuring applications.

Deploying a Mashup

Prerequisites:

You must have the following privileges to deploy a mashup:

- **Deploy Mashups** (in an on-premise installation, set in Mashup Administrator)
- **Deploy** (set in Mashup Manager)

The following tasks must be completed before you can deploy a mashup:

- The mashup was published from Mashup Composer.
- Any endpoints and target servers used in the mashup were verified or created in the destination environment.

Deployment terminates with an error message if there is an orchestration in the mashup and the destination environment does not have at least one ALF event manager and one JBPM engine.

If the mashup that you are deploying contains a report with the same name as an existing report in the target environment, and the two reports are in the same project, are stored in the same table, and have the same access level (public or private), deployment generates a warning about duplicate reports.



Important: If the mashup uses an unsupported older schema version, attempting to deploy the mashup will generate an error. In this case, you must first open the mashup in Mashup Composer and then republish the mashup before deploying it.

Deploy a mashup when you want to take a mashup created in Mashup Composer and make it available on the Application Engine runtime server.



Note: (on-premise installations only) The Global Mashup (and any mashup containing the Global Application) typically should be deployed only to environments in the same environment set from which it was originally loaded. For more information, see [About the Global Mashup and Global Application \[page 40\]](#).



CAUTION:

In a scenario in which multiple mashup developers are working on mashups and there are multiple mashup versions and patches, make sure that you don't undo someone's work that has already been deployed to the target environment (for example, as a patch to version 2.0 labeled 2.0.1) by deploying a mashup version (for example, version 3.0) that does not contain that person's updates. If version 3.0 was developed directly from version 2.0 by User A, and meanwhile User B has created 2.0.1 as a deployed patch to version 2.0, the changes made by User B must be manually applied to the to the latest version before deployment.

The best approach is to always perform a "get latest" from the repository before deploying. This guarantees that you have the latest changes from other mashup designers. If you don't do this, you risk undoing someone else's work. For example, a script might have been deployed by a co-worker and will now no longer be in production after your deployment.

If you want to make incremental changes to a mashup currently running in an environment, the "patch context" feature enables you to do so. For more information, refer to the *Serena[®] Mashup Composer Guide*.



Tip:

If you are deploying a mashup that contains references to other mashups, each referenced entity (for example, a table) must already exist in the target environment when you deploy the mashup in order for the mashup to work. Therefore, if you have any circular references (for example, mashup A refers to mashup B, and mashup B refers to mashup A), you must deploy A, then B, and then A again (or B, then A, and then B again).

If you are deploying the *global mashup* [\[page 68\]](#) as well as other mashups that refer to the global mashup, deploy the global mashup, then the others, and then finally the global mashup again.

You can deploy a mashup from a variety of locations in Mashup Manager, such as the **Home** tab, the **Mashup** tab, and the **Environments** tab. Depending on where you start the deployment from, Mashup Manager fills in as much information as it knows about. For example, if you start a deployment from the **Mashup** tab, the source mashup is already entered for you.



Note:

Business Mashups provides Web services for publishing and deploying mashups. The WSDL file is available at the following URL:

`http://host:port/mashupmgr/services/AppRepositoryService?wsdl`


To deploy a mashup, perform the following steps:

1. From the **Home** tab, click **Deploy a Mashup**.
2. In the **Deploy** dialog box on the **Source** screen, do the following:
 - a. Select a mashup from the list on the left.
 - b. Select the version that you want to deploy from the list on the right.
 - c. Click **Next**.
3. On the **Destination** screen, select an environment to which you want to deploy the mashup, and then click **Next**.
4. If there are application or orchestration endpoints that need to be mapped, perform the following actions on the **Mappings** screen:
 - a. Select an endpoint that doesn't have a destination.
 - b. Click **Choose Destination Endpoint**.
 - c. From the list, select a destination endpoint.
 - d. Repeat these steps for each endpoint that doesn't have a destination.

Although Mashup Manager automatically creates all system endpoints and also creates external endpoints dynamically with each deployment, the external endpoints require some human attention in case the "location hint" provided to Mashup Manager by Mashup Composer doesn't match the Application Engine endpoint.



Note: To map endpoints in a mashup, you must have first created the target servers or endpoints in the destination environment. You can click the **Create Endpoint** link in the **Destination Endpoints** window to launch the **New Endpoint** dialog box.

5. On the **Mappings** screen, click **Done**. You see the **Summary** screen displaying the choices that you have made. Click **Source**, **Destination**, or **Mappings** to make any needed changes before you deploy the mashup.
6. If necessary, change the **Settings** for the deployment.
 -  **Important:** (on-premise installations only) When you deploy the Global Mashup or any mashup containing the Global Application, set the **Stop Deploy** option to **if any warning occurs**. In this way if you inadvertently deploy the wrong Global Mashup or Global Application, the deployment will stop and give you an opportunity to confirm you are deploying the mashup to the correct environment.
7. If you want to schedule the deployment for a later time, do the following:
 - a. Click **Schedule?** to show the scheduling options.
 - b. In the Date/Time field, enter a date or click the calendar icon and select a date.
 - c. Enter a time or click the clock icon to select a time to start the deployment (in the local time zone specified by the Application Engine user profile).

-
- When you are satisfied with all of your choices for the deployment, click **Deploy**. You see either the Deployment Started summary page or the Deployment Scheduled summary page showing the choices that you made.

If you scheduled the deployment for a later time, you can close the **Deploy** dialog box or click **Show Activities** to see the deployment status. If you chose to deploy the mashup immediately, you can also click **View Log** to see the results of the deployment.

Promoting a Mashup Snapshot

Prerequisites:



Restriction: This topic pertains only to on-premise installations of Serena® Business Mashups.

You must have the following privileges to promote a mashup snapshot:

- **Deploy Mashups to This Host** on the destination server (set in Mashup Administrator)
- **Promote to This Host** on the destination server (set in Mashup Administrator)
- **Export Mashups to This Host** on the source server (set in Mashup Administrator)
- **Deploy** for the mashup that you are deploying (set in Mashup Manager)

You must also verify or add any endpoints and target servers used in the mashup in the destination environment.

Promote a mashup snapshot when you want to replicate a mashup from one environment to another. This transfers the mashup design, originally created in Mashup Composer, and configuration data set up by an administrator, such as projects, users and groups.



Tip: The Global Mashup (and any mashup containing the Global Application) typically should be promoted only to environments in the same environment set from which it was originally loaded. For more information, see [About the Global Mashup and Global Application \[page 40\]](#).



Note: Projects are never deleted during promotion. If projects are deleted in a test environment, for example, they are not deleted when the mashup is promoted to a production environment. You can manually delete projects in Mashup Administrator, however.

You can promote a mashup snapshot from a variety of locations in Mashup Manager, such as the **Home** tab and the **Environments** tab, to name a few. Depending on where you start the promotion from, Mashup Manager fills in as much information as it knows about. For example, if you start from the **Environments** tab, the destination environment is already entered for you.



Note: You can also use a promotion profile to promote a mashup snapshot.

To promote a mashup snapshot:

- From the **Home** tab, click **Promote a Mashup**.

2. In the Promote dialog box on the Source page, decide whether you want to take a snapshot as part of the promotion or use a snapshot taken previously. Then click one of the following:

Option	Description
Live	In the Source – Live Snapshots screen, select an Environment and then a Mashup in that environment. Click Next .
Saved	In the Source – Saved Snapshots screen, select a snapshot. Click Next .

3. On the Destination page, select an environment to which you want to promote the mashup snapshot, and then click **Next**.
4. On the Entities page, select each application in the Applications and choose which of the configuration elements you want to promote.
5. If there are application or orchestration endpoints that need mapping, on the Mappings page do the following:
 - a. Select an endpoint that doesn't have a destination.
 - b. Click **Choose Destination Endpoint**.
 - c. From the list, select a destination endpoint.
 - d. Repeat these steps for each endpoint that doesn't have a destination.
6. On the Mappings page, click **Done**. You see the Summary page showing the choices you have made. Click **Source**, **Destination**, **Entities** or **Mappings** to change them before you promote the mashup snapshot.
7. If necessary, change the **Settings** for the promotion.



Important: When you promote the Global Mashup or any mashup containing the Global Application, set the **Stop Promotion** option to **if any warning occurs**. In this way if you inadvertently promote the wrong Global Mashup or Global Application, the promotion will stop and give you an opportunity to confirm you are promoting the mashup snapshot to the correct environment.

8. If you want to schedule the promotion for a later time, do the following:
 - a. Click **Schedule?** to show the scheduling options.
 - b. In the Date/Time field, enter a date or click the calendar icon and select a date.
 - c. Enter a time or click the clock icon to select a time to start the deployment (in the local time zone specified by the Application Engine user profile).
9. When you are satisfied with all of your choices for the promotion, click **Promote**. You see either the Promotion Started summary page or the Promotion Scheduled summary page showing the choices you made.

If you scheduled the promotion for a later time, you can close the Promote dialog box or click **Show Activities** to see the promotion status. If you chose to promote the mashup snapshot immediately, you can also click **View Log** to see the results of the promotion.

Accessing Existing Mashups

Prerequisites:

This procedure requires that you have installed Serena Mashup Server, Serena Mashup Composer and Mashup Administrator.

This procedure describes how to access your existing mashups and applications that exist on your Application Engine Web Server. It applies to you when you are using the sample database or an upgraded database which has existing mashups or applications. If you are using a new database, you must create a mashup or import a pre-built mashup into Serena Mashup Composer.

There are three components through which you can access mashups and applications: Mashup Manager, Mashup Composer, and Mashup Administrator.

To edit or configure your applications, which means adding new projects, users, groups, and privileges, use **Mashup Administrator**. Launching Mashup Administrator and connecting to your database either through a remote connection or through the ODBC (same machine) displays your existing applications broken down on each of the tabs.

To deploy or promote your mashups, which means moving the mashup or snapshot to an Application Engine Web Server, use **Mashup Manager**. Open Mashup Manager in a web browser and view the available mashups by selecting the different views such as mashups, snapshots, and environments. Note the following:

- You need the appropriate privileges on the Deployment tab to log in to Mashup Manager.
- The Mashups view only displays mashups in the repository. See the following procedure for importing files into the Mashup Repository from Application Engine Web Server.

To edit and design your mashups and applications, such as changing the workflow and modifying forms, use **Serena Mashup Composer**. Getting the mashups into Serena Mashup Composer requires that you perform the following steps:

1. Get the existing mashups from Application Engine into the Mashup Repository:
 - a. Open Mashup Manager in a Web browser.
 - b. Click **Environments**, and then click **Default Environment**.
 - c. Click on the **Mashups** tab for the Default Environment.
 - d. Right-click on each mashup and select **Get Mashup from Application Engine**.
2. Allow the user to access the mashup in Serena Mashup Composer by selecting **Privileges** in Mashup Manager and ensuring the user has **View**, **Edit**, and **Publish** permissions for the mashup.
3. Import the mashup from the Mashup Repository into Serena Mashup Composer:

- a. Launch Serena Mashup Composer and choose to connect to the repository, entering the URL, user name and password to connect to the repository. This user needs to have been granted access to the mashup above.



Tip: Selecting a field and pressing **F1** will display the online help topic for the connect dialog. This topic has a sample URL to cut and paste. You will only need to add your server name and port number (default is 8085)

- b. From the main menu, select **Import from Repository**.
- c. Select the mashup to edit and click **Open**. The mashup will open in Serena Mashup Composer. See the Serena Mashup Composer online help for more information on using Serena Mashup Composer.

About the Global Mashup and Global Application



Restriction: This topic pertains only to on-premise installations of Serena[®] Business Mashups.

Every Business Mashups database that you create in Mashup Administrator includes a Global Mashup, a special mashup that contains only the Global Application. The Global Application initially includes the system auxiliary tables—Companies, Contacts, Problems, Resolutions, and others—and their associated default icons.

When you create an environment, you see the Global Mashup listed on the environment's Mashups sub-tab as **Global Mashup (environment-set-name)**. For the Global Mashup to be available to designers using Mashup Composer, you must get the mashup from the Application Engine server. This puts the mashup in the Mashup Repository, and it now shows on the **Mashups** page in Mashup Manager.



CAUTION: The Global Mashup or any mashup containing the Global Application should be deployed and promoted *only* to an environment in the same *environment set* as the environment from which the Global Mashup was originally loaded. If you deploy or promote the Global Mashup or any mashup containing the Global Application to a different environment set, the Global Mashup in the destination environment will contain everything in the deployed Global Mashup, and some system-provided elements in the destination Global Mashup will be overwritten.



Important: When you deploy or promote the Global Mashup or any mashup containing the Global Application, set the **Stop Deploy** or **Stop Promotion** option to **if any warning occurs**. In this way if you inadvertently deploy the wrong Global Mashup or Global Application, the deployment or promotion will stop and give you an opportunity to confirm you are deploying the mashup to the correct environment.

The Global Application is referred to by all mashups that use its contents. Deploying the Global Mashup (or any mashup that contains the Global Application) affects all mashups that contain or refer to the contents of the Global Application.

Promotions Involving the Global Application

To replicate users and groups (and other global configuration entities) from one environment to another, you must promote the Global Mashup or any mashup that contains the Global Application.

When the Global Application is part of a promoted mashup (for example, when you promote the Global Mashup), the following design and runtime data elements associated with the Global Application are promoted:

Design	Runtime
<p>Auxiliary tables not directly associated with an application. This includes system auxiliary tables (Companies, Contacts, Problems, Resolutions, Languages, String Identifiers, Strings) and any customer-added auxiliary tables that do not belong to a particular application and could be used across applications (for example, a Parts table).</p> <p>Any design data associated with the auxiliary tables (for example, Fields, Dependencies, Labels, Custom Forms, and Icons).</p> <p>Mashup Scripts associated with the Global Application.</p> <p>Resources (such as images, style sheets, and JavaScript files) associated with the Global Application.</p> <p>Custom strings associated with the Global Application.</p> <p>Triggers.</p> <p>Web services not associated with a particular application.</p>	<p>Users</p> <p>Groups</p> <p>Folders</p> <p>User field selections for global auxiliary tables</p> <p>Notifications associated with global auxiliary tables</p> <p>Reports associated with global auxiliary tables</p> <p>User calendars</p>

Project Configuration

Projects serve as storage bins for primary items, which follow a workflow. Projects are displayed in a hierarchy, with each level of the hierarchy representing a different project.

- [Adding Projects \(On-Demand\) \[page 41\]](#)
- [Adding Projects \(On-Premise\) \[page 43\]](#)

Adding Projects (On-Demand)


Prerequisites:

- On-demand customers: Administrators or Mashers group membership
- On-premise customers: Add Project privilege

The Serena Web Administrator enables you to add projects within an application's project hierarchy. When you add a project beneath a parent project, the new project initially inherits the parent project's configuration settings, role assignments, and field overrides. You can change these as necessary.

On-premise customers can set additional project configuration settings and workflow overrides in Mashup Administrator.

To add a project:

1. In the Web Administrator by clicking , and click the **Manage Mashups** button. The mashups and applications that you can access appear on the **Mashups** tab.
2. Select the application to which you want to add a project and click **Open**. The project hierarchy appears on the **Projects** tab.
3. Do one of the following:
 - To add a subproject, select the project that will serve as the parent for the new project. Click **Add Project** and then select **Add Sub Project**.
 - To add a project at the root, click **Add Project** and then select **Add Root Project**.

The new, untitled project appears under the parent project or at the root of the project tree.

4. Complete the **Project Settings** tab.

Field	Description
Project Name	Type the name of the project. For best results, name projects similarly to the workflow with which they are associated. Note that sibling projects cannot have identical names.
Alternate Name	Provide a different name for the project if you do not want users without view privileges to see the name of the project.
Workflow	Select the Use Parent's Workflow check box for the project to follow its parent's assigned workflow. To assign a different workflow, clear this check box and select a different workflow from the list. The workflow must be of the same type as the parent project's workflow.
Allow new items to be submitted into this project	Select this check box to enable users to submit new items into the project. If this check box is cleared, the project serves as a placeholder project and items cannot be submitted into it. You can also clear this check box if you want the project to be available for searching and reporting, but you do not want new items submitted into the project.

5. To specify role assignments for the project, click the **Roles** tab.
6. To specify field overrides for the project, click the **Field Overrides** tab.
7. When you are finished configuring the project, click **Save Changes**.

Adding Projects (On-Premise)

When a new project is created, it is always derived from an existing project. Any new project is ultimately a child, or sub-project, of the Base Project. The Base Project cannot be assigned a workflow or contain primary items; it can only contain sub-projects.

To add a project to your on-premise system:

1. Launch Mashup Administrator.
2. On the **Projects** tab, select the position within the project hierarchy where you want to place the new project.
3. Click **Add**. The **Add Project** dialog box opens to the **General** tab.
4. In the **Project Name** box, type the name of the project. For best results, name projects similarly to the workflow with which they are associated. Note that sibling projects cannot have identical names.
5. In the **Name Displayed to Users Without View Privilege** box, type a different name for the project if you do not want users without view privileges to see the name of the project.
6. From the **Workflow Name** drop-down list, select the workflow to assign to the project.
 - When you create a project directly under the Base Project, you can assign any workflow to the project.
 - If you are adding a sub-project, the **Use Parent Project's Workflow** check box is selected by default. When this check box is selected, the project uses its parent project's assigned workflow and the **Workflow Name** drop-down list is disabled.
 - To assign a different workflow from the **Workflow Name** drop-down list, clear the **Use Parent Project's Workflow** check box and select a different workflow. The workflow must be of the same type as the parent project's workflow.
7. Select or clear the **Allow New Items to be Submitted** check box as needed. This option determines whether users can submit primary items into the project. By default, this check box is selected. Clear the **Allow New Items to be Submitted** check box to prevent users from submitting items into the project.
8. Select the **Allow Anonymous Submit** check box to enable users without user accounts to submit items into the project. This option is disabled by default. For details on setting up the anonymous submit feature for a project, refer to the *Mashup Administrator Help*.
9. You can select the **Use Parent Project's Sequence Numbers** check box, which uses the sequence numbers assigned from a parent project instead of defining unique sequence numbering. Clear this check box to allow customization of the numbering sequence. The following options are available:
 - Enter a number in the **Next Number** box to assign the starting item number for the project.
 - Enter a number in the **Zero Fill to: __Digits** box. This option adds the specified number of zeros to the beginning of an item number. You may disable zero filling

by entering a zero in the property field. For best results, however, use zero filling since the item numbers are stored as strings and are sorted accordingly.

10. From the **Default State Form** drop-down list, select a form for all states in the project. This overrides the default form specified for the workflow assigned to the project. Quick Form indicates that the built-in form will be used; other forms are custom forms created in Mashup Composer. From the **Default Transition Form** drop-down list, select a form for all transitions in the project. This overrides the default form specified for the workflow assigned to the project. Quick Form indicates that the built-in form will be used; other forms are custom forms created in Mashup Composer.
11. Click **OK** when you are done making your selections. Your new project appears in the project hierarchy.

After creating your projects, you may want to tailor the fields, states, and transitions that have been set up in the assigned workflow for a particular project. To do this, edit the project in the hierarchy.

Setting Field Values

The core of the Business Mashups infrastructure is the Business Mashups database. The database consists of two types of tables: **primary** tables and **auxiliary** tables. Both types hold records of information, called items. **Fields** in your primary and auxiliary tables hold specific type of information within the item. You add fields to the tables to allow your application to track the information.

Understanding the difference between the two tables lets you understand where you should add fields to store information.



Tip: Watch the <http://www.serena.com/mashups/demos/Mashup-Minutes/Customizing-Data/Customizing-Data.htm> on publishing and deploying. This brief video gives you a tutorial of how to publish and deploy a mashup.

Primary Tables

Primary tables store primary items, which are routed through workflows. Each application has one primary table in the Business Mashups database. The primary table is created automatically when you add an application to a mashup.

A primary table stores a record for each item that follows the corresponding workflow. Primary tables contain a combination of required system fields, optional system fields, and custom fields. These fields are used to collect data as the primary item progresses through the workflow. Workflows depend on the primary table to hold the fields and actual records created by progress through the workflow.

When Business Mashups Web interface users with the proper privileges submit, transition, update, and perform other operations on primary items, they update the corresponding records in the primary table.

Auxiliary Tables

Auxiliary tables store auxiliary items, typically information related to primary items. Auxiliary items support the progression of tracked items, but they do not follow a workflow. Examples of auxiliary items include company and contact records. The Business Mashups database includes system auxiliary tables (Companies, Contacts, Problems, Resolutions, and others).

Auxiliary items typically contain information that is collected once and used repeatedly. Auxiliary tables allow this information to be stored separately from primary items, making it easily shared and reusable across multiple applications.

Because auxiliary tables typically store static information, they are often used to create relationships between tables. Relational fields can be added to any auxiliary or primary table to reference information contained in auxiliary tables. This is the basis for field dependencies, which let you populate selection lists in a selection or relational field type, based on selections in another field.

Setting Default Values for Fields

Administrators set default values for specific fields. This simplifies the choices that the end users make when transitioning items in Serena Business Mashups. You can override the general attributes of a field on a project-by-project basis, which allows you to tailor the workflow for specific projects.

For example, lets say that your workflow has a **Review** state with an owner of **QA Manager**. You also have two subprojects, one to track the problems with the client application and one to track problems on the server application. You can set default value for the **QA Manager** field to the *Client QA Manager* for the client subproject and set the default value for the **QA Manager** field to the *Server QA Manager* subproject associated with the server subproject. The item would then be automatically assigned to the correct QA manager when the item moves to the **Review** state.



Note: Field overrides and default values are inherited by a project's subprojects unless they are set at the subproject level.

The default field values can be set in the Web Administrator for On-Demand customers or in the Mashup Administrator for On-Premise customers.

The following procedure is how an On-Demand customer would set a default value. For On-Premise customers, use a similar procedure with the Mashup Administrator.

To edit a field:

1. Access the Web Administrator using the icon in the Web Interface.
2. Click **Manage Mashups** and then choose a mashup which contains the fields to edit.
3. Choose the project which contains the field.
4. On the **Fields Overrides** tab, select the field that you want to edit.
5. Click the **Edit** button.
6. On the **Attributes** tab, you can check or clear the following options:

Field	Description
Field Name (read-only)	Displays the name of the field as specified in Mashup Composer
Description (read-only)	Displays the description of the field as specified in Mashup Composer

Field	Description
Required	Requires users to set a value for the field. By default, required fields appear in red, italic text in the forms. . On-premise customers can customize the appearance of required fields in Web Administrator .
Allow Mass Update	Makes the field available when users mass update items in the project. Mass updates allow users to simultaneously transition, update, or delete multiple primary items.
Read Only	Sets the field so that it can be viewed but not edited by users.
Require Appended Text <i>(Journal fields only)</i>	Requires users to append text to the field. This option is available if the Required option is checked.
Append Only <i>(Journal fields only)</i>	Allows users to append text to existing journal entries. Clear this option to allow users to edit existing journal entries and append new ones.

7. Click the **Options** tab to view the default value set in Mashup Composer, if any. For user fields, you can select a default value if the field has been associated with a role in Mashup Composer. To set or change the default value of other fields, modify the field in Mashup Composer.
8. Click **OK** and then **Save Changes**.

Populating Auxiliary Table Data

You can view the auxiliary table fields in Mashup Composer, but you must use the Web interface to populate the fields with data.

To populate the data:

1. Log in to the Web interface.
2. Click **Search** in the left pane.
3. Under **Advanced Tasks**, click **Manage Data**.
4. Select the auxiliary table from the **Manage** list.
5. Click **Create New Item**.
6. Provide data for all required fields, and any other fields according to the needs of your organization.

Overview of Users and Groups

Each user has an account with characteristics such as a user login ID, product-access type, password, and e-mail address. Each account has privileges associated with it that determine the information the user can access and functions the user can perform in the Web interface. Some of these privileges are assigned to each individual user; others are assigned to users as part of their group membership or role assignment.

In addition, some users are granted administrative privileges that enable them to administer portions of your Business Mashups system. This feature, referred to as Managed Administration.

Groups are also available. When multiple users have the same privilege set, you can place them in a group and assign privileges to the group as a whole rather than to each individual. A user can be assigned to one or more groups. For best results, begin by establishing the groups you need and assigning appropriate privileges to that group. When you later create user accounts, those users can be assigned to a group (or groups) and the group's privileges are automatically granted to the users.

Groups also simplify the process for populating *User*, *Multi-User*, and *Multi-Group* fields used in workflows. If a group is added as a field selection for these fields, users can select members from a drop-down list of all members of the group displayed in the field. After you create your group and user accounts, you may want to review the selections for the *User*, *Multi-User*, and *Multi-Group* fields in your system.

You can use the Mashup Administrator to fully manage user and group accounts. Administrators with appropriate privileges can also perform limited user account management from the Web Administrator.

Adding User Accounts (On-Demand)


Prerequisites:

- On-demand customers: Administrators group membership

You can add user accounts and specify general information, group memberships, and preferences. Specific privileges are determined by the user's group memberships, along with the roles that users are assigned on projects.

You can also add a user account by copying an existing account. Copying user accounts enables you to easily add users based on a "template" account. The copied user account contains all of the privileges, role and group memberships, preferences, application settings, and options of the template account, except for personal data, such as login ID, password, and e-mail address. If preferred projects are specified for the template account, these are copied to the new account.

To add a user account:

1. Launch the Serenab Web Administrator by clicking , and click the **Manage Users** button. The **Users** page opens.
2. Do one of the following:
 - Click the **Add User** link.
 - Select an existing user account and click the **Copy User** link.

3. On the **General** tab, provide personal data, such as login ID, password, and e-mail address.
4. Click the **Membership** tab to assign group memberships to the new user.
5. Click the **User Profile** tab to assign initial preferences for the user.
6. Click **OK**.

For more information on this procedure, refer to the **Web Administrator Online Help**.

Adding User Accounts (On-Premise)

Prerequisites:

You must install Mashup Administrator on your machine. You can install Mashup Administrator either by running the Serena Mashup Server installer or the Serena Mashup Composer installer.



Note: This procedure applies to new, existing and sample database users.

Before you start using Business Mashups, you must create user accounts.



Important: In addition to creating your users, create a global administrator who can access all parts of the product.

To create a user account:

1. Launch Mashup Administrator.
2. Add the user account on the User tab by clicking **New** on the User tab and add the necessary information for the user account such as user ID and password. See the *Serena[®] Mashup Administrator Guide* or the Mashup Administrator online help for more information on creating a user account.
3. Give the user the appropriate privileges. The following are some examples of the privileges different types of users would have. See the *Serena[®] Mashup Administrator Guide* or the Mashup Administrator online help for more information on creating a user account.

Option	Description
Global Administrator	<p>A super user account has all privileges on both the user and the administration privileges tab. The user has access to the entire system. It is good to have a super user account during testing and to ensure that you have one back up account that is independent from a specific user.</p> <p>If you are using the sample database, you can use the existing managed administrator Bill and give him the deployment permissions on the Deployment tab.</p> <p>If you are using an upgraded database which already contains a super administrator account, you will only need to add the deployment permissions to this account.</p>
Managers who will deploy and promote mashups	<p>Users who will be accessing Mashup Manager, where promoting and deploying mashups occurs, need to have the appropriate permissions on the Deployment tab in the Mashup Administrator. These users must have Managed Administration product access, and also they must have the Remote Administration user privilege to log in to Mashup Manager.</p>
End users	<p>Need to have the necessary privileges either through association with a role or assigned to them to perform the actions on the items in workflows that they need access to. See the <i>Serena[®] Mashup Administrator Guide</i> for more information on setting privileges for users.</p>



Note: You can assign application-specific privileges directly to each user or by assigning the user to a group or role, which has those privileges. You can also assign the user to a group, and the group to role to allow the user to inherit privileges.

Associating Groups with User Fields

Prerequisites:

The mashup must have been deployed to the runtime before you can edit the fields using Mashup Administrator.

User selection fields allow you to choose a user as a value for that field. The field requires that you choose the groups or users that are available for selection. You choose the groups for selection in the Mashup Administrator.

You can have different values available for these fields based on a project level. In other words, you can use the same workflow yet have it be routed to completely different users based on the default values that you set at the project level.

To assign groups to User selection fields:

1. In Mashup Administrator, select the workflow that contains the fields and click **Edit**.

2. Select the **Default Fields** tab on the Edit Workflow dialog.
3. Select the field to associate and click **Edit**.
4. On the **Options** tab of the Edit Field properties dialog, click **Add** and choose your group.
5. To set a default value for the field, select **Allow Override** on the **Attributes** tab and then select the default value on the **Options** tab.

The users that are members of the associated groups are now available for selection as values for the fields. You can set different field values for each project and subproject by setting default values and enabling/disabling selection values.

About Roles

Roles are created in Mashup Composer as part of a mashup, which can comprise multiple applications. Roles span the applications within the mashup, and serve two functions:

- They are a named collection of privileges. For example, a role named User could be a collection of privileges suitable for someone to whom items are assigned but who has no administrative tasks.
- They are a means to populate selection lists in the Web interface for *User*, *Multi-User*, and *Multi-Group* fields. You associate roles with these fields in Mashup Composer.

The two functions can be connected or disconnected. When the functions are connected, a role provides privileges and populates a selection list. When the functions are disconnected, a role either populates a selection list with no privileges, or only provides privileges.

Roles are distinct from groups, which are named collections of users. A group could be created for a particular project, for example, or for a division within the company. You can assign roles to a group.



Note: If you associate a user or group with a role, and the role contains privileges that conflict with the user or group level of product access, those privileges are not granted to the user or group.

Workflows that you design in Mashup Composer control how items move through states in the Web interface. Every state in a workflow must have one primary owner and can also have a secondary owner. The primary owner field must be a *User* field. The secondary owner field can be a *User*, *Multi-User*, or *Multi-Group* field. The fields are populated with users who are assigned the role or roles associated with the field. You specify the roles that are associated with the fields in the Property Editor for the field in Mashup Composer.

The selected owner is responsible for performing an action and then moving the item to the next state. For example, a new item in an issue tracking application starts in a Submit state, and then moves to an Assigned state. The owner of the Assigned state could be someone with the Development Lead role. He or she assigns the item to someone with the Engineer role. The item moves through various states in the workflow until it is closed.

When a mashup is deployed and is available to an administrator configuring the applications using Mashup Administrator, that administrator can manage the roles in the context of actual users, groups, and projects.

When groups or users are copied, role assignments are copied with them. Also, when groups or users are imported through LDAP using a template group or user, the role assignments associated with the template are copied to the new group or user.

In Mashup Composer, you can specify roles by which to restrict a transition. In Mashup Administrator, you can also specify groups that can access the transition, and you can see but not modify the role-based restrictions. If any role-based restrictions on the transition exist, you cannot clear the **Restricted** check box in Mashup Administrator.

Mashup Manager

Mashup Manager is the interface which enables developers and administrators to deploy and promote mashups. The Mashup Manager server hosts the Mashup Repository, which provides versioning capabilities for design elements created in Mashup Composer.

Logging In to Mashup Manager

Prerequisites:

Remote Administration privilege (in an on-premise installation, set in Mashup Administrator)

To log in to Mashup Manager, perform the following steps:

1. In the **Address Bar** of your browser, type the URL provided by your Business Mashups administrator. An example of the Mashup Manager URL is `http://mashupservername:port/mashupmgr`, where *mashupservername* and *port* are the server and port number where Mashup Manager is running.



Note: The default Mashup Manager port number is 8085.

2. Depending on the authentication settings specified by your administrator, you might be prompted to log in to the Web interface. In the **User ID** box, type your login name. In the **Password** box, type your password.



Note:

If SSO is enabled, you see a **Request password reset** link below the **Login** button. To reset your password, click this link, enter your user name in the **User ID** field, and then click **Submit**. You will receive an e-mail message containing a link to verify your request. After you click this link, you will receive another e-mail message containing a temporary password.

3. Click **Sign In**. Mashup Manager opens to the **Home** page.



Note:


If you have the necessary privileges, you see a **Log In As** link near the upper-right corner of the **Home** page. You can click this link to log in as another user. Enter the other user's user name in the **Log In As** field.

Any actions that you perform while logged in as another user are logged under your name *on behalf of* the other user. While logged in as the other user, you have the set of privileges assigned to that user.

To return to your session logged in as yourself, click **Exit**.

Web Administrator

The Serena Web Administrator enables users with administrative privileges to perform configuration tasks, including adding projects and assigning them to workflows (On-Demand only), creating user accounts and assigning them to roles and groups, and more.

Access the Web Administrator through the Web Interface by clicking .

Mashup Administrator

This is the interface that Business Mashups administrators use to assign roles to users and groups, set overrides, and view the workflows designed in Mashup Composer. Business Mashups administrators also perform tasks related to projects, folders, notifications, and Web service end-point definition.

Mashup Administrator includes the Database Creation wizard. The wizard prepares new databases for use with Business Mashups by adding the necessary tables and database information. If you have a new database, you must use the Database Creation wizard in Mashup Administrator to create database.



Note: New users find it confusing as to when you use Mashup Administrator to configure an application and when you use Serena® Mashup Composer™ to edit an application. See [Using Mashup Administrator and Mashup Composer \[page 54\]](#) for more detailed information on when you should use each interface.

Logging In to Mashup Administrator

Prerequisites:

You must install Mashup Administrator on your machine before you can launch it. You can install Mashup Administrator either by running the Serena Mashup Server installer or the Serena Mashup Composer installer. If you have not prepared your database for use with Business Mashups, launch Mashup Administrator, cancel the connection dialog and choose **Tools | Create New Database** to run the Database Connection wizard.

To log in to Mashup Administrator:

1. Launch Mashup Administrator by selecting **Start | Programs | Serena | Business Mashups 2008 | Serena Mashup Administrator**.
2. If it is the first time that you have logged in to Mashup Administrator, the **Connect Dialog Box** will display. This dialog lets you choose from the following options:
 - **ODBC Data Source Name** – Select the ODBC Data Source Name option to connect to the database through an ODBC data source.
 - **Remote Connection to Web server** - Select this option to connect to the database via a Application Engine Web Server. The remote connection allows you to perform administrator functions from computers other than the Business Mashup server computer.
 - **Remote Connection via Proxy Server** - Select this option to connect to a Application Engine Web Server via a proxy server. The remote connection allows you to perform administrator functions from computers other than the Business Mashup server computer.

- **Reconnect at Startup** - Select this check box if you would like the Administrator to automatically log back into the same database or server the next time you start the program.
- **ODBC** - Click this button to open the ODBC Data Source Administrator, which allows you to add, configure, or remove existing data sources.

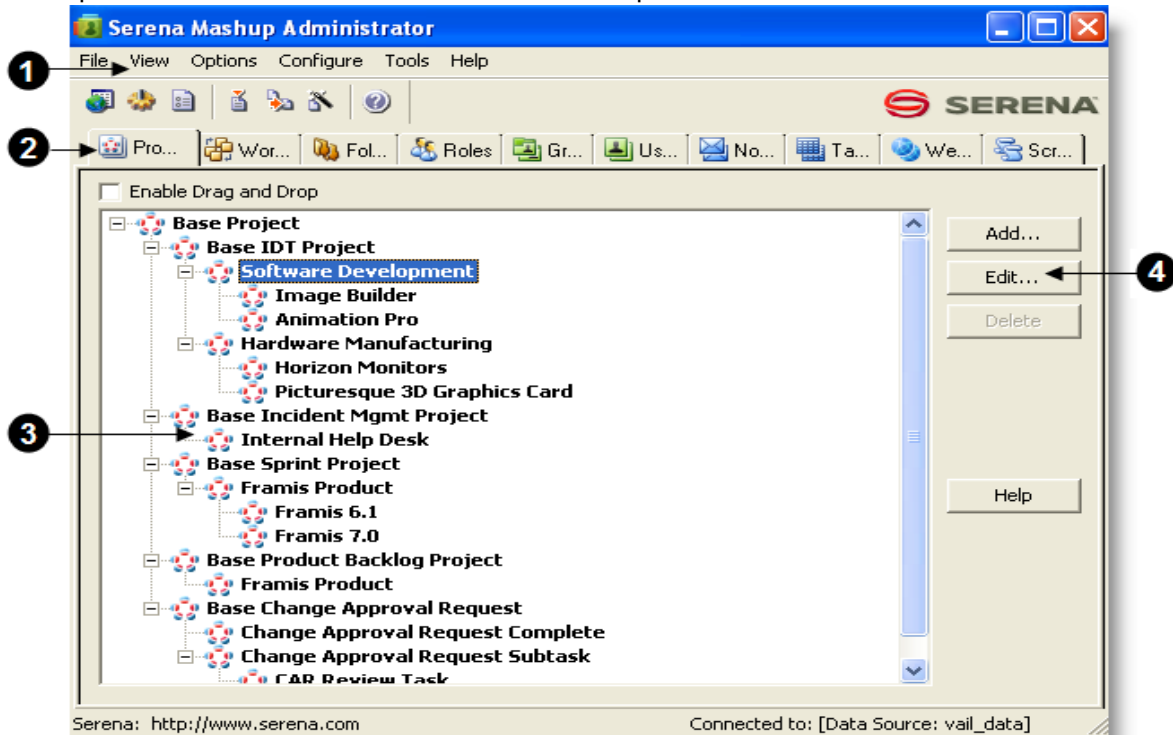


Note: Initially, you must connect to your database using the ODBC Data Source Name option. Later, you can connect to the database through a remote connection if needed.

After successfully connecting to the database, the contents of your database will appear in Mashup Administrator.

Parts of the Mashup Administrator Interface

Mashup Administrator is divided into these main parts.



1. **Mashup Administrator toolbar** – The main toolbar provides commands that pertain to all of Mashup Administrator. For example, through the command bar you can connect to a database, create a new database, or manage your license options.
2. **Mashup Administrator tabs** – The navigation tabs provide access to projects, workflows, folders, roles, groups, users, notifications, tables, web services, and scripts.
3. **Content pane** – The content pane contains information for the tab that is selected. This could be a tree view as shown in the preceding screenshot or a list view of the different elements.

4. **Content pane controls** – The buttons on the right side of content pane let you manipulate the content. For example, you can select an item in the content pane and click **View** to display further information about that item or you could click **Edit** to change properties for that item.

Using Mashup Administrator and Mashup Composer

Business Mashups has two clients, Mashup Composer and Mashup Administrator, that you use to create and manage applications and orchestrations.

In general, these two clients are used as follows:

- **Mashup Composer** is used to design mashups, applications, and orchestrations. This includes designing states, transitions, forms, actions, and other elements. You also use Mashup Composer to create roles and tie the roles to particular states or transitions.
- **Mashup Administrator** is used to change projects, including adding, removing, or modifying projects and project overrides. You also use Mashup Administrator to add user and group accounts, assign users to specific roles, and create notifications.

The following sections describe the tasks you perform in each client.

Project Management

The following table describes the project management tasks that are performed from each client:

Task	Tool
Creating and editing projects	Mashup Administrator

Workflow, State, and Transition Management

The following table describes which workflow, state, and transition management tasks are performed from each client:

Task	Tool
Creating a workflow (application or orchestration)	Mashup Composer
Adding states to a workflow	Mashup Composer
Adding transitions to a workflow	Mashup Composer
Adding, deleting, or modifying actions for a state or transition (including scripts, triggers, mashup events, web services, and transitions)	Mashup Composer
Restricting transitions by type	Mashup Composer
Creating forms	Mashup Composer
Associating privileges with a form (using roles)	Mashup Composer

Table and Field Management

The following table describes which table and field management tasks are performed from each client:

Task	Tool
Adding a primary or auxiliary (non-system) table	Mashup Composer
Adding system auxiliary tables (created when you create a database with Create Database wizard)	Mashup Administrator
Adding fields to a table	Mashup Composer
Modifying field properties	Mashup Composer
Modifying field overrides in a workflow, state, or transition	Mashup Composer
Setting default values for a field	Mashup Composer
Setting general field overrides	Mashup Composer
Setting field overrides for specific projects or user fields	Mashup Administrator
Adding roles to a user field	Mashup Composer
Adding groups or users to a user field	Mashup Administrator
Allowing data import for primary or auxiliary tables	Mashup Administrator

User, Group, and Role Management

The following table describes which user, group, and role management tasks are performed from each client:

Task	Tool
Creating roles	Mashup Composer
Creating users and groups	Mashup Administrator

Task	Tool
Assigning permissions to roles	Mashup Composer
Assigning privileges to users	Mashup Administrator
Assigning privileges to groups	Mashup Administrator
Assigning users to groups	Mashup Administrator
Assigning users and groups to roles	Mashup Administrator
Modifying privileges for specific project or field	Mashup Administrator

Chapter 5: Glossary

- [Key Terminology \[page 57\]](#)
- [Terminology Changes \[page 58\]](#)
- [Glossary \[page 61\]](#)

Key Terminology

Serena Business Mashups has some key terminology that is sure to get you confused. I have worked with the product for eight years and some of the terms still baffle me.

However, it helps not only to write about the product but to understand what is written about the product by understanding the following terms.

The following list show key terms that each type of user should understand:

- Key Terms for End Users
 - [Transitions \[page 80\]](#)
 - [States \[page 79\]](#)
 - [Workflow \[page 82\]](#)
- Key Terms for Mashers
 - [Mashup \[page 70\]](#)
 - [Blueprint File \[page 63\]](#)
 - [Orchestration \[page 72\]](#)
 - [Application \[page 61\]](#)
 - [Role \[page 76\]](#)
 - [Forms \[page 68\]](#)
 - [Transitions \[page 80\]](#)
 - [States \[page 79\]](#)
 - [Workflow \[page 82\]](#)
 - [Deployment \[page 65\]](#)
 - [Mashup Repository \[page 71\]](#)
- Key Terms for Administrators
 - [Mashup \[page 70\]](#)
 - [Project \[page 74\]](#)
 - [Workflow \[page 82\]](#)

- [Primary Owner \[page 74\]](#)
- [Promotion \[page 75\]](#)
- [Deployment \[page 65\]](#)
- [Mashup Repository \[page 71\]](#)
- [Application Engine \[page 61\]](#)
- [Orchestration Engine \[page 72\]](#)
- [Transitions \[page 80\]](#)
- [States \[page 79\]](#)

If you used a previous version of Serena Business Mashups or Serena TeamTrack, refer to [Terminology Changes \[page 58\]](#) for information on differences in terminology between the different releases.

Terminology Changes

With the new release of Serena[®] Business Mashups, some terminology has been changed to better fit the new functionality available in the product. Other terms have slightly different meaning in the context of new functionality, such as groups with the introduction of roles.

The following table shows the new terminology alongside the old terms. Explanations are included to clarify some of the changes.

Old Term	New Term	Explanation
Administrator client	Mashup Administrator	The TeamTrack Administrator client is now known as the Mashup Administrator. This client runs locally on Windows systems and is used to configure applications contained in your mashups.
Browser interface	Web interface	The end-user interface is now referred to as the Web interface.
Browser Administrator	Web Administrator	The TeamTrack Browser Administrator, which is launched from the Web interface, is now referred to as the Web Administrator.

Old Term	New Term	Explanation
Deploy	Promote and deploy	<p>Promote is the process by which an administrator can replicate a deployed mashup and configured application entities from one environment to another. In previous versions of TeamTrack, this process was referred to as deployment.</p> <p>Deploy has a new meaning in the context of Serena Business Mashups. Deploy is the act of taking a mashup created in Mashup Composer, providing missing information like the target runtime server and any Web service endpoints that have not yet been defined, and making it available in a runtime environment. Deployment is no longer optional; all changes made to an application in Mashup Composer must be deployed before they are available in the runtime environment.</p>
Deployment Tool	Serena [®] Mashup Manager	The Deployment Tool has been replaced by a Web-based component called Mashup Manager. This tool is responsible for the deployment and promotion of mashups to runtime environments. Mashup Manager also stores versions of mashups and their design elements as they are published or checked in using Mashup Composer.
Solution	Application	<p>An application contains a collection of elements that solve a business need. The application has one primary table and contains elements such as workflows, fields, forms, roles, projects, reports, and notifications. In previous releases, this was known as a solution. In addition, a new entity has been added called a mashup. A mashup typically acts as a container for one or more applications, one or more auxiliary tables, and any related orchestrations.</p> <p>During the upgrade from TeamTrack, each solution is converted into an application and placed into its own mashup, meaning that each mashup contains one application after upgrade.</p>
TeamScript	Mashup Script	The programming language built around VBScript 4.0 is now referred to as Mashup Script.
TeamTrack	Serena [®] Business Mashups, Business Mashups, and Application Engine	The product TeamTrack is now referred to as Serena [®] Business Mashups, or Business Mashups in its simplest form. The legacy component that executes state/transition workflows is referred to as the Application Engine.

Old Term	New Term	Explanation
TeamTrack API	Mashup API	TeamTrack C++ API is now referred to as the Mashup API.
TeamTrack Broker Service	Serena Broker Service	The service that enables you to configure and manage the Notification Server and Mail Client is now referred to as the Serena Broker Service.
TeamTrack Web server	Application Engine Web Server	The TeamTrack Web server is now called the Application Engine Web Server. Informally, the Web server is also referred to as the runtime server.
Users and Groups	Users, Groups, and Roles	In previous releases, privileges were assigned to specific users and groups. Now, there is an additional method using roles , which allows you to define privileges sets and assign them to users or groups. Roles are defined in Mashup Composer, and application-related privileges are assigned to these roles. System-level privileges are assigned to users and groups in Mashup Administrator. You can continue to assign privileges to specific users or groups, but you may choose to ease privilege management by migrating to roles.
Workflow	Application workflow and orchestration workflow	An application workflow is a collection of states and transitions in an <i>application</i> . This was simply referred to as workflow in previous releases. In addition, there is a new type of workflow called an orchestration workflow , which is used in <i>orchestrations</i> to define the flow and decision branches.

Glossary

Action

A predefined activity tied to a transition or state. When the transition occurs, so does the associated action; or when the state is entered or exited, the associated action occurs. An action can cause the transition of a related item, such as a child or subtask.

Administrative Lock

Administrative locks ensure that only one administrator is editing a specific portion of the Mashup Administrator at any given time.

Advanced SQL Query

SQL, or Structured Query Language, is an ANSI-standard language for selecting records from a database. The Advanced SQL reports in the Web interface provide two ways for users to implement or control SQL: Business Mashups Processed SQL and Pass-Through SQL.

Anonymous Submit

Allows users who do not have Business Mashups user accounts to submit items into selected projects.

"Any" State

A special state provided by the system that enables designers to create transitions from every state in the workflow.

Application

A collection of elements that work together in an interactive business process to solve a business requirement, such as managing a team's work tasks or tracking customer support calls. Applications typically contain workflows, fields, forms, roles, projects, reports, and notifications. Applications can include *orchestrations* that emit events that execute activities in other tools or applications. Orchestrations can be used to combine applications and create *mashups*.

Application Engine

The component in Serena Business Mashups that executes *applications*.

Application Table

This generally refers to a primary table associated with a given application or applications.

Application Tabs

Application tabs filter the buttons on the **Application** toolbar for each application in the Web interface.

Application Workflow

A collection of states, transitions, and fields that define an interactive business process. All primary items follow a workflow process.

Archive Wizard

Enables administrators to archive inactive primary items and change history information for active and inactive items. Archived items are stored in special archive tables in the database. The archive feature allows archived items to be restored and purged.

Audit Log

A historical record of *deployments*, *promotions*, and *application* changes shown in *Mashup Manager*.

Auxiliary Item

Refers to items that are stored in auxiliary tables. Auxiliary items support, but do not follow, an *application workflow* process. Auxiliary table records are useful because they store auxiliary information that can be referred to repeatedly by one or more *applications*. Contact and company records are examples of auxiliary items.

Auxiliary Relational Field

A Relational field that refers to an auxiliary table. Users can select values from the auxiliary table for fields contained in other primary or auxiliary tables.

Auxiliary Table

Auxiliary tables store information such as contacts, companies, problems, and resolutions. Auxiliary tables do not follow a workflow process, but are ideal for storing information needed repeatedly.

BPEL

See *Business Process Execution Language*.

BPEL Engine

See *BPEL Server*.

BPEL Server

A software component that parses BPEL code, creates specific instances of the processes described by that code, and makes the processes available as Web service *endpoints*. Also manages any needed execution details, such as state information.

Base Project

A header project located at the root level of the project hierarchy. The base project cannot be assigned a workflow or contain primary items.

Base Workflow

A workflow that always exists at the root level of the workflow hierarchy in Mashup Administrator. The base workflow serves as a placeholder for all workflows in the system and it cannot be edited, deleted, or used by any project. In Mashup Composer, the base workflow is simply called a workflow, which distinguishes it from its *sub-workflows*.

Basic Condition

A report query that allows users to define the report criteria by making selections from the list of fields.

Blueprint File

A file that is created by Mashup Composer and contains mashup design elements. It contains roles, scripts, icons, tables, workflows, and orchestrations. This file is deployable to any other database.

Broker Service

See *Serena Broker Service*.

Business Mashups API (Application Programming Interface)

A C++ API (UNIX and Windows) that offers an object-oriented, high-level interface for manipulating Business Mashups items, and a low-level interface for access to all tables and for handling of HTTP requests and browser connectivity. The Business Mashups API is suitable for batch jobs, simple custom integrations, and custom imports and exports.

Business Mashups Web Interface

Refers to the end-user interface, which is accessed from a Web browser. The Web interface is used to manage auxiliary tables, enter and track primary items, report on these items, and perform limited administrative tasks.

Business Process Execution Language (BPEL)

An Oasis standard XML-based language that is used to describe business processes that are executed across the Web through the coordination of Web services.

Calculated Field

Provides a way to measure time intervals between transitions or perform numeric calculations. This feature is available with Date/Time and Numeric fields, but is implemented for transitions.

Change History

The history of changes that occur as primary items move through the workflow or as auxiliary items are updated. By default, the Change History section appears at the bottom of the Item Details pane.

Check In

Commits changes made to a mashup or other design element to the *Mashup Repository*, and makes it available for *check-out* by other designers.

Check Out

Creates a new revision of a mashup or other design element and copies the current version from the *Mashup Repository* to a designer's local work area. The current version in the Mashup Repository is locked so that no one else can check it out and change it.

Child Project

A project derived from an existing project. Child projects are also referred to as sub-projects.

Child Workflow

See *Sub-workflow*.

Copy Transition Type

Enables users to make a copy of one primary item and place it in another project.

Create Subtask Transition

Allows users to create a new primary item in a specified project. Designers can specify that the new item be linked to the original, or principal, item and that subtasks are transitioned according to values in a specific Binary/Trinary field.

Cross-Database Posting

Enables users to post primary items to another Business Mashups database.

Custom Fields

A set of field types designers can use to create their own custom fields for data collection. Custom fields can be added to primary and auxiliary tables.

Database Locks

A feature that enables you to protect the integrity of a database so changes cannot be made to application elements in Mashup Administrator. This prevents these changes from being overwritten during promotion to this database from another environment.

Default Fields

Each workflow and project contains a list of default fields. For workflows, the default fields list is determined by the primary table on which the workflow is based. For projects, the default fields list is determined by the workflow to which the project is assigned.

Default Weight

Give numeric value to selections for Single Selection fields. Numeric values can be used with Summation fields to sum the values contained in the field.

Dependent Fields

Autopopulated fields that tailor the selection lists for dependent Single Selection, Multi-Selection, Single Relational, Multi-Relational, Multi-Group, Multi-User, and User fields. When users select a value from one field, the values available in a dependent field are limited to those specified in the dependency.

Deployment

The process by which a developer or an administrator makes a *mashup* defined in *Mashup Composer* available on a host *environment*. The deployment can be performed from Mashup Composer or Mashup Manager.

Design Element

A component of a *mashup*, such as a workflow, field, form, table, action, or an *orchestration*. Design elements created in *Mashup Composer* can be saved locally or checked in to the *Mashup Repository*.

Dynamic Column Sorting

Enables users to quickly sort columns that appear in Listing reports. Columns can be sorted in ascending or descending order.

E-mail Recorder

Automatically attaches e-mail messages sent from external e-mail clients as notes to the primary and auxiliary items from which messages were sent. The E-mail Recorder also attaches replies to these messages to items. In addition, replies to e-mail notifications can be attached to the items to which they pertain.

"E-mail" State

A state used as a starting point in a workflow for e-mail submissions or external posting of items. The "E-mail" state is available when designers set up transitions.

E-mail Submission

Allows users to submit primary items via e-mail.

E-mail Template Tags

Used to access pieces of information administrators may want to place in e-mail messages sent by the system. When the e-mail message is sent, each tag is replaced by information it represents.

E-mail Templates

Used to standardize and customize messages sent for e-mail notifications, self-registration confirmation and password change notices, and e-mail submissions. E-

mail templates used to generate messages sent from the Web interface can also be customized.

Elapsed Time

A function found within a Date/Time field that stores a value representing elapsed time in days, hours, minutes, and seconds.

Endpoint

An entity, processor, or resource that can be addressed with a Web service message. For example, an endpoint might be a URL that specifies a Web service or a supported *BPEL engine*. Endpoints have a type, a protocol, and possibly credentials necessary to connect to the service. Endpoints defined for a *mashup* must be resolved before the *mashup* can be deployed to an environment. Once the mashup is deployed, Business Mashups uses these endpoints to communicate with the orchestration engine and external services. The orchestration event manager uses the endpoints to call the proper BPEL engine.

Environment

A group of runtime hosts to which *mashups* are deployed or promoted. An environment consists of at least one Serena Business Mashups host, and possibly one or more orchestration servers and Web service *endpoints*.

Environment Set

A collection of related environments to which you want to deploy mashups and among which those mashups can be promoted. For example, an environment set might include Development, Testing, and Production environments for a single Business Mashups system; your company might have multiple environment sets. Note that the Global Mashup (and any mashup containing the Global Application) typically should be deployed *only* to environments in the same environment set from which it originated.

Escalation

The ability of one notification to generate another notification when specific conditions occur or when a specified time interval elapses. The notification that is sent is referred to as an *escalation notification*.

Escalation Notification

A notification that is sent by another notification when specific conditions occur or when a specified time interval elapses.

Evaluation License

License that allows the system to be used on a trial basis. All administrative and end-user tasks can be performed during the evaluation period.

Event-Enabled

A Serena Business Mashups application or a third-party software tool that is capable of emitting events.

Event Manager

A component that responds to events sent by event-enabled tools. The Event Manager calls orchestration workflows implemented as BPEL processes.

Event Manager Log

A record of events raised by the *Event Manager* and *Business Mashups* as shown in *Mashup Manager*.

Export

The process in *Mashup Composer* by which a designer stores a *mashup* on the file system. The resulting *blueprint file* can be reimported into Mashup Composer for continued development or imported into *Mashup Manager* for deployment. See also *Publish*.

External Access

Provides minimal set of privileges to users, such as customers or contacts.

External Users

Users who have a minimal set of privileges that allows them to submit and view certain items.

Favorite Folders

Enable users to add links to frequently used features, forms, items, and reports in folders that they create or that are provided by the system. Favorites provide a personal view of items in the system; users can view only their own favorites, not other users' favorites.

Field Sections

Provide a way to organize fields on state and transition forms in the Web interface. Organizing fields in sections provides a way to group fields for display, as well as to limit user accessibility to certain fields. When quick forms are used, field sections are used to control security and field organization. When custom forms are used, field sections control user access to fields.

Field Types

The types of fields that can be added to primary and auxiliary tables. Binary/Trinary, Multi-Selection, Single-Selection, or Summation fields are examples of the types of fields that can be added.

Field Value Searching

Enables users to locate values for selection fields, such as User fields or Multi-Relational fields. This is useful for finding the correct value for a field that may have many selections. Two types of Field Value Search options are available: *Value Find* and *Relational Field Value Lookup*.

File Associations

File associations are similar to version control actions, which display the history of source-code control operations associated with primary items. File associations differ, however, because users can add, modify, and delete them from the Web interface.

Forms

The pages in the Web interface in which users submit, transition, and update items. Designers can use *quick forms* or create custom forms for states and transitions.

From State Property

Designates the state from which a transition originates.

Get Latest

Retrieves a read-only copy of the latest revision of the selected *mashup*, *application*, *orchestration*, or other *design elements* from the *Mashup Repository* to a designer's *Local Cache*; does not create a new revision of the files. Compare to *Check Out*.

Global Administrator

Global administrators have full access to and are responsible for managing the entire Business Mashups system.

Global Application

A special *application*, contained in the *Global Mashup*, that initially includes the seven system auxiliary tables and their associated default icons. In a system upgrade, the Global Application initially also contains any other existing auxiliary tables that are not associated with a single specific application and any existing scripts and triggers used in transition actions. You can also add to the Global Application any other auxiliary tables (and associated design elements—images, Javascripts, roles, styles, and table forms) you create that you want to make available for use in multiple applications. The Global Application is also where you create scripts and triggers to be used in transition actions.

Global Mashup

A special *mashup*, included automatically in every Business Mashups database, that contains the *Global Application*. Creating a new *environment* or upgrading an existing environment typically includes getting the Global Mashup into Mashup Manager, so the contents of the Global Application are available for use in other mashups. You gain access to those contents by defining a reference to the Global Mashup in any mashup in which you want to use them.

Global Search

Allows users to search for items in multiple primary and auxiliary tables at once. Global searches can be saved as Multi-Table reports.

Group-Specific Transition

Enables administrators to limit the groups whose members can execute a particular transition.

Hierarchy Structure

A graphical representation of parent and child workflows, projects, and folders. Elements of workflows and projects can be inherited throughout the hierarchy structure.

ID Search

Enables users to search for primary items in the selected application by Item ID.

Inheritance Rules

Provide the ability to create and customize elements of the tracking system that are inherited throughout a hierarchical tree structure.

Item

A generic term for primary and auxiliary items. See also *Primary Item* and *Auxiliary Item*.

Item Notifications

Provide a way for users to subscribe to e-mail notifications pertaining to an individual primary or auxiliary item.

Item Tabs

Displays items in a tabbed view in the Web interface. Users can then limit the Item Details pane to the fields and items in a particular section.

Item Types

Describe the primary items, such as defects or change requests, tracked in a workflow. This list is populated from selections list for the Item Type field.

Journal Fields

Journal fields automatically stamp a Text field with the date/time and user ID. Designers can specify that users must append the text in a new Journal entry to an existing entry. This prevents users from modifying existing Journal entries. Designers can also allow users to edit existing Journal entries.

Knowledge Base

A collection of information stored in the Problems and Resolutions tables. Links to problem and resolution records are contained in folders, which can be accessed for internal and public viewing by Business Mashups users and anonymous users.

Launch Page

The default home page for users that provides links to frequently used information and features. From the Launch page, users can view items they own, perform common tasks, and view their favorites.

License Server

The Serena License Server allows administrators to centralize license management across multiple Serena software tools. The License Server helps administrators keep track of active licenses and versions of software used.

Local Cache

The special area on a designer's computer file system where Mashup Composer stores mashups and other design elements whenever the designer works on them, both before they are checked in to the Mashup Repository and any time they're checked out. Each Windows login ID has a separate area allocated automatically (by Windows) for its own Local Cache. Compare to *Mashup Repository*.

Locks

Three types of locks are provided: record, administrative, and database locks. Record locks block access to an auxiliary or primary item while a user is updating or transitioning it. Administrative locks ensure only one administrator is editing a specific portion of Mashup Administrator at any given time. Database locks enable you to manually lock a database to prevent changes from being overwritten during promotion activities.

Mail Client

The Mail Client controls the e-mail submission of primary items, posting of items between Business Mashups databases, and the E-mail Recorder.

Managed Administrator

An administrator granted restricted access to certain administrative features. For example, managed administrators can edit projects and workflows; add, delete, or edit user and group accounts; manage notifications, etc.

Managed Global Administrator

A managed administrator who manages other managed administrators.

Masher

The person who uses Mashup Composer to design workflows, data tables and fields, roles, forms, and other design elements. Mashers design applications and orchestrations, linking the different processes together within a mashup. Mashers are also referred to as "application developers."

Mashup

A mashup comprises one or more *applications* and *orchestrations*.

Mashup Administrator

See *Serena Mashup Administrator*.

Mashup Central

A channel containing mashup templates that lets mashup users share mashups. It helps users build mashups quickly and easily by providing a tight integration with Serena Mashup Composer. The templates in the Mashup Central are organized by category.

Mashup Composer

See *Serena Mashup Composer*.

Mashup Event

A Web service message signaling a meaningful change from an application or external tool. For example, a defect tracking application might emit an event every time a user enters a new defect. An external build tool that is event-enabled might emit a "Build_Completed" event. When a mashup event is received by an event manager, the orchestration engine is called to execute the workflow linked to the event.

Mashup Manager

See *Serena Mashup Manager*.

Mashup Repository

A *Serena Mashup Manager* component that provides versioning capabilities, including *check in*, *check out*, and labeling for *design elements* and *mashups* created in *Serena Mashup Composer*. Version management capabilities allow application designers to collaborate on the creation of design elements. See also *Undo Check Out*, *Get Latest*, and *Publish*.

Mashup Script

Mashup Script is a subset of VBScript 4.0, with Business Mashups extensions. Programmers can create and edit scripts that allow them to modify the system.

Mass Update

Mass updates allow users to transition, update, and delete multiple primary items at the same time. Mass updates can also be used to update and delete multiple auxiliary items.

Named License

Permits the use of one user license on a single workstation at one time.

Navigation Pane

Located in the left pane of the Web interface, the navigation pane provides easy access to active items in selected projects, reports, favorites, public, and Knowledge Base views.

"None" State

A special state used to define a Submit transition.

Notification Rules

Conditions that cause notifications to be executed.

Notification Server

The server used to generate notifications when certain events or conditions occur in the system. The Notification Server is also used to send all out-going e-mail, such as e-mail sent by users from the Web interface, e-mail notifications, mail client responses, and to automatically call Web service functions or execute Mashup Scripts.

Notifications

E-mail messages sent to users when certain events or conditions occur in the system. Notifications can also be used to automatically add and remove items from folders and to execute scripts.

ODBC

ODBC (Open Database Connectivity) data source contains connection information and other database specific parameters necessary to connect to a database.

Orchestration

A container to collect related *orchestration workflows* as part of a *mashup*.

Orchestration Engine

The component in Serena Business Mashups that executes *system workflows* defined in *orchestrations*. Using *Mashup Composer*, the designer can include Web services in an orchestration, which can then be executed in response to a *mashup event* or by transitions in *applications*.

Orchestration Workflow

A sequenced arrangement of Web service calls designed using *Mashup Composer*. Orchestration workflows combine Web services using loops and decision branches and define the way data is mapped between the Web services. The final arrangement is saved as a BPEL process. Orchestration workflows can be linked to *application workflows* in a *mashup* through *actions* on both *transitions* and *states*. Orchestration workflows can run asynchronously using a *mashup event*, or they can be called synchronously, where the *action* waits for the orchestration workflow to return some data. When designed to be used with a *mashup event*, orchestration workflows can also be invoked by external systems.

Overrides

A means of configuring elements of workflows and projects. Overrides can be applied at the workflow or project level to the inherited order and properties of Default fields, Transition fields, and State fields. Overrides can also be applied to transition properties.

Ownership

Ownership provides accountability for an item during the workflow process. A primary owner assigned to the item is responsible for the item while it resides in a particular state; secondary owners can have secondary responsibility for items as well.

Parent Project

Projects that contain child projects or sub-projects are referred to as parent projects.

Parent Workflow

Workflows that contain sub-workflow (child workflows).

Parent-Child Actions

Actions that transition items that are selected as values in a Primary Relational field or in which a Primary Relational field is the selected value. The transition can be executed unconditionally or can be based on the values for a Binary/Trinary field in either the original item or the item in the Relational table.

Pass-Through SQL

Used with Advanced SQL reports, pass-through SQL allows users to implement sub-queries to system tables or to other user tables. In addition, the full power of SQL (functions, aggregates, etc.) is available.

Patch Context

A patch context allows parallel and concurrent development to occur on the same *mashup*, so that patches can be applied to running mashups as ongoing development continues. When performing maintenance work, a designer can create a patch context from a "snapshot" of the mashup. The chosen snapshot serves as the baseline for the maintenance work. When a designer is working in a patch context, any changes apply only to the patch context and do not affect ongoing development of the "baseline" version of the mashup. Any number of designers can do concurrent development in a patch context.

Post Item Transition Type

Enables users to post an item from an existing primary item to another project or to another primary or auxiliary table.

Preferences

The Web interface options set for users. Preferences are set on the Preferences tab page in the Mashup Administrator or Web Administrator. With the correct privilege, users can modify their user profile in the Web interface.

Preferred Application

Determines which application tab is selected when users launch the Web interface.

Preferred Projects

Enable users to limit the list that appears in project lists in the Web interface. This enables users to quickly submit into, search, and create reports against projects that they most frequently use. When users specify preferred projects, they can easily switch between the full list of projects they can work with and their preferred project list.

Primary Item

Items, such as issues and change requests, that are submitted into projects in the Web interface and that follow an *application workflow* process.

Primary Owner

To provide accountability for primary items, a primary owner is designated for each state in the workflow. Users can only select a single user as a primary owner for each state the item resides in. This ensures that primary items always have one user who is primarily responsible for them while they resides in each state.

Primary Relational Fields

A Relational field that refers to a primary table. Users can select values from the primary table for fields contained in other primary or auxiliary tables.

Primary Tables

Tables that store information about primary items, which follow an *application workflow* process.

Principal Item

A primary item that has subtasks associated with it. Subtasks are created using the Create Subtask transition type or are manually linked together by users in the Web interface.

Privileges

Define the information and features users, members of groups, and users assigned to roles can access. The types of privileges that can be granted depend on the type of product access the user has been assigned.

Processed SQL

Used with Advanced SQL reports, Business Mashups attempts to process conditional expressions included in SQL statements.

Project

A collection of primary items that follow a workflow process. Projects are displayed in a hierarchy, with each level of the hierarchy representing a different project. A project is a means for organizing items.

Project Hierarchy Structure

A graphical representation of parent projects and child or sub-projects. The Base Project exists at the root level of the hierarchy.

Promotion

The process by which administrators can replicate a *mashup* from one host *environment* to another.

Public Folders

Contain links to items such as reports, which can be accessed by users who have been granted appropriate privileges. Notifications can also be created to automatically add items to or remove items from public folders.

Publish

The process in *Mashup Composer* by which a designer stores a complete *mashup* in the *Mashup Repository*, making it available for deployment in *Mashup Manager* or *Mashup Composer*. See also *Export*.

Publish Problem Transition Type

Allows users to publish problems and resolutions pertaining to a primary item to the Knowledge Base.

Query

A search question that determines the data retrieved from the database. Business Mashups provides two types of report query mechanisms: basic conditions and Advanced SQL conditions.

Quick Administrator

A feature that accelerates the setup process by preconfiguring each mashup with certain runtime elements after the mashup is deployed for the first time. These elements include a project for each workflow and sub-workflow in a mashup and a default set of notification and notification rules.

Quick Form

The non-custom form for a state or transition. Quick form is the name for the forms created automatically. With quick forms, fields are displayed in sections according to the permissions assigned to them. (Contrast with *custom forms*, in which permissions control only the accessibility and visibility of fields.) With quick forms, designers can use overrides to control the order in which fields appear within the sections.

Quick Links

Enables users to save and return to any page that is open in the content pane. For example, a quick link could open a specific report, the **Submit** form for a specific project, the three-pane view for a specific table, or a Web page.

Quick Transition

Quick transitions bypass the transition form in the Web interface, allowing users to transition an item with a single click. The form opens for users if there are required fields specified for the transition, however.

Record Lock

Record locks block access to an auxiliary or primary item while a user is updating or transitioning it. Administrators can determine the amount of time users are blocked from an item while it is being updated or transitioned. Locks can be manually removed by an administrator.

Relational Field Value Lookup

Provides an advanced searching mechanism that enables user to find values for Single Relational and Multi-Relational fields.

Relational Fields

Relational fields allow designers to establish relationships between primary and auxiliary tables. Single Relational, Multi-Relational, and Sub-Relational field types are available.

Remote Administration

Allows administrators to work in the Mashup Administrator via a remote connection.

Repository

See *Mashup Repository*.

Required Attachments

Designers can require that users attach a note, URL, file, or item link to a primary item before transitioning it.

Restricted Attachments

Attachments that are restricted by users' Note and Attachment privileges.

Revision

A specific instance of a *mashup* or *design element*. When designers modify an item and check it in, a new revision is stored in the *Mashup Repository*.

Rich Graphical Reports

Offer dynamic charting and animation capabilities for Distribution, Trend, and Duration reports. Adobe Flash Player is required for users to run Rich Graphical Reports.

Role

A collection of application-related privileges. Roles provide one way to assign multiple Business Mashups privileges to users and groups. Users and groups may have

different roles in different projects, and a user or group can be assigned to multiple roles. Examples of the types of permissions associated with a role are the ability to read and update fields; the ability to perform specified actions on items, attachments, notes, and reports; and the ability to specify access to, or restriction from, certain transitions. Designers create roles in *Mashup Composer* as part of a mashup, which can comprise multiple applications. The roles span the applications within the mashup.

SSO

See *Single Sign-On*.

Sample Database

An evaluation database that can be optionally installed by the Business Mashups setup program. The Sample database can be used to explore the product.

Search Features

Business Mashups offers several methods of searching for items in the Web interface: ID Search, Basic Search, Advanced Search, Global Search, Advanced Lookup Tool, and Field Value Searching.

Secondary Owner

Designers can set up a workflow so that one or more users are secondarily responsible for items while they reside in a particular state. A User, Multi-User, or Multi-Group field can be used to populate the secondary ownership property.

Self-Registration

Allows customers to automatically register themselves as external users. Automatic and Manual registration are available.

Serena Broker Service

Enables administrators to configure the Business Mashups Mail Client and Notification Server. The Broker Service can also be used to stop and start these services.

Serena Business Mashups

Business Mashups is a set of components that allow users to easily create workflows, applications and mashups. Without requiring technical IT resources, Business Mashups allows non-technical business users to build mashups that coordinate execution across applications, platforms, and teams.

Serena License Manager

The Serena License Manager (SLM) is a separate component that allows administrators to centralize license management across multiple Serena software tools. The License Manager helps administrators keep track of active licenses.

Serena Mashup Administrator

The Windows client application used to configure the Application Engine. Mashup Administrator is used to add and edit projects and notifications, manage user

accounts and authentication settings, assign users and groups to roles, and configure system settings. The Mail Client and Notification Server are also configured and managed in Mashup Administrator.

Serena Mashup Composer

A Windows client application that designers can use to create and edit *mashups*.

Serena Mashup Manager

A Web-based component that is responsible for the deployment and promotion of *mashups* to runtime environments. It also stores versions of mashups and their *design elements* as they are published or checked in using *Mashup Composer*.

Serena Mashup Server

The collection of engines required for runtime execution of mashups (for example, the application engine, the orchestration engine, the event manager, and Single Sign-On).

Single Sign-On (SSO)

Refers to Serena-installed software that enables a user to log in to a Web-based component of Business Mashups and be recognized on subsequent accesses to that component or other Web-based components of Business Mashups. This software also provides the ability for security tokens to be used in an orchestration, allowing Web services to be called without requiring the user to provide credentials at inconvenient times.

SourceBridge

An extension that integrates source code control systems with Business Mashups. SourceBridge can be used with version control applications and integrated development environments that comply with Microsoft Source Code Control Interface (MSSCCI) standards, such as Microsoft Visual SourceSafe. SourceBridge is used within the integrated development environment (IDE) or within the Serena Version Manager Windows or Web clients.

Standard Notification

Used to send e-mail messages to users when certain events or conditions occur. Standard notifications are also used to add items to and remove items from folders, call Web service functions, and execute Mashup Scripts.

State Change History

Displays in the Web interface the history of the states a primary item has resided in during the workflow process.

State Fields

A set of fields associated with a particular state. State fields are derived from the default fields list and can be customized in Mashup Composer so that users view appropriate information for a primary item while it resides in a particular state.

State Form

A form used only for viewing primary items while they reside in a particular state.

States

A key element of application workflows, states are positions that a primary item resides in while moving through the workflow process. States can also be considered a stopping point along a workflow's path.

Stopwatch

A function found within Date/Time fields that allows users to record elapsed time in the Web interface.

Sub-project

A project derived from an existing project. Sub-projects are also referred to as child projects.

Submit

The process used to add a new item to the system. Primary items are submitted into projects and tracked through their life cycle or workflow process. Auxiliary items, such as problems, are submitted into auxiliary tables.

Submit Form

A form page in the Web interface that is used to add new items to the system.

Subtask

A primary item that is associated with a principal task. Subtasks are created using the Create Subtask transition type or by users who link items together in the Web interface.

Subtask Action

Action that executes on subtask items that are created using Create Subtask transitions or that are manually linked by users in the Web interface.

Subtask Status

The value in a specified Binary/Trinary field that determines the status of subtasks residing in a specific state.

Sub-workflow

A workflow derived from an existing workflow. Subworkflows are also referred to as child workflows.

System Event Manager

See Event Manager.

System Favorite Folders

Four folders provided by Business Mashups that are located in the Navigation pane of the Web interface and accessed by users. The Inbox, Submitted Items, Transitioned Items, and Updated Items folders are System favorite folders.

System Fields

Fields provided by Business Mashups that are required for the system's operation. System fields can be edited but cannot be deleted.

System Reports

Offer information about administrative aspects of the system, such as fields, user privileges, group membership, item locks, and license usage.

Target Server

A server in an environment that handles a specific type of process, such as a *mashup event* or a BPEL process. Examples of target servers are the System Event Manager and the *BPEL server*. (The Application Engine is also a target server, but it is listed separately, under the General tab of *Mashup Manager*.) Mashups are deployed to target servers, which run the processes; *endpoints* are references to Web services or other resources that are used by the mashup while it runs.

Termination Rule

Determines the condition that stops notification escalation from occurring. The system stops sending escalation notifications once a Termination Rule becomes true.

To State Property

Designates the state to which a transition is moving.

Transition Fields

The fields that are displayed to users when a primary item is transitioned from one state to another. Transition fields can be customized so that users provide appropriate information for primary items as they move through the workflow.

Transition Form

A form page in the Web interface that contains fields for recording information about a primary item before it moves to another state in the workflow.

Transition Triggers

Used to automatically transition linked primary items. When one linked item is transitioned to another state, the item linked to it is transitioned as well.

Transitions

A key element of application workflows, transitions activate a primary item's movement from state to state in the workflow process.

Undo Check Out

Discards any changes that designers have made to a mashup or design element since it was *checked out*, leaving the item checked in and unchanged in the *Mashup Repository*. The revision number that was created on check-out is released.

Unrestricted Attachment

Attachments that can be viewed by users who have privileges to view the item to which the attachment has been added.

User Access

This access type grants full product access to users. User access is controlled by privileges.

Value Find

Represented by a **Find** button next to fields in the Web interface, Value Find capability for selection-type fields allows users to enter search criteria, such as an entire word, a few letters, or an asterisk, and then click the **Find** button to perform the search. Results appear in a drop-down list, allowing users to select a value for the field.

Version Control History

In the Web interface, displays the history version control actions associated with a primary item. File association information is also considered version control history.

Version History

In Mashup Composer, an ordered list of the revisions to a mashup or design element *checked in* to the *Mashup Repository*. The version history shows such information as who checked in the item and when.

Web Architecture

Business Mashups allows local and remote sites fully functional access to the system using a Web browser. This architecture ensures accuracy, cuts down on the duplication of effort in tracking systems, eliminates system downtime, and allows for future upgrades of the tracking system to proceed smoothly.

Web Administrator

Available through the Web interface, the Web Administrator enables users with administrative privileges to perform basic configuration tasks.

Web Interface

See *Business Mashups Web Interface*.

Web Server

The application server used to operate Business Mashups.

Web Services

Applications that are accessible using standard Internet protocols and formats such as Extensible Markup Language (XML), Hypertext Transfer Protocol (HTTP), and Simple Object Access Protocol (SOAP). Developers can implement applications that interact with Web services on any platform in any programming language, as long as the language can create and respond to messages that are sent using SOAP over HTTP.

Web Services API

The Business Mashups Web Services API enables developers to create integrations with Business Mashups that create, read, update and delete items in Business Mashups.

When Rule

Determines the condition or conditions that activate a notification.

Workflow

A collection of states, transitions, and fields that define an organization's tracking process.

Workflow Hierarchy Structure

A graphical representation of parent workflows and child workflows or subworkflows.

XML E-mail Submission

The Business Mashups e-mail submission feature includes XML parsing of the body of the e-mail message. Fields in the submitted item are populated with data contained in the message body.