Agile Product Lifecycle Management

Getting Started with Agile PLM User Guide

9.2.2.5

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Preface

Oracle's Agile PLM documentation set includes Adobe® Acrobat PDF files. The Oracle Technology Network (OTN) Web site http://www.oracle.com/technetwork/documentation/agile-085940.html contains the latest versions of the Agile PLM PDF files. You can view or download these manuals from the Web site, or you can ask your Agile administrator if there is an Agile PLM Documentation folder available on your network from which you can access the Agile PLM documentation (PDF) files.

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The Oracle Technology Network (OTN) Web site http://www.oracle.com/technetwork/documentation/agile-085940.html can be accessed through **Help** > **Manuals** in both Agile Web Client and Agile Java Client. If you need additional assistance or information, please contact My Oracle Support (https://support.oracle.com) for assistance.

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Readme

Any last-minute information about Agile PLM can be found in the Readme file on the Oracle Technology Network (OTN) Web site http://www.oracle.com/technetwork/documentation/agile-085940.html.

Agile Training Aids

Go to the Oracle University Web page http://www.oracle.com/education/chooser/selectcountry_new.html for more information on Agile Training offerings.

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Chapter 1

Introduction

This chapter includes the following:

- What's in this Manual 1
- Overview of the Agile PLM Suite 2
- What's New for the User Experience in Agile PLM 9.2.2 3

What's in this Manual

This manual is an introduction to Agile Product Lifecycle Management (PLM) and its main features across the user solutions of the Agile PLM suite. Agile PLM is a comprehensive suite of enterprise business applications, and the information in this guide is both a starting point for learning Agile as well as a "return-to" reference manual.

This Agile Manual Precedes the Solution Manuals

Chapters 2–5 provide information about the two primary client applications and introduce basic terms, concepts, and features that are used in Agile PLM. Chapters 6–10 cover features and functionality in Agile PLM 9.2.2 that all users will work with sooner or later.

Agile PLM Basics

Every new Agile user needs to have a good grasp of the material in either Chapters 2, 4, and 5, if primarily using Java Client, or Chapters 3, 4, and 5, if primarily using Web Client. Some solutions are accessed only through Web Client. Your Agile administrator has likely set up your Agile account with a "preferred client."

- Chapter 2, Navigating in Agile Java Client on page 7 — Java Client user interface is fully described
- Chapter 3, Navigating in Agile Web Client on page 27 — Web Client user interface is fully described
- Chapter 4, Concepts and Terms in Agile PLM Solutions on page 65 — the basics in Agile PLM are surveyed
- Chapter 5, Working with Business Objects on page 85 — creating objects, printing, sending, relationships, subscriptions

You can change many of your user settings to help you manage your Agile user experience. A complete list of the settings in your user object is found in User Properties Defined on page 60.

Cross-Solution Utilities in Agile PLM

The material in Chapters 6–10, within each chapter, tends to run from elementary to advanced. You

will likely need to learn some things about reports, searches, workflows, and attachments in Agile early on; however, not everything in these chapters has to be – or can be – mastered at once. For example, you could learn how to work with attachments (ch.9) but find that you do not have to work with file folders (ch.10).

- Chapter 6, Working with Agile Reports on page 123 — using and customizing the many out-of-box reports in Agile PLM
- Chapter 7, Finding Agile Data with Searches on page 145 — locating data and information in the Agile database
- Chapter 8, Routing Objects with Workflows on page 209 — routing business objects for approval and to gather other kinds of information
- Chapter 9, Working with Attachments on page 255 — Agile business objects can "carry" additional data as attachments
- Chapter 10, Working with File Folders on page 303 — more advanced capabilities with the Agile objects that hold attachment files and URLs

The Agile end-user guides all assume that you have learned the basic information presented in this guide. For instance, although each PLM solution may have its own default workflows, saved searches, and predefined reports, the basic information in this manual is preliminary to the more specific information in the various user guides.

Overview of the Agile PLM Suite

The Agile PLM suite of solutions covers five primary areas of product lifecycle management:

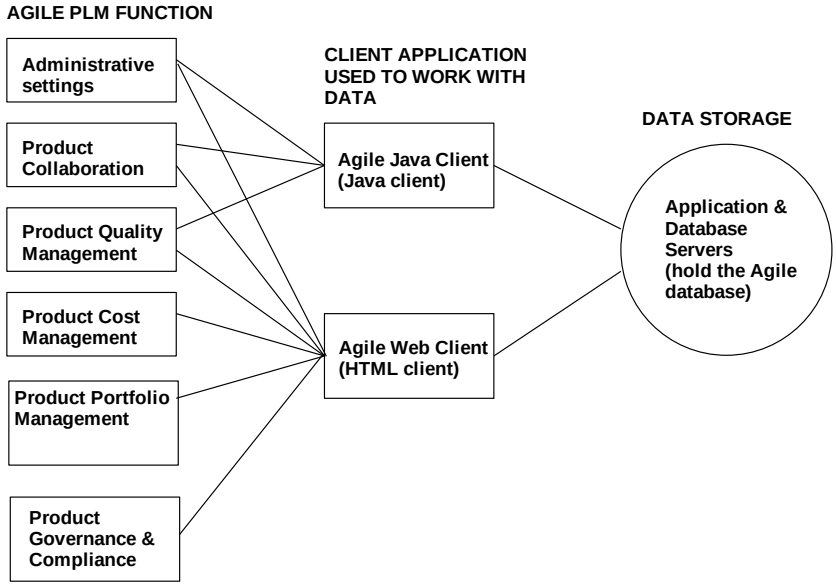
- **Agile Product Collaboration** (PC) — Management and collaboration of product record information throughout the product lifecycle, across internal organizations and the extended supply chain. Accessed through Java Client and Web Client.
- **Agile Product Governance & Compliance** (PG&C) — Management and tracking of all substances and materials contained by any item or manufacturer part, allowing companies to meet substance restrictions and reporting requirements, design recyclable products, minimize compliance costs, and eliminate noncompliance on future products. Accessed through Web Client.
- **Agile Product Portfolio Management** (PPM, formerly Program Execution) — Integration of program and product information, streamlining business processes across the product lifecycle and across a portfolio of programs. Accessed through Web Client.
- **Agile Product Quality Management** (PQM, formerly Product Service & Improvement) — Integration of customer, product, quality, and regulatory information with a closed-loop corrective action system. Accessed through Java Client and Web Client.
- **Agile Product Cost Management** (PCM) — Management of product costs across the product lifecycle and synchronization of product cost data and processes. Accessed through Web Client.

Agile administrators use Agile Java Client to set up and maintain settings for these solutions.

The Agile Application Server, the foundation of the Agile suite, manages data stored in the Agile database. All Agile data is contained or organized in business objects that are set up by the

administrator, and specified and used by the enterprise's Agile users. For instance, the administrator configures the Parts class of objects, and users create and deploy specific instances of the kinds of Parts made available to them. "Business objects" is a general term that implies objects created from the classes available to the enterprise, but other entities in Agile are also objects, such as workflows, searches, reports, and so forth.

The following figure shows relationships between the Agile functional components, the primary client applications used to manipulate the data (Agile Java Client and Web Client), and the Agile Application Server (the database where the data is stored).



What's New for the User Experience in Agile PLM 9.2.2

This section lists new elements of the user experience that are found in Agile PLM 9.2.2.

Java Client and Web Client User Interfaces

The user interfaces of the primary Agile clients are described in Navigating in Agile Java Client on page 7, and Navigating in Agile Web Client on page 27.

- **Bookmarks** – you can create nested **organizational bookmark folders** in which to sort and save your bookmarks. You can **rename bookmarks** in order to give them names that are meaningful to you.
- **Parametric Search** – Agile 9.2.2 includes easy-to-use parametric searches. The Agile administrator configures the parametric searches to present the most commonly used search attributes. Parametric searches can be saved.
- **New Rational Search Operators** – New search operators include: **Contains All**, **Between**, **Not Between**. Updated search operators are **In**, **Not In**, **Contains Any**, and **Contains None**.
- **Tab content indicator** – In Web Client, a simplified content indicator is used on all tabs. A grey dot indicates there is content on the tab. A red dot alerts users to problematic content on the tab.

For more information, see Web Client Tab Content Indicator Icons.

- **Relationships tab** – the **Relationships** tab and **Reference** tab have been merged into one tab called the **Relationships** tab. All Agile objects (except Reports and Action Items) have **Relationships** tabs. Relationships may have an optional rule to define how the two objects affect one another. The Web Client **Relationships** tab includes a **preview pane** that allows you to view details about the selected related object.
- **Dashboard Management Extensions** – This feature introduced in this release is similar to Process Extensions. Dashboard Extensions (DX) allow the Agile system to access internal or external content and configure the display format (tabular or charts) for authorized users to view and manipulate the outputs in Agile Web Client. Dashboard tabs and formats are defined in Agile Administrator.
- **Web Client Home Page** – The inbox display has been simplified. The Web Client inbox is organized into three tabs: **Notifications**, **Workflow Routings**, and **My Assignments**. The **My Assignments** tab can be sorted by pre-defined views and by using the filter to sort the table by multiple criteria. Many assignment management actions and tasks can be performed on the **My Assignments** tab.
- **User-defined Web Client Home Page Quick Links** – Each user can define his own list of ten most commonly used Links, Bookmarks, and Searches.

What's New in Agile PLM 9.2.2.4

- File folders and attachments:
  - Bulk download of business object attachments in Web Client by using **Get All Files** button to download a zip file of all the Attachment table rows. Bulk download of file folder files in Web Client by using **Actions** > **Get All Files** to download a zip file of all the Files table rows. When using Advanced File Productivity components, the user can choose to either download the files to a specified directory or download a zip file.
  - File folder **Routing Slip** tab is version-specific; each version can have a different set of approvers and observers.
  - In Web Client, file folder **Actions** > **Version Browser** feature opens a version browser window which lists information about all versions of the file folder. You can select files in the Version Browser window to view or compare.
  - The **Checkin User** field is available on the File Folders **Title Block** tab and the business object **Attachments** tab. Identifies the user who checked in the specified version.
  - The Designs class was added to the File Folders base class to support an Agile PLM Engineering Collaboration (EC) CAD integration.
  - Attached URLs can be up to 255 characters in length.
  - A Version Browser is added to the Web Client File Folder class objects and Design class objects **Actions** menu. The Version Browser displays information about all versions of the File Folder or Designs object. You can select Version Browser rows to view or compare.
- Items:
  - The item **Manufacturers** tab includes an attachment icon column to indicate whether the manufacturer part has any attachments.
  - On the item BOM table, the reference designator (**Ref Des**) attribute is validated against a null Quantity (**Qty)** attribute.

- Reports:
  - The option to use BI Publisher when executing selected Standard Reports.
- Searches:
  - The display of available search objects and search attributes in parametric searches and advanced searches is controlled by the user's Discovery privileges and field-level Read privileges.

Chapter 2

Navigating in Agile Java Client

This chapter includes the following:

- Logging In and Out of Java Client 7
- Java Client Windows, Menus, and Toolbars 9
- Java Client Tables 12
- Using the Inbox 13
- Using Bookmarks and the Recently Visited List 15
- Changing Your User Settings 17
- Address Book in Java Client 21
- User Groups 23
- Creating Supplier Groups 25

Agile Java Client is distributed using only a browser and Java Web Start. The Product Collaboration and Product Quality Management (PQM) solutions can be accessed with Java Client. While you may prefer to work in Java Client on a regular basis, some utilities on the **Tools** menu (Agile Import, Export, FileLoad) and Reports open only in Web Client. Viewing Designs attached to item objects is available in Web Client only

Logging In and Out of Java Client

Agile PLM 9.2.2 has been installed on your company's system, and the administrator has sent you a URL to connect to Java Client. There may already be a shortcut icon on your desktop, or there is an application path on your Start menu. If you do not have access to Java Client, see your administrator.

Complete details for installing Java Client are in the appropriate Agile *Installation Guide*.

To log in to Java Client:

1. Start the Web browser and type the following, per information from your administrator:

   http://<webserver_hostname>/JavaClient/start.html

2. You will receive a message about accessing the computer when you install and run Java Client. Click **Launch**. The Login window appears.

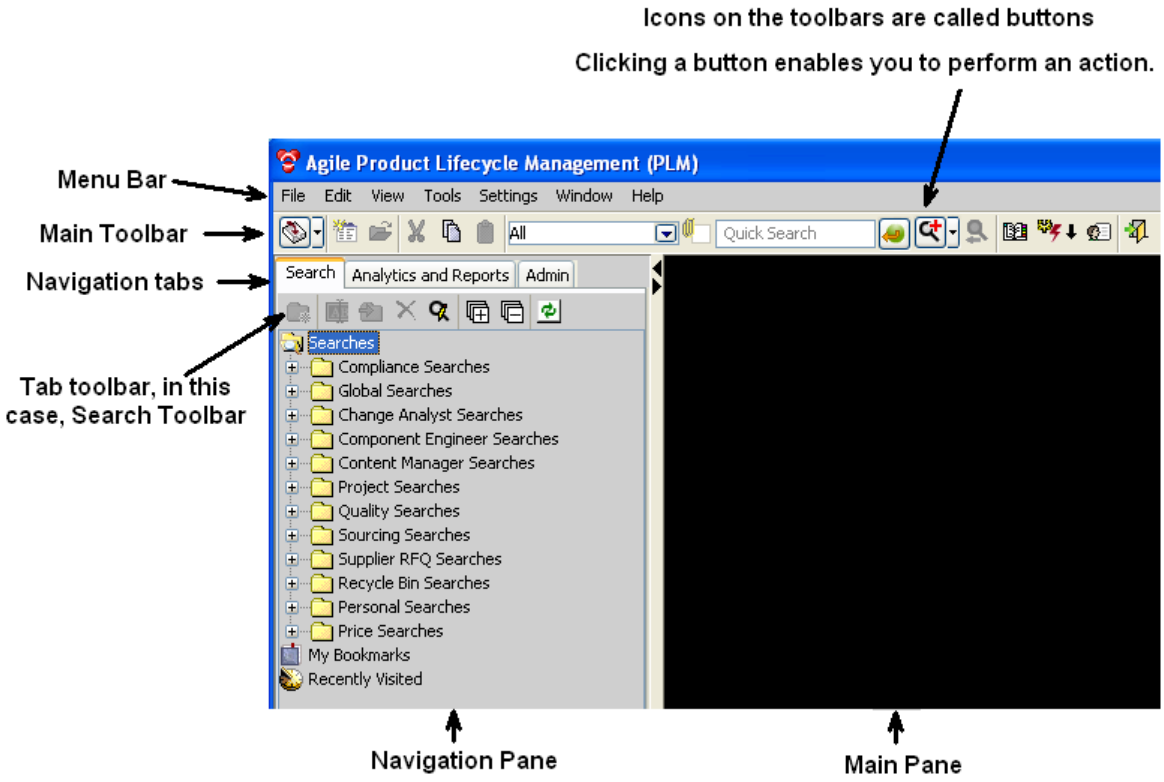
3. Enter your username. Your username is not case-sensitive.

   Your *username* is assigned by your Agile administrator and can be an abbreviation of your full name. For example, the name Michael Jones may be abbreviated to MICHAELJ or MJONES.

4. Enter your password. Your password **is** case-sensitive.

   Your password is initially assigned by your Agile administrator. If you have the appropriate privileges, you can change your password at any time. The administrator may require you to do so within a set number of sessions. (See Changing Your Password *on page 40)*.

5. Click **OK**.



The login process is complete. The Java Client window opens, as shown in the figure above.

The next time you start Java Client, you are prompted to create shortcuts on the desktop and in the Start menu. It is recommended that you choose Yes for either or both shortcut types.

You can also start Java Client using the Java Web Start icon on your desktop. Double-click the icon and you will see an option for Agile PLM.

Note	If you are having difficulty logging in to Java Client, one problem could be that your Java Web Start cache might be full. To clear the cache, open Java Web Start, choose **File** > **Preferences**, click the **Advanced** tab, and click **Clear Folder**. Then try launching Java Client. If you continue to have difficulty logging in, contact the Agile administrator.

You can search for Agile data using the Simple Search field and **Run Search** button. To create a Quick Search, use the Search Option drop-down list to select a specific object type. Or, use the **Advanced Search** button. You can choose an activity from the menu bar, main toolbar, or tab toolbar. For detailed instructions about searching, see, Finding Agile Data with Searches on page 145.

To close Java Client, click the **Exit** button.

Java Client Windows, Menus, and Toolbars

This section discusses some of the key user interface elements of Java Client.

Java Client Menus

You can use the following menus to perform various tasks based on your assigned roles and privileges:

- **File** — Perform actions on Agile business objects, including **New** (Create), **Open**, **Close**, **Save**, **Save As**, **Send**, **Scan Files**, **Batch Print**, and **Exit** Java Client. Some Agile objects are items (parts and documents), changes (such as engineering change orders and price change orders), file folders (attachment objects), users, and suppliers. For more information about classes of Agile objects, see Introducing Agile Objects on page 65.

Note	The Scan utility (**File** > **Scan Files**) is available in Java Client only. See Agile Scan Utility on page 9.

- **Edit** — **Cut**, **Copy**, and **Paste** data. **Delete** and **Undelete** an object. Create a **Quick Search** or an **Advanced Search** and **Organize Searches** (delete). Add and organize (that is, delete) **Bookmarks**.
- **View** — View **Notifications**, **Workflow Routings**, and toggle the **Windows Bar** on or off: the Windows Bar shows all current open windows in Java Client.
- **Tools** — Work with the **Address Book**; generate **Reports and Analytics**; access *Agile Import, Export*, and **FileLoad** (these are documented in Import & Export Guide). **Process Extensions** appear on a drop-down menu, which depends on a developer at your company (or an Oracle Consulting – Agile Practice consultant) having created process extensions.
- **Settings** — **Transfer Authority** for other users or user groups to sign off your workflows; create and modify **Personal Groups**, **Personal Supplier Groups**, and **Personal Criteria**; view **Deleted Personal Groups**; view and modify your **Current User** settings; **Change Password**.

Note	**Color Scheme** and **Options** offer some standard Windows-based options.

- **Window** — This is a standard menu that allows you to switch to the **Previous Window** or the **Next Window**, and to arrange your open windows in **Cascade** or **Tile** schemes. There are some keyboard equivalents if you prefer to use those.
- **Help** — **Manuals** gives access to Agile documentation. **About Agile** displays information about the current release of Java Client.

Agile Scan Utility

From Java Client only, Agile's Scan utility runs a Windows utility that scans documents using a TWAIN interface. The user specifies valid file types. Scanned images are designated as one of those file types, and they are added to the system as an attached file to a file folder object. Scan is described in Scan Utility on page 298.

Java Client Toolbars

There are toolbars in the main Java Client window, in object windows, and in some object tabs.

Depending on your assigned roles and privileges, you can use the toolbar buttons on the main toolbar to perform the tasks described in the following table. Toolbars in object windows contain buttons that pertain to the object.

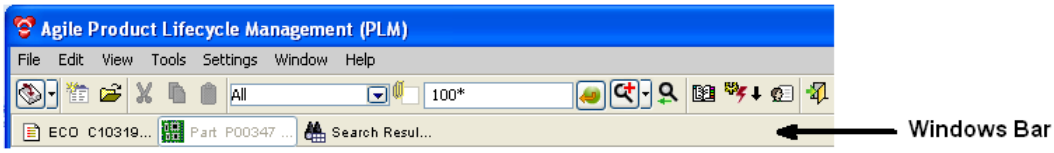
These are the buttons that appear on Java Client's main toolbar.

Button	Name	Description	For more information, see...
	Inbox	Displays **Notifications** or **Workflow Routings**. You can change this by clicking the **View/Edit Current User** button.	Using the Inbox on page 13
	New Object	Opens the New window, where you select which type of object you want to create, and assign a number to the object.	Agile Object Types on page 67
	Open Selected Objects	Displays the tabbed window for the selected object(s).	—
	Cut	Removes selected information and places it on the Clipboard.	—
	Copy	Places a copy of the selected information on the Clipboard.	—
	Paste	Places a copy of the Clipboard contents into editable fields and tables.	—
Quick Search Controls		Quick Search class selection list. Select a base class of objects that will limit the Quick Search. Default selection is **All**. Search Attachment Contents Check this box to search attachment file contents. Search Criteria Entry field Enter the search text in this field.	Base classes and other object types are presented in Installed Agile Classes, Base Classes, and Subclasses on page 68. Full Text Search for Content in Attachment Files on page 156

Button	Name	Description	For more information, see...
	Run Search	Searches for objects that match the criteria in the **Simple Search** text box.	Quick Searches and Wildcard Characters on page 154
	Advanced Search	Searches for objects with fields that match (multiple) conditions of the search that you set up. A Where Used search finds assemblies that contain parts that meet your search criteria; a Relationship search finds objects related to the objects that match your search criteria.	Advanced Searches on page 167
	Last Search Results	Displays results of the most recent search you performed.	—
	Address Book	Opens the Address Book window, where you can view, create, and modify user groups.	Address Book in Java Client on page 21
	Process Extensions	Lets you run/access custom actions that were defined by someone else.	For information about process extensions, see *Agile Administrator Guide* — "Process Extensions.
	View/Edit Current User	Lets you modify your Agile user profile.	Changing Your User Settings on page 37
	Exit	Lets you log out of Java Client.	—

Windows Bar

An optional windows bar appears below the main toolbar.



The windows bar contains a button for each open Java Client window. Each button includes the title of the window and an icon reflecting the window's contents. The button representing the current window is highlighted. To move to a different window, click its button in the windows bar.

To close a window using the windows bar:

- Right-click the button representing the window you want to close, and choose **Close**.
- You can also use Shift-click and Ctrl-click to select multiple windows, right-click (over one of the

selected windows), and choose **Close**.

- Finally, there is also a **Close All** option when you right-click over any window.

You can hide or show the windows bar, and you can move it to the top or bottom of the Java Client desktop.

To hide the windows bar:

Right-click the window bar and choose **Hide Windows Bar**, or choose **View** > **Windows Bar**.

To show the windows bar:

Choose **View** > **Windows Bar**.

To move the windows bar:

Right-click the windows bar and choose **Move**.

Hiding and Showing the Navigation Pane

You may want to view the main window only (hide the navigation pane), then show the navigation pane again when you need to use it.

To hide or show the navigation pane:

1. On the boundary between the navigation and content panes, click the small left arrow (to hide) and the small right arrow (to show) the navigation pane.

To adjust the width of the navigation pane:

1. Hold the pointer on the boundary between the navigation and content panes. The pointer changes to a double-sided arrow.
2. Drag until the pane is the desired width: it is limited to a maximum of about one-fourth the total screen width.

Java Client Tables

Java Client displays many types of information in tables. For example, search results, BOMs, and AML information appear in tables.

Sort Order in Tables

You can change the sort order of some Agile tables, for example, the Affected Items table. To sort a table, click the column header of the column by which you want to sort. For example, to sort the **Affected Items** table by item description, click the **Item Description** column header. You can change the width of the columns by selecting the line between column headers and dragging.

Selecting Rows in Tables

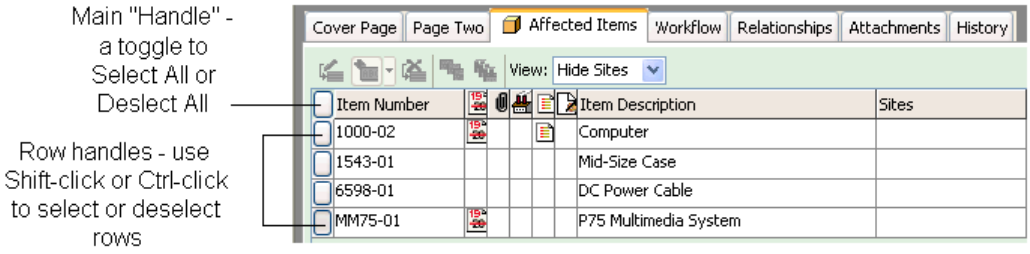
There are a number of tables in Java Client on which you can perform certain actions. For example, on the **Affected Items** table, you can remove items. From the Search Results table, you can open an

object and modify it or export it; you select the items on which you want to perform the action, then click the action to perform it.

Tables on object tabs have a “handle” column at the left, as shown in the following figure. You can select rows by using any of the following methods:

- You can select all the rows with the top handle, or you can use Windows commands (Shift–click and Ctrl–click) on the row handles to select the rows on which you want to perform the action.
- You can select a row by clicking in the row or you can use Windows commands (Shift–click and Ctrl–click) in the rows you want.
- You can drag-select (mouse-down or mouse-up as you drag across multiple rows).

When you have selected the rows you want, the available actions are buttons in the menu bar above the table.



For editable tables, select the rows you want and click the **Edit** button, and the Edit mode popup appears. In this mode, make any changes or updates and click **OK**. The table refreshes to reflect the changes.

In Edit mode, Java Client displays the object ID and object Description, which identifies the data in the row that has the focus.

To open and view objects in a table, use one of these methods:

- To open one object, double-click the object’s row in the table.
- To open an object with a specific tab on top:
  a. Select the object’s row in the table.
  b. Right-click.
  c. In the displayed menu, choose **Open** and the tab you want.
- To open multiple objects:
  a. Select multiple rows in the table.
  b. Either press **Enter** on the keyboard, or right-click the mouse and choose **Open**.

Using the Inbox

As information passes through the Agile system, users receive news of status changes, requests, and notifications. When you first start Java Client, it is a good idea to view your Inbox.

To view your Inbox in Java Client:

1. Click the arrow to the right of the **Inbox** icon on the main menu bar.
2. Click the Inbox section that you want to view, **Workflow Routings** or **Notifications**.

Notifications

The **Notifications** section of the Inbox lists Agile PLM notifications. Notifications inform you of some action or process that has taken place, such as subscriptions, RFQs, and project invitations. You also receive a notification when a program-related request is sent to your **My Assignments** tab. The Accept function does not apply to notifications.

You can view or delete a notification. To view a notification, double-click it. To delete a notification, select it and click **Delete**.

When configuring Agile PLM, the Agile administrator can choose whether notifications are sent to an email address, to the Agile PLM inbox, or to both.

Workflow Routings

The **Workflow Routings** section of the Inbox lists routable objects that require your review or action. For example, your Inbox may contain changes for which you are an approver. The out-of-box workflow routings are a combination of base classes and actions that define the kind of review, as in the table below.

Note The searches selected in your User Profile **Searches** field also determine which workflow routings appear in your Inbox. For example, if **Change Analyst Searches** is one of your assigned searches, you see Change class object workflow routings in the **Workflow Routings** window. In a similar manner, if **Quality Searches** is one of your assigned searches, you see QCR and PSR workflow routings. For more information, see Changing Your User Settings on page 37 and User Properties Defined on page 60.

Base class...	...includes routable objects from these classes...	...combined with these actions of review
Change	Change Orders, Change Requests, Site Change Orders, Price Change Orders, Deviations, and Stop Ships	... **That Require My Approval** ... **That I Am An Observer Of** ... **That Were Returned To Me** ... **Transferred to Me** ... **Escalated to Me**
Quality Change Request (**QCR**)	Corrective and Preventive Actions and Audits	
Problem Service Request (**PSR**)	Non-Conformance Requests and Problem Reports	
Package	Packages	

Base class...	...includes routable objects from these classes...	...combined with these actions of review
Program	Activities and Gates	
Transfer Order	Content Transfer Orders and Automated Transfer Orders	
Declarations	Substance Declarations, Part Declarations, JGPSSI Declarations, Homogeneous Material Declarations, Supplier Declarations of Conformance, IPC 1752-1 Declarations, and IPC 1752-2 Declarations	
File Folders	Designs and File Folders	

To open a workflow routing in the table, double-click its number.

To export objects to a text or PDX file (if you have privileges), select the row and choose **Tools** > **Export**.

The **Print** button prints the entire Inbox table.

Using Bookmarks and the Recently Visited List

If there are objects that you need to return to frequently, you can use Bookmarks and the Recently Visited list for quick access.

Bookmarking

Bookmarking lets you keep a list of objects that you return to frequently. You can click an object bookmark to quickly display that object.

To bookmark an object in Java Client:

1. Open the object.
2. Choose **Edit** > **Add Bookmark**, or click the **Add Bookmark** button in the object's toolbar.

   The Add Bookmark dialog displays.
3. Enter a name for the bookmark in the **Name** field.
4. Select a folder in which to store it.

   You can always save a bookmark in the My Bookmarks folder.
5. To create a new folder, click the **New** button. In the Create New Folder dialog, enter a folder name and click **OK**.
6. Click **OK** in the Add Bookmark dialog to save the bookmark.

   The object's number is saved in the **My Bookmarks** list on the **Searches** tab in the navigation

pane.

To open a bookmarked object in Java Client:

Double-click the object's number in the **My Bookmarks** list on the **Searches** tab in the navigation pane. The object opens.

Organizing Bookmarks

You can arrange your bookmarks in folders using the Organize Bookmarks window (**Edit** > **Organize Bookmarks**).

To organize bookmarks in Java Client:

1. Choose **Edit** > **Organize Bookmarks**. The Organize Bookmarks window opens.

The Organize Bookmarks Window

Use the features in the Organize Bookmarks window to create or remove folders and rename or remove bookmarks.

Button	Description
Remove	Removes the selected bookmark or folder.
Rename	Renames the selected bookmark or folder.
New	Adds a new bookmarks folder within the current folder. See Bookmarking on page 52 for more information.
Save	Saves the changes you made in the Organize Bookmarks window.
Cancel	Discards the changes you made in the Organize Bookmarks window and closes the window.

Removing Bookmarks

To remove a bookmark:

1. In the Organize Bookmarks window, select the bookmark or folder you want to remove.
2. Click the **Remove** button.
3. Click **Yes** to remove the bookmark or folder.

   Note Removing a folder will also remove all of its children.

4. When you are finished, click **Save**.

Renaming Bookmarks

To rename a bookmark:

1. In the Organize Bookmarks window, select the bookmark or folder you want to rename.
2. Click the **Rename** button.

3. Edit the name of the bookmark in the **Enter Name** field.
4. Click **OK**.
5. When you are finished, click **Save**.

Recently Visited List

When you view an object during a work session, it is added to the Recently Visited list. The Recently Visited list includes the last 10 objects viewed (or 25, 50, or 100, depending on your administrator's setting of a Preference).

To open a recently visited object in Java Client:

1. Double-click the **Recently Visited** icon in the **Search** tab in the navigation pane.
2. Double-click the object's number in the list. The object opens.

Changing Your User Settings

This section includes information about creating or changing your User Profile, password, personal criteria, and escalations.

Note	Keep in mind that the Agile administrator may have set values in Agile PLM that impact what you are able to modify. Most changes made by the administrator are automatically implemented systemwide; however, if the administrator makes changes in your role assignment, or to the roles and privilege masks, these take effect for a user only after the user has logged out and logged back in to Web or Java Client.

Changing Your User Profile

Your user profile contains a variety of information about you, including your contact information, your Windows date and time preferences, and several Java Client onscreen display preferences. The Agile administrator determines whether you can edit your user profile.

To edit or add information to your user profile:

1. Open your user profile by choosing **Settings** > **Current User** on the computer from which you are logged in to Java Client, or click the **View/Edit Current User** button .
2. Click the tab on which you want to make changes.
3. To make changes to the **General Info** tab, edit any field that is available. Use the lists, browse buttons, and text boxes to enter the requested information.

You can also make changes to the **Escalations** and **Attachments** tabs. For information about escalations, see Working with Escalations on page 18. For information about working with the **Attachments** tab, see Working with Attachments on page 255.

Note	If you are working primarily in Java Client, check the System Preferences under the **Preferences** tab: Preferred Client should be set to Java Client and Receive Email Notifications should be set to Yes. This will ensure that you will receive email notifications in the same client you are working in. If there is a discrepancy and you are not able to change these properties, see your Agile administrator.

Changing Your Password

These instructions describe how to change your login password, which you can do at any time. The **Change Approval Password** option is enabled only when your Use Login Password for Approval user property is set to No.

To change your login password:

1. Choose **Settings** > **Change Password**. The Change Password dialog box appears.
2. Type your old login password in the **Old Password** field.
3. Type your new login password in the **New Password** and **Retype New Password** fields. (Passwords are case-sensitive.)

   If you want to change your approval password (and the Change Password dialog displays the **Change Approval Password** fields), fill in the fields as described above.
4. Click **OK**.

If you have not followed the rules defined on your Agile system for selecting passwords, you are prompted to correct your password.

Persisted User Interface Settings

For some user interface settings, the most recently used settings persist across sessions for each user.

Examples include:

- **Add method** – (Search, Type in Known Number(s), Create)
- **Edit Rows After Adding**.

Working with Escalations

If your administrator has granted you the necessary privileges, you can set up escalations for yourself. Escalations allow changes to be forwarded automatically to a designated user if you do not respond within a set amount of time. You can also create escalations for your personal user groups.

Your Agile administrator can add escalations to your user profile, and can edit existing escalations.

To manage escalations for yourself:

1. Choose **Settings** > **Current User** on the computer from which you are logged in to Java Client.

   Or, click the **View/Edit Current User** button on the main toolbar.
2. Click the **Escalations** tab.

3. To set up a new escalation, click the **Add** button, then select an escalation criteria and one or more users to be notified for that criteria. You can select a different person for each criteria, if you want.
4. To edit an escalation, select it on the **Escalations** tab and click the **Edit** button . Add users to, or remove them from, the **Notify Users** list.
5. To delete an escalation, select it and click the **Delete** button .

To manage escalations for a personal user group:

1. Choose **Settings** > **Personal Groups**.
2. Double-click the group.
3. When the user group window appears, click the **Escalations** tab.
4. Follow steps 3–5 in the preceding procedure, "To manage escalations for yourself."
5. To set up a new escalation, click the **Add** button, then select an escalation criteria and one or more users to be notified for that criteria. You can select a different person for each criteria, if you want.
6. To edit an escalation, select it on the **Escalations** tab and click the **Edit** button . Add users to, or remove them from, the **Notify Users** list.
7. To delete an escalation, select it and click the **Delete** button .

Creating Personal Criteria

A saved "personal criteria" is a reusable database query very similar to an advanced search, in that the attributes used to create personal criteria are similar to the attributes used to create advanced searches. (For more information, see Advanced Searches on page 167.) They may also be thought of as "filters" or "qualifying descriptions" of objects that you are interested in tracking.

Personal criteria are used to define signoff authority transfers. If you have the appropriate privileges, you can temporarily transfer your signoff authority for routable objects to one or more Agile users. For more information about signoff authority transfers, see Transferring Signoff Authority on page 236 and Defining Personal Criteria for Authority Transfers on page 239.

Any criteria in Agile—personal or reusable—applies to one Agile class (and its children) or a particular subclass; therefore, you must create a separate criteria to apply to the objects of another class or another subclass.

To create a personal criteria:

1. Choose **Settings** > **Personal Criteria**. The Personal Criteria window appears.
2. Click the **Create** button. The Create Criteria dialog box appears.
3. Fill in the **Name** and **Description** fields, and select the object type that your personal criteria will apply to. This list includes all the Agile classes and user-defined subclasses.

   Note The personal criteria name must be unique. If you specify a personal criteria name that is already used, you get a duplicate name error message.

4. Select the attribute you want from the **Attribute** drop-down list. The values that are available change according to the Agile class or subclass you selected in the previous step. Click **OK** in

the small dialog box.

5. The **Match If** field specifies the search operator. The values that appear depend on what you selected from the **Attribute** list. Select from the listed operators, which will be a subset of the following:
   - Contains, Does Not Contain
   - Equal To, Not Equal To
   - Greater Than, Greater Than Or Equal To
   - Less Than, Less Than Or Equal To
   - Is Null, Is Not Null
   - Starts With, Does Not Start With
   - Like, Not Like
6. In the **Value** field, select a value for the field you selected from the **Attribute** list. Click **OK** in the small dialog box.
7. To add additional conditions, select AND or OR in the **And/Or** field.
8. Repeat step 4 through step 7 until your personal criteria is complete.
9. When the criteria is complete, click **OK**.

Note	Changing the criteria in the **Object Type** field resets the entire personal criteria. A personal criteria applies to one class or subclass. You must create a separate global criteria to apply to another class or subclass.

If you want your criteria to be case-sensitive, select the **Case Sensitive** checkbox. This can simplify how you define personal criteria:

- If you enter text in the Value field, the criteria will look for text that is an exact match, depending on the restraints of the value of the **Match If** field.
- If you define a numerical value, checking **Case Sensitive** allows the Agile system to make use of internal database settings to find objects more quickly.

  Using case-sensitive searches improves performance of the system and is recommended when possible.

The **Add( )** button places parentheses around the specified condition or conditions, which changes the order in which the search conditions are evaluated. The **Add( )** button functions like a formula within parentheses in an algebraic equation, following the standard algebraic order of operations. The grouped criteria within parentheses are resolved before any others. If you do not use parentheses when defining your personal criteria search, the search is processed row by row without any precedence of And/Or values. The first line is combined with the second based on the first line's And/Or value. The result of the first two lines is then combined with the third line based on the second line's And/Or value, and so on.

Editing Personal Criteria

Use this dialog box to edit the conditions in your personal criteria object. Defining or modifying a personal criteria object is similar to defining or modifying an advanced search. For detailed information about searches, see Finding Agile Data with Searches on page 145.

You can perform the following modifications to your personal criteria object:

- In the search condition table, use **Add**, **Insert**, and **Delete** to add more **Search Condition** rows as needed, or to delete rows you do not want.
- Click a cell in the Search Condition table to display the search criteria selection list.

  Working from left to right in the search condition row, click the drop-down list buttons to select the target **Attribute** (for example, CoverPage.Originator), the **Match If** search operator (for example, Equal To), and the **Value** (for example, John Smith).

  Depending on the selection in the **Attribute** list, the **Value** field may contain a list that is relevant to the selection, a calendar button, or a field where you can enter text or numbers.
- Click the And/Or field to select And or Or from the list. Use And if both conditions must be met. Use Or if either or both conditions can be met.
- Use the **( )** button to enclose selected rows in parentheses, which determines precedence in the way the search is performed.

  If you do not use parentheses when defining your personal criteria search, the search is processed row by row without any precedence of And/Or values. The first line is combined with the second based on the first line's And/Or value. The result of the first two lines is then combined with the third line based on the second line's And/Or value, and so on.
- Select **Case Sensitive** if you want to perform a case-sensitive search where text capitalization matters.

Address Book in Java Client

The Address Book is a multi-list window that enables you select users and user groups for various functions. The situations in which you use the address book can include:

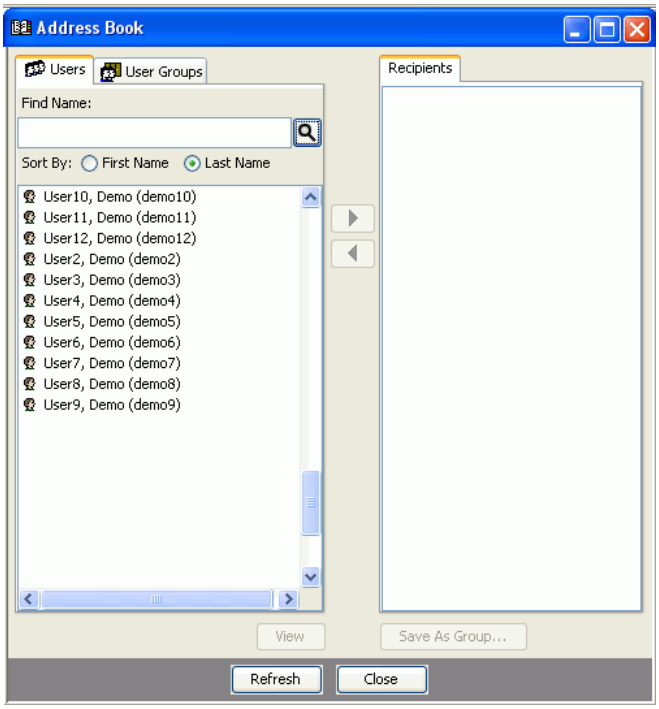
- When you send email notifications
- When you select people or groups to sign off a workflow
- When you share, or grant, one or more of your roles to another user or user group for specific objects

You can also create user groups in the address book.

Overview of the Address Book

You can access the address book by clicking the button on the main toolbar, or by choosing **Tools** > **Address Book**, or when you are performing actions that involve sending an object or a notification (for example, routing a change). You can select individual users or user groups. The address book lists all the individuals and user groups that use Java Client and Web Client.

Note The Agile administrator can use Discovery privileges to limit the users you see in the address book.



Selecting Users and User Groups from the Address Book

You can select recipients individually or in groups. When you select a group, all the members of the group receive the email message. You can sort users by Last Name or First Name by clicking one of the radio buttons.

To select users or user groups from the address book:

1. To display a list of names on the **Users** tab, click the **Check Names** button, which returns a list of all users.
2. Select a person on the **Users** tab, or select a user group on the **User Groups** tab.

   To see more information about a user or user group, select it and click the **View** button.
3. To add names directly to the **Recipients** list, type a known value (e.g., last name) in the **Find Name** field, then click the **Check Names** button or the keyboard shortcut **Ctrl**+**K**; the system moves that name over to **Recipients**.
4. You can also select a name, then click the **Add** button to move your selection into the **Recipients** list.

   To select multiple names or user groups, use the Shift-click or Ctrl-click, then the **Add** button.

   To remove a name or multiple names, select using the same techniques and click the **Remove** button.

5. On the **User Groups** tab, if you select a user group, and you want only the group name to appear in the **Recipients** list, use the button. If you do this when selecting approvers, only the group as a whole becomes an approver, and any single member of the group can approve.

   If you select a user group, and you want to see **every name** in that group in the **Recipients** list, use the **Add all the users in the selected group** button (this button only appears on the **User Groups** tab). If you do this when selecting approvers for a routable object, each individual becomes an approver.
6. Continue selecting names and using the arrows until the **Recipients** list is correct.
7. Click **Save As** to create a new user group that includes every individual's name on the assembled list. This includes the individuals of any user group you included in the new group.
8. Click **Save** to save the list. Click **Close** to close the address book.

Note	When you add a user group to a group, and save it, when you open the modified user group, all the names of the members of the added user group are there; the modified group does not record user groups that were added.

User Groups

This section explains how to create both personal and global user groups, as well as modifying and deleting them. See also Creating Supplier Groups on page 25.

Note	Your User Profile **User Group** tab lists the Global Groups of which you are a member. Your membership in the personal groups of individual users is not displayed on the **User Group** tab. See also Changing Your User Profile on page 17.

Creating User Groups

You can create personal user groups; with the appropriate privileges, you can create global user groups.

To create a personal user group in Java Client:

1. Choose **Settings** > **Personal Groups**. The Personal User Groups window appears.
2. Click the **New** button. The Create User Group dialog box opens.
3. Using the **Subclass** drop-down list, select a subclass of the User Groups class. User Groups will be the only subclass available if your administrator has not created another one in the User Groups class.
4. Fill in a name for the group in the **Name** field.
5. Click next to the **Users** field, and move users (from the **Users** list) or other user groups (from the **Groups** list) to the **Recipient** list.
6. Click **OK**. The new user group object appears, with applicable fields populated.
7. On the **General Info** tab, select or accept values from the drop-down lists. Enter a description and the maximum number of named users, if appropriate.

8. When you are finished, click **Save**.
9. Continue to select, enter, or accept values for properties under the **Users** and **Escalations** tabs.

To create a user group from the address book:

1. Open the address book by clicking the button on the main toolbar, or by choosing **Tools** > **Address Book**.
2. Select and move users (from the **Users** list) or other user groups (from the **User Groups** list) to the **Recipients** list.
3. Click **Save As Group**. The Save Group dialog box appears.
4. Enter a name in the **New Group** field. Or you can select a group from the **Existing Group** field; the new version of the existing group will overwrite the original one.
5. In the Save In area, select **Personal Groups** or **Global Groups**.
6. The **Subclass** field contains only User Group. It will list other subclasses if the administrator has created new subclasses of the User Groups class.
7. Click **OK**. The new user group is saved in the Global or Personal Groups folder.

Completing or Editing User Groups

To complete additional information about your user group, or to edit an existing personal user group:

1. If the address book is still open, click **Refresh**. Otherwise, choose **Settings** > **Personal Groups**, or open the address book , and display the **Groups** tab.
2. Navigate to the group you created by expanding the appropriate group folder.
3. Select the group and click **View**. The group opens in a tabbed window.
4. On the **General Info** tab, specify general information about the user group.
5. You can click the **Users** tab to delete users. On the **Users** tab, select the name, and click the **Delete** button .
6. To add or modify escalations for the user group, click the **Escalations** tab. For information about escalations, see Working with Escalations on page 18.
7. Add or remove any attachment references for the user group on the **Attachments** tab.

   For information about attachments, see Working with Attachments on page 255.
8. Click **Close** to close the user group window.

Note	With User Group "synch" function enabled, you cannot remove or add users on a user group's **Users** tab that have been synchronized (that is, where users have been added to a user group via LDAP). This feature only applies to iPlanet server. Contact your Agile administrator if you have questions about your ability to delete users from the **Users** tab of a group object.

Deleting Personal User Groups

To delete a personal user group:

1. Choose **Settings** > **Personal Groups**.
2. Select the group and click . The selected group is deleted.

To delete a personal user group from the address book:

1. Open the address book and display the **Groups** tab.
2. Select the group you want to delete. Click **View**.
3. Click . The selected group is deleted.

Creating Supplier Groups

You can create personal supplier groups; you cannot create a global supplier group in Java Client. Suppliers are other companies who are using Agile PLM to work with your company.

Note	Global supplier groups are created by the Agile administrator, as noted below. For more information about creating global supplier groups see *Agile Administrator Guide*.

To create a personal supplier group:

1. Choose **Settings** > **Personal Supplier Groups**. The Personal Supplier Groups window appears.
2. Click the **New** button. The Create New Supplier Group dialog opens.
3. Fill in the **Name** and **Description** fields, and select Yes or No in the **Enabled** field.
4. The **Type** field is grayed, with the value of **Personal** entered. (Supplier groups that are created from the **Admin** > **User Settings** > **Supplier Groups** node are “global.” You can create global supplier groups only if you have sufficient privileges. For more information about global supplier groups, see *Agile Administrator Guide*.)
5. For the Suppliers field, click the down-arrow, and move suppliers from the **Choices** list to the **Selected** list.
6. Click **OK**, you are returned to the Create New Supplier Group dialog. Click **OK** again, the new supplier group object appears, with applicable fields populated.

Chapter 3

Navigating in Agile Web Client

This chapter includes the following:

- Introducing Web Client 27
- Main Toolbar 33
- Navigation Pane Toolbar 35
- Changing Your User Settings 37
- Exploring the Home Page 41
- Using and Organizing Bookmarks 52
- Using the Recently Visited List 56
- User Groups and the Address Book in Web Client 56
- User Properties Defined 60

Introducing Web Client

Agile Web Client is opened using only a browser. Web Client is the only client that supports these Agile solutions:

- Program Portfolio Management,
- Product Governance & Compliance, and
- Product Cost Management.

Both Web and Java clients support these Agile solutions:

- Product Collaboration and
- Product Quality Management.

Agile Reports (Analytics and Reports) and some utilities—Agile Import, Export, FileLoad—can be accessed from either client but, when selected, open in Web Client. For example, in Java Client, choosing **Tools** > **Import** opens the Import utility in Web Client; Java Client remains open.

Logging In to Web Client

Agile PLM 9.2.2 has been installed on your company's system, and you are ready to work in Web Client. There may be a bookmark already on your browser, or perhaps your Agile administrator has given you a starting URL, along with username (User ID) and password.

Important	If a URL is specified in the documentation or release notes, copy the upper- and lower-case characters exactly, including the full domain name specified.

Also, if a popup blocker is installed on your machine, the login may halt. You would disable the popup blocker, then click the **Retry** button, which will display the application in a new window.

To start Web Client:

1. Start your browser.
2. Click the Web Client bookmark, if one exists, or type a URL that follows this pattern:

   http://Web **Server.<***domainname***>.com/Agile/PLMServlet**

   The Login page appears.
3. Enter your username. Your username is not case-sensitive.

   Your *username* is assigned by your Agile administrator and can be an abbreviation of your full name. For example, the name Michael Jones may be abbreviated to MICHAELJ or MJONES.
4. Enter your password. Your password **is** case-sensitive.

   Your password is initially assigned by your Agile administrator. If you have the appropriate privileges, you can change your password at any time. The administrator may require you to do so within a set number of sessions. See Changing Your Password on page 40.
5. Click the **Login** button. If you make a mistake, click **Clear** and retype your username and password.

The login process is complete, and the user Home page appears ("**Welcome, <Your Name>**").

You can choose an activity from the user Home page, the navigation bar on the left, or the main toolbar at the top. For more information, see Main Toolbar on page 33 or Navigation Pane Toolbar on page 35.

You can select a preferred start page; see Choosing Your Preferred Start Page on page 28.

Choosing Your Preferred Start Page

At any time you can change the start page that opens when you log in to Web Client. However, your administrator may restrict what properties you are able to change in your user object.

To set or change your preferred start page:

1. Click the **Tools** icon , and on the drop-down menu, click **My Settings**.
2. On the Settings Home page, click **User Profile**. Your "user object" appears, that is, the Agile database object that your administrator created to represent you.
3. Click the **Preferences** tab.
4. Click the **Edit** button. The properties on the page become editable.
5. Under Display Preferences, click the drop-down arrow for **Preferred Start Page**. Select the page you want.

   The Preferred Start Page list includes the **Home** page and all the dashboard tabs for which you have view privileges.

   If you are not able to view any dashboard tabs, the only selection is **Home**.
6. Now click the drop-down arrow for **Preferred Inbox View**.

   In Web Client, if you have selected **Home** as your start page, this setting determines which tab is displayed when you view the Home page by clicking the **Home** button in the main menu.

Choose **My Assignments**, **Notifications**, or **Workflow Routings**.

Note If you chose a Dashboard page in step 5, that Dashboard page will be displayed when you click the **Home** button in the main menu. However, you can use the **Home** button drop-down list to display the Home page with the selected tab displayed: **My Assignments**, **Notifications**, or **Workflow Routings**.

For more information about the Home page and these settings, see Exploring the Home Page on page 41.

7. When you have finished, click **Save** (at the top of the page). Your preferences have been saved and you will see your chosen start page the next time you log in to Web Client.

For more information about changing properties in your user object, see Changing Your User Profile on page 17.

For more information about the other links in the list of My Settings, see Changing Your User Settings on page 37.

Logging Out of Web Client

To log out of Web Client:

1. From the menu bar, click the **Logout** button.
2. You are returned to the Login page. To exit, close the browser from the upper-right corner.

Bookmarking Web Client in Your Browser

When the Web Client Login page opens in your browser, you can bookmark it to create a startup shortcut. Create a shortcut on your desktop, then click it the next time you want to open the Web Client.

Web Client Tables

Web Client displays many types of information in tables. For example, search results, BOMs, and RFQ information appear in tables. Often a table is what you see when you click a tab in an object, so as **BOM** tab displays the **BOM** table.

To open and view objects in a table:

- Click the Number link of the object.

Web Client displays a tooltip (in both Read and Edit modes) that displays the object ID and object Description, which identifies the data in the row that has the focus.

Sort Order in Tables

You can change the sort order of some Agile tables, such as the **Affected Items** table. To sort a table, click the column header of the column by which you want to sort. For example, to sort the **Affected Items** table by item description, click the **Item Description** column header. On a returned-search table, all columns are "live," that is, clicking them sorts the table one way, clicking again sorts the other

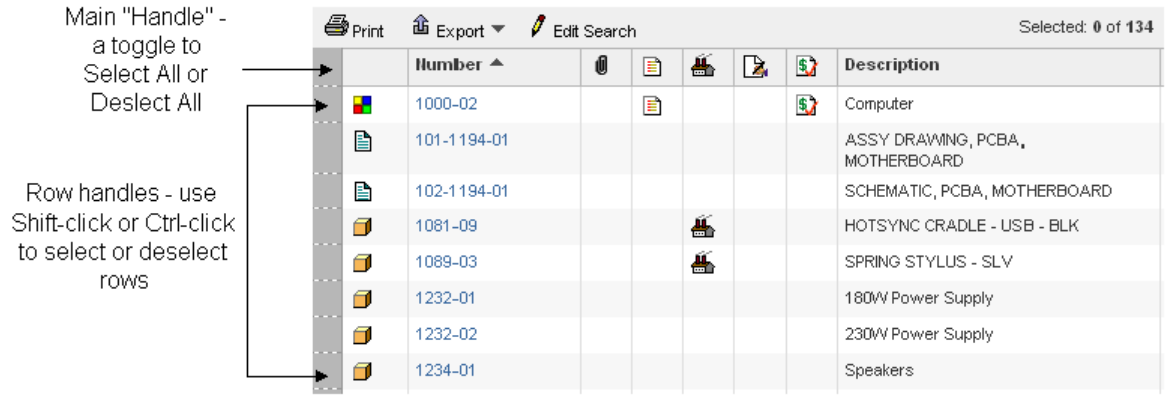
way (ascending or descending order).

Selecting Rows in Tables

There are a number of Agile tables on which you can perform certain actions in Web Client. For example, on the **Affected Items** table, you can delete items. These tables have a “handle” column at the left, as shown in the following figure. You can select rows by using any of the following methods:

- You can select all the rows with the top handle, or you can use Windows commands (Shift–click and Ctrl–click) on the row handles to select the rows on which you want to perform the action.
- You can select a row by clicking in the row or you can use Windows commands (Shift–click and Ctrl–click) in the rows you want.
- You can drag-select (mouse-down or mouse-up as you drag across multiple rows).

When you have selected the rows you want, the available actions are buttons in the menu bar above the table.



If a table is more than one page long, you can select rows on multiple pages to perform actions.

For example, to remove items from the Affected Items table that spans two pages:

1. Go to the first page and select all the items you want to delete.
2. Go to the next page and select all the items you want to delete.
3. Click **Remove**.

Using Copy/Paste in Tables

Copy/paste functionality in Web Client is applicable to changes (to edit **Affected Items** tab) and supplier responses.

To use copy/paste in tables:

1. Select rows to edit, then click **Edit** to display the table page in edit mode.
2. If not already done, fill in the values that you will copy.
3. Select the columns to copy by checking the **Paste Column** checkbox for each column.

4. Select the row you want to copy by highlighting the row.
5. Click the **Copy** button.
6. Select which columns to paste by checking or unchecking the **Paste Column** checkbox for each column.
7. Select which row(s) to paste to.
8. Click the **Paste** button.

Note For information about using Web Client affected item table Fill Up and Fill Down buttons, see the chapter about the affected items of changes in *Product Collaboration Guide*.

Web Client Tab Content Indicator Icons

In Web Client, a grey dot icon appears on the tab, next to the tab name, to indicate:

- The tab has contents. For example, content icon on a **BOM** tab indicates that the item has child items added to the **BOM** tab.
- The tab has active contents. For example, a content icon appears on the **Changes** tab of an item only when the item has pending changes (active changes).

A red dot icon appears on a tab to alert you that the tab has problematic content.

- A red dot icon is displayed on the **Compliance** tab if an item or manufacturer part that has a specification that is non-compliant or is missing information.
- A red dot icon is displayed on the item **Changes** tab if the item has a released Deviation or Stop Ship.

Tab	Web Client Tab Indicator	Found in these classes of business objects
Attachments (and Files)	= Object has attachments	All objects except file folders (which contain attachment content) and reports.
Changes	= Item has pending changes = (Red icon) Item has released Deviation or Stop Ship	Items and published prices.
BOM	= Item has BOM items	Items.
Manufacturer	= Item has manufacturer parts	Items & Sourcing Projects.
Affected Items (in PCOs: **Affected Prices**)	= Change has affected items	Changes, PSRs, QCRs.
Sites	= Item has sites assigned	Items.
Prices	= Object has prices	Items & Manufacturer Parts.
Suppliers	= Object has suppliers	Items & Manufacturer Parts.

Tab	Web Client Tab Indicator	Found in these classes of business objects
Quality	= Item has active PSR or QCR	Items.
Compliance	= Object has specifications = (Red icon) Object has non-compliant or incomplete specifications	Items & Manufacturer Parts.
Relationships	= Object has relationships	All classes (except Actions Items and Reports) (For Programs classes, relationships are included on the **Content** tab.)
Content	= Program has object content (relationships)	*Agile PPM Program objects* *For Program classes, relationships are included on the Content tab and relationships with rules are named deliverables.*
Discussions	= Program has discussions	Agile PPM Program objects.
Related PSR	= PSR has related PSRs	Agile PQM Product Service Request (PSR) objects.
PSRs	= Customer has active PSRs	Customers
First object tab "Page One" for example: **Cover Page** **Title Block** **General Information** **General Info** In Web Client, optional tabs: **Page Two and Page Three**	Not applicable Tab indicator icons are not used on these tabs.	All objects have a "Page One" that uses one of the names to the left. In Web Client, if Page Two and Page Three sections are enabled, they appear on the first object tab. Your Agile administrator may rename them.
Where Used		Items, Manufacturer Parts, Discussions, File Folders.
History		All.
Workflow (routable objects only)		Changes, PSRs, QCRs, Packages, Transfer Orders, Programs
Escalations		Users and User Groups
Shares		Users and User Groups
Subscriptions		Users

Using Online Help

The **Help** menu provides access to online Agile documentation set and online help tools:

- **Manuals** – Opens the Oracle Agile Documentation web page, with access to online manuals for Web Client and Agile PLM. The documentation set contains detailed information about Oracle Agile PLM applications, concepts, procedures, and reference information.
- **About Agile** – Displays technical information about the current release of Web Client.

Main Toolbar

There are toolbars in the main Web Client window, in object windows, and in some object tabs.

Depending on your assigned roles and privileges, you can use the toolbar buttons on the main toolbar to perform the tasks described in the following table. Toolbars in object windows contain buttons that pertain to the object.

Button	Name	Description	For more information, see...
	Back	Takes you to the previous page you viewed in your browser. (It does not, however, undo any changes you entered in Agile.)	—
	Forward	Takes you to the next page forward. It is disabled if you did not use the **Back** button to view the page currently in your browser.	—
	Refresh	You can refresh (update) objects, the Recently Visited list, Bookmark list, and Search Results page by clicking the **Refresh** button. There is a **Validate** button on the Cover Page of change objects in Edit mode. The **Validate** button saves the changes, validates the workflow, and reloads the workflow list.	—
	Home	Brings you to your home page in Web Client as defined by **Preferred Inbox View** in your user properties, which has been selected by your administrator and can be changed by you. So, based on that setting, when you click the **Home** button, the main area displays your **My Assignments**, **Workflow Routings**, or **Notifications**. Above the main area, the standard Home page has the live links that you have defined as your **Quick Links** list.	Choosing Your Preferred Start Page on page 28 Exploring the Home Page on page 41 Quick Links on page 41 *Product Portfolio Management User Guide*

Button	Name	Description	For more information, see...
	Create	Lets you create objects in all the base classes and classes that your company has purchased and to which you have privileges.	Introducing Agile Objects on page 65
	Search Attachment Contents	In the quick search interface, this checkbox lets you **Search Attachment Contents** when checked.	Base classes and other object types are presented in Installed Agile Classes, Base Classes, and Subclasses on page 68. Web Client Quick Search on page 153 Full Text Search for Content in Attachment Files on page 156
	Run Simple Search	Searches for objects that match the criteria in the Simple Search text box.	Quick Searches on page 151
	Advanced Search	Looks for objects with fields that match (multiple) conditions of the search that you set up. A Where Used search finds assemblies that contain parts that meet your search criteria; a Relationship search finds objects related to the objects that match your search criteria.	Advanced Searches on page 167
		Pre-configured parametric search drop-down list. Select a base class from the list to display the parametric search window. In the parametric search window, select an object type to display the object search criteria your Agile administrator has pre-configured for you.	Web Client Parametric Search Window on page 162
	Last Search Results	Displays results of the most recent search you performed.	—
	Tools	Drop-down menu with links to **Address Book** and **My Settings**. It also links to these Agile client utilities: **Analytics and Reports, Import**, **Export**, and **FileLoad**. If Product Portfolio Management is installed, further down the menu are: **Microsoft Project Synchronization Setup** and **Microsoft Project Publish**. **Administration** is visible only if you have been assigned the Administrator privilege (or Administrator role); it lets you access settings for the following Administrator nodes: **Users**, **User**	User Groups and the Address Book in Web Client on page 56 Changing Your User Settings on page 37 Working with Agile Reports on page 123 Agile Import, Export, FileLoad, and Microsoft Project links are

Button	Name	Description	For more information, see...
		Groups, and **Supplier Groups**.	documented in *Agile PLM Import & Export Guide* Analytics are documented in *Portfolio Analytics User Guide* Administration nodes are documented in *Administrator Guide*
	Help	The **Help** > **Manuals** command you access to Agile 9 documentation. The **Help** > **About Agile** command displays version information.	Using Online Help on page 33
	Exit	Lets you exit Web Client.	—

Web Client Session Timeouts

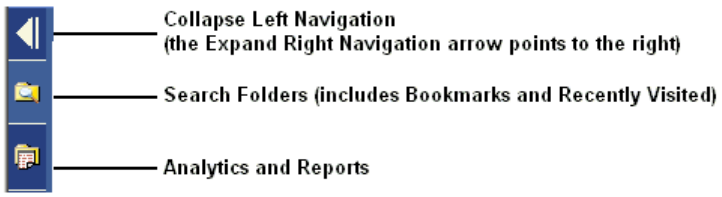
Web Client sessions are set to time out, or disconnect, after a session is idle for a specified period of time. If you are interrupted while you are in the middle of a wizard operation (such as creating a change), and the session is idle and times out, your information will be lost. If you try to perform a Web Client action after the session has timed out, the login page appears.

Occasionally, if you try to perform an action in Web Client after a timeout, you may see a second, smaller Web Client page. If this happens, simply close all dialog boxes and pages and log in again.

For more information about extending the timeout (idle time) value for Web Client, see your administrator or the appropriate Agile *Installation Guide*.

Navigation Pane Toolbar

The left pane, called the *navigation pane*, provides access to searches—via **Search** Folders containing out-of-box solution-oriented searches, **Bookmarks**, and **Recently Visited**—and **Analytics and Reports**. As you perform certain actions in Web Client, such as stepping through wizards or configuring user settings, the navigation pane provides tools for navigating the process.



Showing and Hiding the Navigation Pane

At times you may want to show the navigation pane or view the main window only (hide the navigation pane).

To show or hide the navigation pane:

- Click the **Expand Left Navigation** button (which points right), or the **Collapse Left Navigation** button (which points left).

  or:

- When the navigation pane is collapsed, you can click the **Search Folders** or **Reports and Analytics** buttons to expand the navigation pane and display that menu of navigation folders or links.
  - Clicking the same button (**Search Folders** or **Reports and Analytics)** a second time hides the navigation pane; then clicking any of the buttons restores the navigation pane.

To adjust the width of the navigation pane:

1. Hold the pointer on the boundary between the navigation and content panes. The pointer changes to a double-pointed arrow.
2. Drag until the pane is the desired width: it is limited to a maximum of about one-fourth the total screen width.

Note	Adjusting the width of the navigation pane is possible only in Internet Explorer.

Search Folders

The **Search Folders** section of the navigation pane contains saved searches you can use whenever needed. It includes predefined system searches and searches you have created, stored in folders; click one to view the search results. For more information about saved searches, see Saved Searches on page 149.

Shortcuts

Beneath the search folders are two “shortcuts” areas:

- **My Bookmarks**—Objects you have bookmarked for quick display later. To bookmark an object, choose **Actions** > **Bookmark** on an object’s page. For more information about bookmarking, see Using and Organizing Bookmarks on page 52.
- **Recently Visited**—The last 10 objects you have viewed (or 25, 50, or 100, depending on your Agile administrator’s setting of a System Preference); click one to display it. For more information about the Recently Visited list, see Using the Recently Visited List on page 56.

Analytics and Reports Folders

The **Analytics and Reports Folders** section of the navigation pane gives you access to the types of reports for which you have privileges—and include Analytics folders if that is part of your Agile installation. You can view, edit, and delete existing reports. You create reports from the **Create** button; see Creating Objects on page 92.

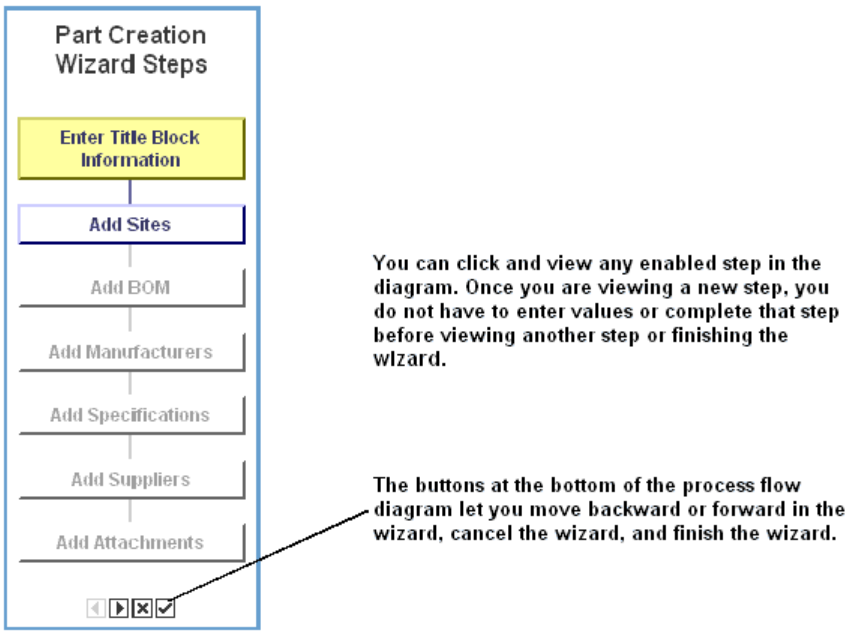
Reports are documented later in this manual.

Analytics requires separate licensing. A **PLM Analytics** folder may not appear in your view. There is a separate user guide for Analytics.

Using the Wizard Process Flow Diagrams

As you proceed through the steps of a wizard, click the **Expand Left Navigation** button to see process flow diagrams in the navigation pane. The process flow diagram displays each step in the task, and you can click the next step or a previous step in the diagram to go directly to it. The step you are currently on is highlighted.

The following graphic shows the process flow diagram that appears in the navigation pane when you create an item.



Note For information about adding data to an object you are creating, see Adding Data during Create with the Process Flow Diagram on page 94.

Changing Your User Settings

You access Web Client settings by clicking the **Tools** button on the main toolbar. When you click **Tools** > **My Settings**, the Settings Home page appears, where you can access and edit your **User Profile**.

Administrators or user administrators can access other user settings by choosing **Tools** > **Administration** > **Users** or other User Settings. For more information about working with User Settings (for user administrators), see the Agile PLM Administrator Guide.

Note Keep in mind that the Agile ad*ministrator may have set* values in Agile PLM that impact what you are able to modify. Most changes made by the administrator are automatically implemented systemwide; however, if the administrator makes changes in your role assignment, or to the roles and privilege masks themselves, these take effect for a user only after the user has logged out and logged back in to Web or Java Client.

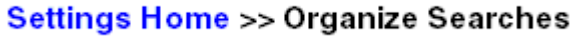
To make changes to a setting:

1. Open the Settings Home page from the **Tools** button (on the main toolbar) > **My Settings**.
2. Click the setting you want to change. The relevant information appears in the right pane.

Here are the links on the Settings Home page and where you can find more information about them in this manual.

Link	Where the function is described in this manual
User Profile	Changing Your User Profile on page 17; see also Choosing Your Preferred Start Page on page 28
Change Password	Changing Your Password on page 40
Transfer Authority	Viewing Signoff Authority Transfers on page 40
Organize Bookmarks	Using and Organizing Bookmarks on page 52
Organize Searches	Editing and Managing Searches and Search Folders on page 200
Organize Reports	Working with Agile Reports on page 123
Personal Groups	User Groups and the Address Book in Web Client on page 56
Deleted Personal Groups	Deleting Personal User Groups on page 59
Personal Criteria	Creating Personal Criteria on page 19; that discussion is specific to Java Client but the Web Client procedure is very similar
Personal Supplier Groups	Creating Personal Supplier Groups on page 60

When you are working with Agile settings, a navigation path displays at the top of the main pane, indicating how you arrived at the current Web Client page. You can click a link in the path to return to the corresponding location. The navigation path in this figure shows that you can return to the Settings Home page by clicking **Settings Home**.



Changing Your User Profile

Your User Profile is simply the settings entered by the Agile administrator when your “user object” was created. Your user profile is available for you to modify, within constraints set by the

administrator. It contains data under various tabs that is either purely informational or is used by the Agile applications:

- **General Information**, for example, how to contact you;
- **User Preferences**, including:
- **System Preferences**, for instance, your preferred client to receive email notifications;
- **Format Preferences**, for instance, your Windows date and time preferences; and
- **Display Preferences**, for instance, whether you see icons or text in the toolbar (or both).
- Other tabs are for **Escalations**, **User Groups**, **Share**, **Subscription**, **Attachments**, and **History**, which you will learn about in other chapters of this manual.

You have an opportunity to enter information when you first log in to Web Client. Again, your Agile administrator determines to what extent you can edit your user profile.

To edit or add information to your user profile:

1. Open your user profile by clicking **Tools** > **My Settings** > **User Profile**.

   You can also click **My User Profile** under Quick Links on the Home page.
2. Click the tab on which you want to make changes. For instance, to make changes to the **General Info** tab, click that tab.
3. Click the **Edit** button on that page. Use lists, browse buttons, and text boxes to enter the requested information.
4. When you have finished, click **Save**. If you wish to cancel your changes, click **Cancel**.

   You may change settings on other tabs, but you must click **Save** for each page you alter. If you click another tab after entering new values, you will be prompted to **Cancel** the move operation so you can **Save** the tab you are on.

   To verify changes you make to your user profile, it is best to log out of Web Client and log back in.

Note	If you will be working primarily in Web Client, check this setting in your user profile: **Preferences** > **System Preferences** > **Preferred Client**; it should be set to Web Client. Also, **Receive Email Notifications** should be set to Yes. This will ensure that you will receive email notifications in the same client you are working in. If there is a discrepancy and you are not able to change these properties, see your Agile administrator.

Important	Product Portfolio Management, Product Governance & Compliance, and Product Cost Management solutions operate only from Web Client. If one of these solutions is to be your primary area of work, your administrator has likely already set Preferred Client to **Web Client**. If you change this setting to **Java Client**, all your email notifications would include a link that opens Java Client; yet you cannot work with PPM, PG&C or PCM objects in Java Client, so it may be counter-productive to change this setting.

Main Toolbar (Web Client)

A Display Preference lets you decide whether you want to see icons or text in the toolbar. The

choices are Icons Only, Text Only, or both Icons and Text.

User Preferences

A full list of the user preferences and their descriptions are found in User Properties Defined.

Persisted User Interface Settings

For some user interface settings, the most recently used settings are persisted across sessions for each user. These settings are stored in a web browser cookie when you log out of Web Client.

Examples include:

- **Resizable table columns** – Resizable table column widths are persisted across sessions for each user.
- **Add method** – (Search, Type in Known Number(s), Create)
- **Edit Rows After Adding.**
- **Continue Creation in Wizard.**
- **Agile PPM** – Details selections in the Create Program from Template wizard.

Changing Your Password

These instructions describe how to change your login password. The process is similar for changing your approval password using the **Change Approval Password** option, which is enabled only if your Use Login Password for Approval user property is set to No.

To change your login password:

1. Click **Tools** > **My Settings** > **Change Password**. The Change Login Password page appears.

   You can also click **Change Password** under Quick Links on the Home page.
2. Type your old login password in the **Login Password** field.
3. Type your new login password in the **New Login Password** and **Confirm Login Password** fields. (Passwords are case-sensitive.)

   If you want to change your approval password (and the Change Password dialog displays the **Change Approval Password** fields), fill in the fields as described above.
4. Click **OK**. If you have not followed the rules set by the Agile administrator for selecting passwords, you are prompted to correct your password.

Viewing Signoff Authority Transfers

The Agile administrator or user administrator can have signoff authority transferred from you to another user, or from another user to you. This is useful when, for example, you are out of the office and unavailable to sign off on changes.

To view transfers that have been set up:

Click **Tools** > **My Settings** > **Transfer Authority**.

Exploring the Home Page

Note	The page that displays when you open Web Client can be changed, as described in Choosing Your Preferred Start Page on page 28. If you chose a Dashboard page as your Preferred Start Page, that Dashboard page will be displayed when you click the **Home** button in the main menu.

However, you can use the **Home** button drop-down list to select a Home page tab (**My Assignments**, **Notifications**, or **Workflow Routings**), which displays the Home page tab with the selected tab on top.

Quick Links

Quick Links, at the top of the Home page, is a list of up to ten links that you use frequently. You define your own Quick Links list and you can edit and modify your Quick Links list at any time. Your Quick Links list can include predefined system links, saved searches in your Personal Searches folder, or bookmarks in your Bookmarks folder.

To edit your Quick Links list:

1. Click the **Edit** link next to the **Quick Links:** heading at the top of the Home page. The editable list appears at the top of the page.
2. From the drop-down list choose the type of link you want to use.

   The three types of available links are:

   - Links – predefined Agile system links including My User Profile, Change Password, Analytics and Reports, and Dashboard.
   - Bookmarks – available values are all the bookmarks in your Bookmarks folders, listed individually.
   - Searches – available values are all the searches in your Personal Searches folders, listed individually.
3. Use the arrow buttons to move links from the Available Values list to the Selected Values list.

   Or, double-click to move links from one list to the other list.
4. You may include more than ten links in the Selected Values list, but only the first ten links in the list will be displayed in your **Quick Links** list. Reorder the list by selecting one or more links and using the up and down arrow buttons to move them up or down in the list.
5. When you are finished, click the **Save** button.

Home Page Inbox Tabs

As information passes through the Agile system, users receive news of status changes, requests, and other notifications through email. Users with different roles and privileges receive different notifications. When you first start Web Client, it is a good idea to view the information collected for you on the Home page.

- **Notifications** tab – Notifications inform you of some action or process that has taken place or a notification can let you know that you have a request to accept or decline ownership of an action item or activity. Delete notifications after you have read them.
- **Workflow Routings** tab – lists routable objects that require your review or action. Click the object number in the table to open it.
- **My Assignments** tab – lists program leaf node objects assigned to you which are not yet complete and action items assigned to you which are not yet complete.

Viewing the Home Page

The Agile Home page provides access to Dashboard, Notifications, Workflow Routings, and My Assignments. Dashboard features are documented separately, see "Dashboard".

To access the Home Page, click the icon. The page that displays when you first open Web Client can be changed, as described in the *Getting Started with Agile PLM Guide*. If you choose a Dashboard page as your Preferred Start Page, that Dashboard page will be displayed when you click the **Home** button in the main menu.

To view your Inbox tabs in Web Client:

You can open and view the Home page using any of the following methods:

- At any time while you are using Web Client, click the small down-arrow next to the **Home** button and select an inbox view: **My Assignments**, **Notifications**, or **Workflow Routings**.
- If your preferred start page is a Home page tab, it is displayed when you login to Agile Web Client.
- If your preferred start page is a Home page tab:
  a. In the menu bar, click the **Home** button.

     The Home page is displayed with your preferred inbox view tab on top.
  b. To view a different inbox view, click the Home page tab you want to view.

Note	If your preferred start page is a Dashboard tab, you will not see the Home page tabs when you click the **Home** button. Click the small down-arrow next to the **Home** button and select a non-Dashboard inbox view: **My Assignments**, **Notifications**, or **Workflow Routings**.

Notifications

The Home page **Notifications** tab lists notifications that have been sent to you. Notifications inform you of some action or process that has taken place, such as subscriptions, RFQs, and project invitations. A notification can also let you know that you have a request that requires your attention in the My Assignments tab. Requests ask you to accept or decline ownership of an action item or activity.

Note To accept or decline a request, use the **My Assignments** tab.

You can view or delete a notification.

- To view a notification, click the Subject link.
- To delete a notification, select its row and click **Delete**.

Icon or Button	Description
Delete	Deletes the selected notifications. Select one or more rows in the Notifications table, and click this button to delete them from the table.
	New Notification Icon in Notifications table row. Indicates that you have not yet opened this notification.
	Read Notification Icon in Notifications table row. Indicates that you have previously opened this notification.

Workflow Routings

The Home page **Workflow Routings** tab lists routable objects that require your review or action. For example, your **Workflow Routings** table may contain changes for which you are an approver. The out-of-box workflow routings are a combination of base classes and actions that define the kind of review, as in the table below.

Note The searches selected in your User Profile **Searches** field also determine which workflow routings appear in your Inbox. For example, if **Change Analyst Searches** is one of your assigned searches, you see Change class object workflow routings in the **Workflow Routings** tab. In a similar manner, if **Quality Searches** is one of your assigned searches, you see QCR and PSR workflow routings. For more information, see Changing Your User Profile on page 17 and User Properties Defined on page 60.

Base class...	...includes routable objects from these classes...	...combined with these actions of review
Change	Change Orders, Change Requests, Site Change Orders, Price Change Orders, Deviations, and Stop Ships	... **That Require My Approval** ... **That I Am An Observer Of** ... **That Were Returned To Me** ... **Transferred to Me** ... **Escalated to Me**

Base class...	...includes routable objects from these classes...	...combined with these actions of review
Quality Change Request (**QCR**)	Corrective and Preventive Actions and Audits	
Problem Service Request (**PSR**)	Non-Conformance Requests and Problem Reports	
Package	Packages	
Program	Activities and Gates	
Transfer Order	Content Transfer Orders and Automated Transfer Orders	
Declarations	Substance Declarations, Part Declarations, JGPSSI Declarations, Homogeneous Material Declarations, Supplier Declarations of Conformance, IPC 1752-1 Declarations, and IPC 1752-2 Declarations	

To open an object in the table, click its number. To export objects to a text or PDX file (if you have privileges), select the object rows and choose **Tools** > **Export**. The **Print** button prints the entire table.

My Assignments

The Home page **My Assignments** tab lists Activities and Action Items for which you are responsible. The **My Assignments** tab provides a set of tools that allow you to efficiently work with your assignments. You can sort the assignments table rows, or select one or more assignment rows in the table, and then perform an action on the selected assignments. For example, you can accept or decline a program activity assignment, or flag an assignment for easier tracking.

The Home page **My Assignments** tab table includes:

- Activity objects where:
  - The activity is In Process. The workflow status type is *not* Complete or Canceled.
  - The activity's **Template** attribute is set to Active. Proposed or Template activities are not included.
  - The activity is a leaf node. Activities with children are not included.
  - You are the owner of the activity and the **Delegated Owner** field is blank. If you have delegated ownership, the **Delegated Owner** field contains the name of the delegated owner until the activity is accepted or declined.
  - You are the delegated owner of the activity.
  - You are a resource on the **Team** tab of the activity and your allocation is greater than 0%.
- Action Items where:
  - The action item is assigned to you and it is *not* Complete or Cancelled.
  - The action item is assigned to you and it has been accepted.

- The action item is assigned to you and it has *not* been declined.
- You are the creator of the action item and it has been declined by the assignee.

My Assignments Table

Your Agile administrator determines which columns appear in the **My Assignments** table. If you have questions about the **My Assignments** tab, contact your Agile administrator.

By default, the **My Assignments** tab includes the following columns:

Column name	Description
Flag	Flag icon which you can set to manage your assignments. For more information, see Flagging Assignments.
Name	The name of the activity or action item. Click this link to open the activity or action item.
Status	Workflow status of the activity or action item. For example, an activity can be Not Started or In Process and an action item can be Not Accepted or Accepted. If you have the appropriate privileges, you can edit the **Status** column. For more information, see Editing Assignments.
Due Date	The date the activity or action item is due. You can sort the assignment list by due dates. For more information, see Using the View Options to Sort your Assignment List. If you have the appropriate privileges, you can edit the **Due Date** column. For more information, see Editing Assignments.
% Complete	For activities, the percentage of the task that has been completed. If you have the appropriate privileges, you can edit the **% Complete** column. For more information, see Editing Assignments.
Related To	For activities, the **Related To** column lists the parent activity and root parent activity. For action items, the **Related To** column lists the activity or discussion object to which the action item is associated. Click the links in this column to open the related activities or discussions.
Actual Hours	For activities, the number of hours expended on the activity. If you have the appropriate privileges, you can edit the **Actual Hours** column. For more information, see Editing Assignments.

My Assignments Tab Tools

The **My Assignments** tab tools include:

Tool	Description
View	View drop-down list. Use the list to sort your assignments by pre-defined views, for example, pending requests, flagged assignments, due dates, action items, or activities where you are a resource. For more information, see Using the View Options to Sort your Assignment List.
Edit	Edit the selected row objects. Allows you to edit object fields displayed in the table, based on your privileges. For example, you can modify the Status, Due Date, and Actual Hours fields. For more information, see Editing Assignments.
Accept	Accept the selected activities, program activity assignments, or action items. For activities, accept the ownership when you are the designated owner. For program activity assignments, accept the assignment as a resource for the activity. For action items, accept the action item when you are the assignee and the action item has not yet been accepted. For more information, see Accepting Assignments.
Decline	Decline the selected activities, program activity assignments, or action items. For activities, decline the ownership when you are the designated owner. For program activity assignments, decline the assignment as a resource for the activity. For action items, decline the action item when you are the assignee and the action item has not yet been accepted. For more information, see Declining Assignments.
Mark Complete	Mark as complete the selected activities or action items. For activities, sets the Complete field to 100% and changes the workflow status to Complete. For action items, changes their status to complete and removes them from your assignment list. For more information, see Mark Assignments Complete.
Show Filter **Hide Filter**	Displays or hides the filter definition fields. For detailed information about using the filter, see Using the Filter to Sort your Assignment List on page 52.
Print	Prints the table sorted table. Allows you to print the assignment table that is currently displayed. For more information, see Printing the Assignment Table.

Tool	Description
More Actions... **Add to Flagged View**	Sets the flag for all the selected table rows. Allows you to flag multiple rows at one time. To display flagged rows, in the **View** drop-down list, choose **Flagged**. For more information, see Flagging Assignments.
More Actions... **Add to Hidden Assignments View**	Allows you to hide assignments. Hidden assignments do not appear in the assignments table. For more information see Hiding and Unhiding Assignments.
More Actions... **Remove From View**	Remove assignments from the Hidden view. When displaying the hidden assignment view, allows you to remove (unhide) the selected assignment rows. See also Hiding and Unhiding Assignments and Flagging Assignments.
Flag not set **Flag set**	Flag icon appears in each row of the assignment table. Set or unset the flag by clicking it. The flag helps you to organize your assignments and flag the ones you want to track. For more information, see Flagging Assignments.
View Details	**View Details** icon button. Appears in each activity row next to the activity name. Opens a popup window that displays important details about the object and allows you to edit, accept, or decline the object. The content of this window can be configured in Java Client Administrator. For more information, see Using the Show Details Dialog.

Using the View Options to Sort your Assignment List

Use the Home page **My Assignments** tab **View** drop-down list to sort you assignments and quickly find the assignments with which you want to work. For example, you can sort for pending requests or for overdue assignments.

Agile provides the following pre-defined view categories.

View	Description
All	Displays all assignments, except hidden assignments.
Pending Requests	Displays only pending requests.
Flagged	Displays only the flagged assignment rows. You set or clear flags in order to manage your assignments. This **View** list choice displays only the rows that you have flagged.

View	Description
Due Today or Overdue **Due this Week** **Due within 2 Weeks** **Due within 30 Days** **Due within 90 Days**	These **View** list choices display assignment table rows according to due dates.
Hidden Assignments	Displays only hidden assignments. You decide which assignments you want to hide on your assignments list. For more information, see Hiding and Unhiding Assignments.
Activities where I am a Resource	Displays activities where you have been assigned as a resource on the **Team** tab.
Action Items	Displays action items assigned to you. Action items are generated and assigned from activities and discussions.

Editing Assignments

You can use the Home page **My Assignments** tab **Edit** function to edit assignment attributes in the table. You must have the appropriate Modify privileges for the editable fields.

For example, depending on your privileges, for an activity, you can edit the **Status**, the **Percent Complete**, **Actual Hours**, and **Due Date**.

To edit My Assignment table rows:

1. Use the **Home** button drop-down list and choose **My Assignments** to display your list of assignments.
2. Select one or more rows in the table.
3. Click the **Edit** button.
4. Make the desired modifications.

   Note The editable fields are determined by which fields your Agile administrator has included in the assignments table and your modify privileges.

5. When you are finished, click **Save**.

Accepting Assignments

You can use the Home page **My Assignments** tab **Accept** function to accept multiple activities or action items at one time. The accept action applies to activities where you are the delegated owner, program activities assigned to you, and action items whose status is Not Accepted and you are the

assignee.

To accept assignments on the My Assignment tab:

1. Use the **Home** button drop-down list and choose **My Assignments** to display your list of assignments.
2. Select one or more rows in the table.
3. Click the ✓ **Accept** button.

   The selected objects are accepted.

Declining Assignments

You can use the Home page **My Assignments** tab **Decline** function to decline multiple activities or action items at one time. The decline action applies to activities where you are the delegated owner and action items whose status is Not Accepted and you are the assignee.

Note	When you decline an activity, you must enter a reason.

To decline assignments on the My Assignment tab:

1. Use the **Home** button drop-down list and choose **My Assignments** to display your list of assignments.
2. Select one or more rows in the table.
3. Click the ✕ **Decline** button.
4. If one or more of the selected rows are activities, you must enter a reason why you are declining. Enter your reason in the popup dialog and click **Send**.

Mark Assignments Complete

You can use the Home page **My Assignments** tab **Mark Complete** function to mark as complete multiple activities or action items at one time.

Note	If you have not accepted an action item, you cannot mark it as complete. Accept the action item first, then mark it as complete.

When you mark an activity as complete, the **Percent Complete** field is automatically set to 100%.

To mark assignments as complete on the My Assignments tab:

1. Use the **Home** button drop-down list and choose **My Assignments** to display your list of assignments.
2. Select one or more rows in the table.
3. Click the **Mark Complete** button.

   Action items in status Not Accepted cannot be marked complete and an error message is displayed.

Printing the Assignment Table

You can use the Home page **My Assignments** tab **Print** function to print the currently displayed assignments table. Use the **View** drop-down list or the Filter to sort the table, then print the displayed table rows.

To print the My Assignment table:

1. Use the **Home** button drop-down list and choose **My Assignments** to display your list of assignments.
2. Use the **View** drop-down list or the **Filter** to sort the table to display the assignments you want.
3. Click the **Print** button.

   A printable version of table is displayed in a new browser window and the Print dialog appears.
4. Click **Print** in the Print dialog.
5. Close the new browser window when you are finished.

Hiding and Unhiding Assignments

On the Home page **My Assignments** tab, the **More Actions...Add to Hidden Assignments View** command allows you to hide assignment rows that you do not want to see. The assignments are still part of your assignment list, but they are displayed only when you choose **Hidden Assignments** in the **View** drop-down list.

Hiding assignments can be a useful assignment management tool. For example, suppose you are assigned as a resource for an activity, but you are not the activity owner. You have completed your portion of the task, but other resources have not yet completed their portions of the task. Therefore, the assignment still appears on your **My Assignments** tab because it has not been marked as Complete. You can hide this assignment so it no longer appears on your assignments list, however, it will still appear on the assignment lists of other resources.

Hiding an assignment removes it from all your **My Assignments** tab views except your **Hidden Assignments** view. Your **Hidden Assignments** view has no effect on the assignment lists of other users. You can hide assignments (add them to your hidden view), display your hidden assignments, and unhide hidden assignments (remove them from your hidden view).

To add assignment rows to your Hidden View:

1. Use the **Home** button drop-down list and choose **My Assignments** to display your list of assignments.
2. If desired, use the **View** drop-down list or the filter to sort which assignment rows are displayed.
3. Select one or more rows in the table.
4. Choose **More Actions...** > **Add to Hidden Assignments View**.

To view your hidden assignments:

1. Use the **Home** button drop-down list and choose **My Assignments** to display your list of assignments.

2. In the View drop-down list, choose **Hidden Assignments**.

To remove assignment rows from your Hidden View:

1. Use the **Home** button drop-down list and choose **My Assignments** to display your list of assignments.
2. In the **View** drop-down list, choose **Hidden Assignments**.
3. In the hidden assignments view, select the rows you want.
4. Choose **More Actions...** > **Remove from View**.

Flagging Assignments

On the Home page **My Assignments** tab, the flag icon included in each row is a useful assignment management tool. Because you can sort assignments according to whether or not they are flagged, you can use the flag to indicate assignments that you want to track differently from other assignments. The flags on your assignment table appear only on your **My Assignments** tab, so you can decide how you wish to use them.

To set or unset the flag in a single assignments table row:

1. Use the **Home** button drop-down list and choose **My Assignments** to display your list of assignments.
2. Click the flag icon in the row you want.
   - If the flag is not set, clicking it toggles the flag to set: .
   - If the flag is set, clicking it toggles the flag to not set: .

To set the flags in multiple assignments table rows:

1. Use the **Home** button drop-down list and choose **My Assignments** to display your list of assignments.
2. If desired, use the **View** drop-down list or the filter to sort which assignment rows are displayed.
3. Select the rows you want to flag.
4. Choose **More Actions...** > **Add to Flagged View**.

To unset the flags in multiple assignments table rows in the flagged view:

1. Use the **Home** button drop-down list and choose **My Assignments** to display your list of assignments.
2. In the **View** drop-down list, choose **Flagged**.
3. In the flagged assignments view, select the rows you want.
4. Choose **More Actions...** > **Remove from View**.

Using the Show Details Dialog

On the Home page **My Assignments** tab, the **Show Details** icon (in each row next to the name of activity objects) opens a details dialog that displays additional information about the object and

allows you to perform actions on that object, for example, edit and bookmark. Your Agile administrator determines which attributes and actions are available in the details dialog of each object type.

Using the Filter to Sort your Assignment List

On the Home page **My Assignments** tab, the **Show Filter** and **Hide Filter** button toggles the display of the table filter. The table filter allows you to define filter criteria based on any column in the table. You can define multiple filter criteria, which are combined in an AND search of the table rows.

For example, you can filter for assignments whose **Related To** column includes the word **marketing** and the **% Complete** column is less than 50.

The format of each filter criteria row is similar to an Agile search criteria:

<attribute> **is** *<Match If Operator> <value to match>*

To use the My Assignments **tab filter:**

1. Use the **Home** button drop-down list and choose **My Assignments** to display your list of assignments.
2. Click **Show Filter** to display the **Filter:** criteria.
3. In the first filter drop-down list, labeled **--Select an Attribute--**, choose from a list of the columns in the assignments table.
4. In the next drop-down list, choose a Match If operator. The list of available Match If operators depends on the attribute type you chose as the **--Select an Attribute--** drop-down list.
5. In the remaining field, enter the filter values.
   - To add a filter criteria row, click **Add Row** at the end of the row. A filter criteria row is added to the display.
   - To delete a filter criteria row, click **Delete Row** at the end of the row. The row is deleted.
6. Click **Apply** to filter the assignments table. Only assignments that match your filter criteria are displayed.
7. To define different set of filter criteria, click **Clear** to clear the criteria and begin again.

Using and Organizing Bookmarks

If there are objects that you need to return to frequently, you can use Bookmarks and the Recently Visited list for quick access. For more information about the Recently Visited list, see Using the Recently Visited List on page 56.

Bookmarking

Bookmarking lets you keep a list of objects that you return to frequently. You can click an object bookmark to quickly display that object.

You can also bookmark reports that you use frequently.

To bookmark an object in Web Client:

1. Open the object.
2. From the **Actions** menu, choose **Bookmark**.
3. The Add to Bookmarks dialog box appears.
4. Enter a name for the bookmark in the **Bookmark Name** field.

   By default, the **Bookmark Name** field contains the object's number or name. You can edit or replace the bookmark name in this field now, or you can edit the bookmark name later.
5. Then select a folder in which to store it.
6. To create a new folder, click the **New** button. In the Create New Folder dialog, enter a folder name and click **OK**.
7. Click **OK** in the Add to Bookmarks dialog box to save the bookmark.

   The bookmark is saved in the **My Bookmarks** list in the **Search Folders** link on the navigation pane.

Using a Bookmark

To open a bookmarked object in Web Client:

1. Click **Search Folders** in the navigation pane.
2. Expand the **My Bookmarks** list by clicking **+**.

   Or, highlight the **My Bookmarks** folder and click the **Expand All** icon in the navigation pane to display all bookmark subfolders and their contents.
3. Click the object in the list of bookmarks. The object opens.

Organizing Bookmarks

You can organize bookmarks, including renaming them and organizing them into folders.

Buttons on the Web Client My Bookmarks Toolbar

The following table lists and describes the buttons on the My Bookmarks folder in the Web Client navigation pane.

Button	Description
Expand All	Expands all the bookmark folders in the navigation pane to display all available bookmarks.
Collapse All	Collapses all the bookmarks folders in the navigation pane.
Organize Bookmarks	Opens the Organize Bookmarks window.

The Organize Bookmarks Window

Use the features in the Organize Bookmarks window to create or remove folders, rename or remove bookmarks, and organize and move folders and bookmarks.

Open the Organize Bookmarks window with either of the following methods:

- Choose **Tools** > **My Settings**. On the Settings Home page, click the **Organize Bookmarks** link.
- Or, click the pencil icon in the left navigation pane next to **My Bookmarks**.

  The Organize Bookmarks page appears.

Button	Description
Remove	Removes the selected bookmarks and bookmark folders. See Deleting a Bookmark on page 54 or Removing a Bookmark Folder on page 55.
Rename	Renames the selected bookmark or bookmark folder. See Renaming a Bookmark on page 54 or Renaming a Bookmark Folder on page 55.
New	Adds a new bookmark folder within the current folder. See Creating a Bookmark Folder on page 55.
(drag and drop)	Allows you to reorder bookmarks and bookmark folders. See Moving Bookmarks and Folders on page 56.
Save	Save the modifications you made in the Organize Bookmarks window.
Cancel	Discards the modifications you made in the Organize Bookmarks window and closes the window.

Deleting a Bookmark

To delete a bookmark in Web Client:

1. Click **Tools** > **My Settings** > **Organize Bookmarks**.

   Or, click the pencil icon in the left navigation pane next to **My Bookmarks**.
2. In the Organize Bookmarks window navigate to the bookmark you want to remove and select it.
3. Click the **Remove** button.
4. When you are finished, click **Save**.

Renaming a Bookmark

To rename a bookmark in Web Client:

1. Click **Tools** > **My Settings** > **Organize Bookmarks**.

Or, click the pencil icon in the left navigation pane next to **My Bookmarks**.

2. In the Organize Bookmarks window navigate to the bookmark you want to rename and select it.
3. Click the **Rename** button.
4. In the text field, enter a new name and press the Return key.
5. When you are finished, click **Save**.

Using Folders to Organize Bookmarks

You can organize your bookmarks in folders to make them easier to locate and manage. You can use the existing folders or create new ones.

Creating a Bookmark Folder

To create a bookmark folder in Web Client:

1. Click **Tools** > **My Settings** > **Organize Bookmarks**.

   Or, click the pencil icon in the left navigation pane next to **My Bookmarks**.
2. In the Organize Bookmarks window navigate to the folder in which you want to create a new folder.
3. Click the **New** button.
4. In the text field, enter a new name and press the Return key.
5. When you are finished, click **Save**.

Removing a Bookmark Folder

You can remove or delete a folder, even if it is not empty.

To remove a bookmark folder in Web Client:

1. Click **Tools** > **My Settings** > **Organize Bookmarks**.

   Or, click the pencil icon in the left navigation pane next to **My Bookmarks**.
2. In the Organize Bookmarks window navigate to the folder you want to remove and select it.
3. Click the **Remove** button.
4. When you are finished, click **Save**.

Renaming a Bookmark Folder

To rename a bookmark folder in Web Client:

1. Click **Tools** > **My Settings** > **Organize Bookmarks**.

   Or, click the pencil icon in the left navigation pane next to **My Bookmarks**.

2. In the Organize Bookmarks window navigate to the folder you want to rename and select it.
3. Click the **Rename** button.
4. In the text field, enter a new name and press the Return key.
5. When you are finished, click **Save**.

Moving Bookmarks and Folders

To move a bookmark or a bookmark folder into another folder or to a different location in the list in Web Client:

1. Click **Tools** > **My Settings** > **Organize Bookmarks**.

   Or, click the pencil icon in the left navigation pane next to **My Bookmarks**.
2. In the Organize Bookmarks window, navigate to the search or folder that you want to move. To expand a folder, click its folder icon.
3. Click the folder or search to select it.
4. Drag the folder or bookmark to its new location and drop it onto:
   - Highlighted folder – the dropped folder or bookmark is moved into the highlighted folder.
   - Grey line between two names in the list of bookmarks and folders – the dropped folder or bookmark is moved to that location in the list.
5. When you are finished, click **Save**.

Using the Recently Visited List

When you view an object during a work session, it is listed in the Recently Visited list. The Recently Visited list includes the last 10 objects viewed (or 25, 50, or 100 if the administrator re-set the systemwide Preference).

To open a recently visited object in Web Client:

1. Click **Search Folders** in the navigation pane.
2. Expand the **Recently Visited** list.
3. Click the object in the list of recently visited objects. The object opens.

User Groups and the Address Book in Web Client

The address book is a multi-list window that lets you select users and user groups for various functions. The situations in which you use the address book can include:

- When you send email notifications
- When you select people or groups to sign off a workflow
- When you select users to act as change analyst, component engineer, originator, quality analyst, quality administrator, sourcing project owner, RFQ owner, program team member,

and so forth

- When you share, or grant, one or more of your roles to another user or user group for specific objects

You can also create user groups in the address book.

Note	User groups cannot be modified (adding or deleting users) in the Address Book, instead, you must use the **Users** tab of the group object. To modify a user group or delete a user group, use **Tools** > **My Settings** > **Personal Groups** to view your user groups.

You can access the address book by clicking **Tools** > **Address Book**, or when you are performing actions that involve sending an object or a notification (for example, routing a routable object). You can select individual users or user groups. The address book lists all the individuals and global user groups that have been created in Agile PLM.

When you email objects or send notifications, you can select recipients individually or in user groups. When you select a user group, all the members of the group receive the email message.

Note	Your Agile administrator can use Discovery privileges to limit the users you see in the address book.

Selecting Users from the Address Book

When you use the address book, you can select recipients individually or in groups. When you select a group, all the members of the group receive the message.

To select users from the address book:

1. Click **Tools** > **Address Book** to open the View Address Book page.
2. Section 1 of the page is Find Users. In the **Filter By** drop-down list, select All Users, All Groups, or the name of a specific group. Leave the Name(s) field blank and click **Find** to see in the Available Values table:
   - All User — A list of all users.
   - All Groups — A list of group names.
   - A specific group — A list of the users in that group.
3. To find specific names or groups, type all or part of a name you want to find and then click **Find** to see matches from which you can select.

   You can type multiple names, and even partial names, separated by a semi-colon. The exact matches are automatically selected. Those that are partial and can match more than one name (for instance, if you type Jeff and there are several “Jeff” users) are displayed in the Available Values table.

   If you type a name that is matched by only one user in the address book, when you click the **Find** button, that user’s name goes directly to the Selected Values table. If you decide you do not want that user, select the name and click the ◆ button. It moves to the Available Values table.

Note	You can also move names back and forth with double-clicks.

4. Section 2 of the page is Select Users. There should be names in the Available Values table from 1–Find Users.

   To go directly to a name in the table, type a value in the **Type name or select from list** field; the address book moves to a matching value in the table.

   Click the radio button for **First** or **Last** to sort the names in the Available Values table accordingly.

5. Select a person or user group in the Available Values table.

   To select multiple names or user groups, use the Shift or Ctrl key. To see more information about a user or user group, select it and click the **Details** button.

6. Use the ➧ button to move your selection(s) into the Selected Values table.

7. Continue selecting names and using the arrows until the Selected Values table is what you want.

   Remember, if you want to choose a user group, return to the **Filter By** field in 1–Find Users.

   If you want to create a group for another purpose, select the names of users and click the **Save As Group** button.

8. Click **OK** to close the address book.

Using the Details and Save As Group Buttons

When you select a user name that appears in the **Available** Values or **Selected Values** lists and click the **Details** button, the user object opens.

When you click the **Save As Group** button, the Save As dialog is brought up for you to create a personal or global user group. All user names that appears in the **Selected Values** lists are in the group.

Creating Personal User Groups

With the appropriate privileges, you can create personal user groups. You create user groups from the **Settings** page.

Note	You can create personal groups on-the-fly from the address book, which appears whenever you follow a process where you can select users. In the address book, click the **Save As Group** button and all users in the **Selected Values** list are in the new group.

To create a personal user group:

1. Click **Tools** > **My Settings** > **Personal Groups**. The Personal User Groups page appears.
2. Click **Create**. The Create User Group wizard appears.
3. Select the User Group subclass and type the name of the new group.
4. Click **Continue**.
5. In the Define the User Group page, specify general information about the user group, including description, status (Active or Inactive), and whether you want this group to be a resource pool (part of the Product Portfolio Management solution).

6. Click **Next**.
7. On the Add Users page of the wizard, click the **Add** button + to add users and user groups to this new group. The address book appears.
8. Select names in the **Available Values** list, and use the arrows to move them into the **Selected Values** list. For more information, see Selecting Users from the Address Book on page 57.
9. When you have selected all the users you want to include in the new group, click **Add** in the address book window.
10. Back in the wizard, click **Finish**. The new group appears on the Personal User Groups page.

    You may complete aspects of the user group by clicking the tabs and the **Edit** button. See Editing Personal User Groups on page 59.

Editing Personal User Groups

You can edit the groups you have created.

To edit a personal group in Web Client:

1. Click **Tools** > **My Settings** > **Personal Groups**. The Personal User Groups page appears.
2. Click the name of the group you want to edit. The Group page appears.
3. On the **General Info** tab, you can click **Edit** to change the general information about the group.
4. You can click the **Users** tab to add or delete users. On the **Users** tab, click **Add** to add another user. To delete a user, select the user row and click **Delete**.
5. To create or modify escalations, click the **Escalations** tab.
6. You can add or remove attachments on the **Attachments** tab.

For information about attachments, see Working with Attachments on page 255.

Deleting Personal User Groups

To delete a personal user group from the address book:

1. Click **Tools** > **My Settings** > **Personal Groups**. The Personal User Groups page appears.
2. Select the personal group you want to delete, and click **Remove.** The selected group is deleted.

Note	If the personal group is involved with elements like workflow approval or escalation, you will be prompted and prevented from deleting the group. In this case, you can set the group to Inactive status, which keeps the group from being involved in new events, but does not impact events in which it is already involved.

From the **Deleted Personal Groups** node, you can view personal groups that you have deleted from the Agile system. When a personal group is deleted, it does not appear in the Address Book. You cannot edit a personal group that has been deleted; if it is undeleted, it can be edited again.

Undeleting Deleted Personal Groups

A personal group may be “undeleted” if, for instance, a project team (group) was no longer needed at the end of the project, and then the project is reinstated, and the same people are on the project team. Once the group is undeleted, of course, the users in the group can be changed.

To undelete a personal user group:

1. Click **Tools** > **My Settings** > **Deleted Personal Groups**. The Deleted Personal Groups page appears.
2. Open a deleted personal group by clicking its name.
3. Choose **Actions** > **Undelete**. The selected group is undeleted and now appears in the **Personal Groups** table.

By undeleting the deleted user group, it appears again in the Address Book.

Creating a New Group Using Save As on a Deleted Personal Group

You can also create a new personal group from a deleted personal group. Once you have opened a deleted personal group, choose **Actions** > **Save As**. You will be prompted to give the deleted group a new name and save it. You can then modify it in the usual ways.

Creating Personal Supplier Groups

With the appropriate privileges, you can create personal supplier groups. You create personal supplier groups from the **Settings** page.

To create a personal supplier group:

1. Click **Tools** > **My Settings** > **Personal Supplier Groups**. The Personal Supplier Groups page appears.
2. Click **Create**. The Create Supplier Group wizard appears.
3. Type a name and a description of the new group, and select the supplier group type Personal.
4. Click next to the Suppliers field. The Identify Suppliers dialog appears.
5. Find suppliers’ names using the search options offered: Search, Advanced Search, Saved Search, Bookmarks. Click **Next**.
6. Select suppliers for the group by checking the box next to each one’s name (or select all with the topmost box).
7. Back in the original wizard, click **Finish**. The personal supplier group is created and appears on your Personal Supplier Groups page.

You may modify aspects of a supplier group by selecting the supplier group row and clicking the **Edit** button.

User Properties Defined

The table below lists and describes the properties common to all users in the Agile PLM system.

The **General Info**, **Preferences**, **Escalations**, and **User Groups** tabs are documented. **Share**, **Subscription**, **Attachments**, and **History** tabs are all automatically populated, and do not have fields or properties per se. If you are not able to set a field that you want, see your Agile administrator to go over your roles and privileges.

Preferences for users are found on the **Preferences** tab of any user object. There are three sub-categories of user preferences: system-related, format-related, and display-related. (These "user preferences" should not be confused with **Administrator** > **Server Settings** > **Preferences** node of "systemwide preferences.")

Property	Description
General Info tab, required fields	
User ID (username)	The user's Agile PLM login user identification, or username.
First Name and **Last Name**	The user's public name.
Status	Indicates whether the user is enabled (Active) or disabled (Inactive). A disabled user cannot log in.
Email	The user's valid email address for change notification/routing. *Example*: danny.design@agile.com. **Note**: The user will not receive any email notifications if there is no valid address in the **Email** field.
General Info tab, optional user information	
Status	Active or Inactive. (This is the same thing as Enabled or Disabled, respectively.)
Title	The user's title, for example, Senior Engineer.
Address fields	There are four address fields that are used for informational purposes only: **Address** (street), **City**, **Postal/Zip Code**, and **Geography**. The Geography field is a series of drop-down lists.
Phone number fields	The user's **Business Phone**, **Home Phone**, and **Mobile Phone** numbers (for informational purposes only).
Fax	The user's fax number (for informational purposes only).
Pager	The user's pager number (for informational purposes only).
Secondary Email	The **Secondary Email** is optional, but when the field is filled in, the user receives notifications at both email addresses.
General Info tab, Profile fields	
Role(s)	The user's role assignments. This property determines a user's access to the objects in Agile PLM from the point of discovery forward.
Lists	These lists link certain roles, like Change Analyst, to routable objects and their workflows, such as Changes.

Property	Description
Searches	These lists control roles, searches folders, and queries. For example, **Change Analyst Searches** controls whether a user has, in Java or Web Client interfaces, a Change Analyst Searches folder and Change Analyst queries in the **My Inbox** Workflow Routings list.
User Category	Power, Concurrent, or Restricted.
Use Login Password for Approval	Each user has a login password and approval password (used to approve changes).
Allow Escalation Designation Approval	If the user has identified one or more designated escalation persons (DEPs), this setting determines when the DEPs can approve or reject a routable object.
Home Organization	The name of the company profile (organization name) for all users created from the **Users** node and the supplier name and supplier number for all users created from the **Supplier Groups** node.
Site(s) and **Default Site**	**Sites** are used for distributed manufacturing, and indicate all of the company's locations where the user is involved; selecting from the drop-down list for this property populates the drop-down list for Default Site. **Default Site** is the user's main base of work.
Ship-To address fields	**Authorized Ship-To** (called "Site" in earlier versions of PCM), used only by PCM, indicates all company locations where the user can initiate sourcing activity; selecting from the drop-down list for this property populates the drop-down list for **Home Ship-To**. **Home Ship-To** is the primary location where the user is responsible for sourcing activities.
Program Manager for Partners	The partners for which this user is program manager (which is the change analyst for Package objects).
Rate fields	There are three **Rates** fields: **Labor Rate**, **Overhead Rate**, and **Bill Rate**. The drop-down lists in these fields show all currencies entered in the **Currency Exchange Rates** node. You can select a currency different from the user's Preferred Currency (see **Preferences** tab). Used by PPM.
Comment	The Agile PLM administrator may enter a comment regarding the user.
Program Type	Types of programs the user can participate in.
Region	Regions the user has belongs to.
Division	Divisions the user belongs to.
Product Line	Product lines the user has access to.
Customer	Customers the user is associated with.
Launch Year	Product launch years the user is associated with.
Category 7, Category 8, Category 9, Category 10	Optional Product Portfolio Management Dashboard fields.
Preferences tab: System Preferences	

Property	Description
Preferred Client	This field controls the type of link provided in system notifications to the user. Select Web Client, Java Client, or Portal Client. Agile's PCM, PG&C, and PPM solutions operate only in Web Client. Users who work primarily in those areas should have their Preferred Client set to Web Client.
Preferred File Manager	Select from the list of file servers. For best performance, select a file server that is a local server for the user.
Preferred Portal URL	Specify the URL used to access the Agile PLM portal. The user's Agile PLM email notifications will contain a link to the portal URL.
Receive Email Notification	Controls whether the user can receive automatically generated email notifications from the system. *Settings* = Yes or No
File Productivity Preference	Controls whether the user has access to advanced productivity components, or standard components, or wants to be prompted in each situation. If set to Standard mode, non-supported files will not be opened automatically. Instead, the user is prompted to choose Save or Open. *Settings* = Prompt, Advanced, or Standard **Note**: this user preference will not appear in any user's Profile if the systemwide preference Allow Download of Productivity Components is set to No.
Preferences tab: Format Preferences	
Language	English is available with all Agile PLM licenses. Agile PLM includes Japanese, Traditional Chinese, Simplified Chinese, French, or German, per your license.
Workweek Settings	This setting is for future use only, and is not referenced in any Agile PLM module. **Note**: This property is not applicable to any Agile PLM module including Product Portfolio Management and Microsoft Project schedules.
Preferred Date Format	The format in which dates are displayed to the user.
Time Zone	The time zone where the user is located.
Preferred Time Format	The format in which times are displayed to the user.
Preferred Currency	The currency in which prices/costs are displayed to the user.
Number Format	The format in which numbers are displayed to the user. An example of each format is displayed in the drop-down list.
Preferences tab: Display Preferences	
Preferred Start Page	Select between Home and the available dashboard tabs.
Preferred Inbox View	Select between My Assignments, Notifications, and Workflow Routings.
Response Edit Mode	Choose between Basic, Advanced Table Edit, and Advanced Wizard Edit. The Basic setting brings the user – generally a "supplier" who does not work at the "buyer" company – to a simplified Web Client user interface. The two Advanced settings bring the user to the familiar Web Client UI.

Property	Description
Rows per Table Display	The number of rows that appear in the user's Agile Web Client user interface.
Static Table Headers	Set to Yes to carry table headers to additional pages.
Maximum Rows Displayed	The maximum number of rows displayed in any Agile PLM table, including search results. The default is 1000. If you set this property to a higher value, searches will take longer to display results.
Main Toolbar (Web Client)	Menu "headings" on Web Client's main toolbar can be seen as Icons Only, Text Only, or both Icons and Text.
Encode Type	Select from: **Western European (ISO), Japanese (Shift JIS), Traditional Chinese (Big 5), Japanese (EUC), Simplified Chinese (GB2312), and Unicode (UTF-8)**
Show Time Sheet	Set to Yes to display Timesheet tab in your Agile PLM Inbox. Requires the SmartRule **Detailed Timesheet Entry** to be enabled.
Escalations tab	
Criteria and **Notify Users**	Set **Criteria** and **Notify Users**, which is an individual user or user group (personal or global) to be notified when a workflow status exceeds its escalation time period without a signoff by the user.
User Group tab	
Name and **Status** and **Role(s)**	The user's user group assignments for the address book.

Chapter 4

Concepts and Terms in Agile PLM Solutions

This chapter includes the following:

- Introducing Agile Objects 65
- Installed Agile Classes, Base Classes, and Subclasses 68
- Other Important Concepts in Agile 73
- Product Collaboration Process 76
- Product Portfolio Management Process 79
- Product Quality Tracking Process 80
- Product Cost Management Process 82
- Product Governance and Compliance Process 83

Introducing Agile Objects

In the Agile system, you work with *objects*. Examples of objects are parts, documents, RFQs, and change orders.

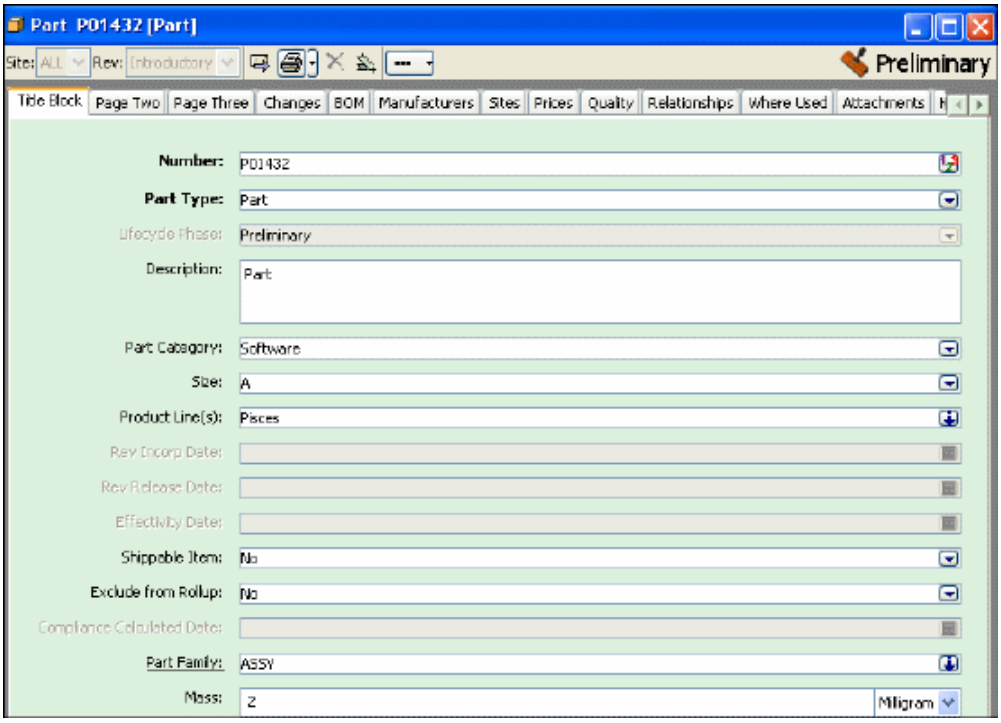
The objects you can view and the actions you can perform are determined by the server components installed on the Agile Application Server and the roles and privileges you are granted to access those components. Privileges can vary from field to field. If you have questions about your roles and privileges, contact your Agile administrator.

How Objects Appear

When you open an object, it appears with a number of tabs. Different types of objects have somewhat different tabs. Each tab contains fields that provide information about that object. For example, a part's **Title Block** tab includes **Number**, **Part Category**, and **Description** fields, and a change's **Cover Page** tab includes **Originator**, **Status**, and **Reason For Change** fields.

Some tabs have fields and tables where you enter data; some fields and tables are filled in automatically. Some objects and commonly found tabs are mentioned in the platform-specific discussions later in this chapter. For more information about objects and their tabs, see Working with Business Objects on page 85.

Below is a typical object page in Java Client and the same object window in Web Client.



Agile Object Types

Business objects that you create in Agile PLM are based on a framework of *object types*: **base class**, **class**, and **subclass**. The base class object type is a framework for classes; the class object type is a framework for subclasses. Each class has at least one default subclass; the subclass level is where you create specific objects. Every object created in Agile (by users or administrators) is an instance of an existing subclass. (Base classes and classes are never objects themselves.)

The Agile system provides some three dozen default classes of business objects. The default classes of objects that are available for your company's creation and use depend on which Agile products and licenses have been purchased. The Agile administrator—that is, any user who has been assigned the Administrator privilege mask or role—can create subclasses according to the needs of the enterprise; the administrator can also rename the existing ("out-of-box") base classes, classes, and subclasses. You may find that even a relatively new Agile installation has objects that have been created with names that are not reflected in this manual, for example, in the next three tables that describe the object types.

The classes represent either a kind of action (business process) or kind of entity (business object). Everything that a user can create in Agile PLM—object or process—is treated as an object, and, again, each object is a specific instance of a subclass. The child subclass inherits the attribute settings of the parent class; where applicable, it inherits lifecycle phase and process extension. Tabs—tab names and tab visibility—are inherited from the parent class, but only if these are set at the class level; even out-of-box subclasses with the same parent class can differ slightly from their "siblings" because of tabs that the administrator has hidden or given different names.

This table summarizes Agile's hierarchy of object types. As an Agile user, you do not need to know much about base classes and classes, but it is helpful to have an idea of the hierarchy and naming behind the subclasses you will be working with. "Items" and "changes" are examples of frequently used base class names.

Object type	This type inherits...	Rename, Create, or Delete	Installed examples	Notes
Base Class	Does not inherit; is the highest level of object type that user sees (for example, in searches).	Administrator can rename base classes, but cannot create or delete any base class.	1. Users base class 2. Items base class 3. Changes base class 4. Suppliers base class	
Class	...general properties and process extensions of its parent base class.	Administrator can rename classes, but cannot create or delete any class.	1. Users class 2. Parts class and Documents class 3. Change Orders class, Change Requests class, Site Change Orders class, etc. 4. Suppliers class	The class object type (sometimes called *main class*) is the primary level of organization in Agile PLM. Each class represents a specific process or kind of entity (see Routable and Non-Routable Objects on page 72).

Object type	This type inherits...	Rename, Create, or Delete	Installed examples	Notes
Subclass	...all components (tabs), properties, and attributes of its parent class. Subclasses arrange the information & data that describes the specific object in the Agile system.	Administrator can create and rename subclasses, and also delete any subclasses that have not been used by Agile users.	1. User 2. Part, Document 3. ECO, ECR, SCO, etc. 4. Broker, Distributor, Component Mfr., Contract Mfr., and Mfr. Representative	When users create a new object in Agile, they specify one of the Agile-supplied subclasses or a subclass that the administrator has created (or renamed) per your company's requirements. Subclass names cannot be used more than once within an Agile system. A few classes offer multiple out-of-box subclasses.

The object type plays a part in user access and permissions. For example, you can restrict a user's privilege to either the Changes base class, the Change Orders class, or the ECO subclass (or another, user-defined subclass of Change Orders class).

Installed Agile Classes, Base Classes, and Subclasses

The following two tables list all the possible installed object types in Agile PLM. Classes are grouped being routable or non-routable, which is discussed further on. Also covered in this section:

- Discovery and Read Privileges
- Routable and Non-Routable Objects

The following two tables list all the possible installed object types in Agile PLM, grouped by the routable and non-routable distinction. Your company may have purchased server licenses to a subset of this list. A class appears grayed out in the administrator's list of classes if your company has not purchased its server license.

Base class	Class	Subclass	Description
Routable objects: the means to direct or recommend changes to non-routable objects; these classes have a default workflow for changes to seek approval from other users; objects from these classes can be changed without approval.			
Changes	Change Orders	ECO	Directives to change an item; can advance the revision ("rev") of an item
	Change Requests	ECR	Requests for a change to an item

Base class	Class	Subclass	Description
	Deviations	Deviation	Directives to temporarily substitute one item for another
	Manufacturer Orders	MCO	Changes to AML data, such as information about manufacturers or manufacturer part numbers
	Price Change Orders	PCO	Directives to change a published price; can advance the revision of a published price
	Site Change Orders	SCO	Changes to BOM and AML information for a specific site
	Stop Ships	Stop Ship	Directives to stop shipping/using an item
Declarations	Substance Declarations	Substance Declaration	Seeks compliance information for each substance within the specification
	Part Declarations	Part Declaration	Seeks part-level compliance information and other composition header-level information (manufacturing parameters)
	JGP Declarations	JGP Declaration	Seeks compliance information (weights) according to the JGP standard
	Homogeneous Material Declarations	Homogeneous Material Declaration	Seeks complete breakdown of parts on the Bill Of Substances and compliance information at the homogeneous material level
	Supplier Declarations of Conformance	Supplier Declaration of Conformance	Seeks compliance with specifications from customers and government agencies
	IPC 1752-1 Declarations	IPC 1752-1 Declaration	A Joint Industry Guide (JIG) material composition declaration for electronic products
	IPC 1752-2 Declarations	IPC 1752-2 Declaration	A homogeneous material composition declaration for electronic products
Packages	Packages	Package	Packages of data to share with partners
Product Service Requests	Problem Reports	Problem Report	Quality incidents with items or products
	Non-Conformance Reports	NCR	Quality conformance issues with items or products

Base class	Class	Subclass	Description
Programs	Activities	Program; Phase; Task	Components of project planning in Product Portfolio Management; activities are time-based objects to which resources can be assigned
	Gates	Gate	Project management milestones in Product Portfolio Management; gates identify cross-PLM deliverables of the product development process to enable executive reviews of programs
Quality Change Requests	Corrective and Preventive Actions	CAPA	Requests for corrective actions and preventive actions
	Audits	Audit	Proactive reviews of business processes
Transfer Orders	Automated Transfer Orders	ATO	Transfer or publication of a product record that is automatically triggered by a workflow
	Content Transfer Orders	CTO	Transfer or publication of a product record that is manually triggered

Base class	Class	Subclass	Description
Non-Routable Objects: objects in these classes are not routed to Agile PLM users with workflows; objects from some of these classes, however, are changed by a user submitting a workflow (from routable classes) for approval from other users.			
Customers	Customers	Customer	Clients of the company
Discussions	Discussions	Discussion	Informal, threaded dialogue
File Folders	File folders	File Folder	Objects that include files or URLs; this class includes all file folder objects except historical report file folders
	Designs	Design	Objects used for CAD integration
Manufacturers	Manufacturers	Manufacturer	Qualified manufacturers
Manufacturer Parts	Manufacturer parts	Manufacturer Part	Parts provided by manufacturers
Part Groups	Part groups	Commodity Part Family	Containers of other parts (items or manufacturer parts) that share the same properties, such as prices, approved supplier lists, and composition. **Note** This object was named "Commodities" in previous

Base class	Class	Subclass	Description
			releases of Agile PLM.
Prices	Quote Histories	Quote History	Organizes bid prices from RFQ responses; cannot be revised by a PCO (see Changes)
	Published Prices	Published Price; Contract	Organizes prices of the company's products; can be revised by a PCO (see Changes)
Reports	Standard Reports	Administrator Report; Standard Report	The out-of-box reports for administrators (Administrator Reports) and users (Standard Reports include Products, Sourcing, Quality, Process, Personal, and Global reports)
	Custom Reports	Custom Report	Reports created and used within company
	External Reports	External Report	Reports created outside Agile PLM
Requests For Quote	Requests for quote	RFQ	Requests for quote, which are assembled from sourcing projects and sent to suppliers for formal bids
RFQ Responses	RFQ responses	RFQ Response	Bids, that is, responses from suppliers to your company's RFQs
Sites	Sites	Site	Manufacturing locations within the company, or closely partnered with the company
Sourcing Projects	Sourcing projects	Sourcing Project	Work preparatory to creating RFQs and capability for analysis across multiple RFQs
Specifications	Specifications	Specification	Lists of banned substances (or substances of concern) and their threshold values
Substances	Substances	Substance	A single chemical element used in composition of items, manufacturer parts, and part families
	Materials	Material	A compound chemical, a substance consisting of multiple substances
	Subparts	Subpart	A subunit of a component
	Substance Groups	Substance Group	A group of multiple substances, with a base substance that is what legislation is interested in, for example, "Lead

Base class	Class	Subclass	Description
			and Lead Compounds"
Suppliers	Suppliers	Broker; Distributor; Component Mfr.; Contract Mfr.; Mfr. Representative	Qualified suppliers of manufacturer parts; used by PCM (which uses the out-of-box subclasses) and PG&C solutions
Users	Users	User	Individuals using the Agile PLM system
User Groups	User groups	User Group	Groups of people using the Agile PLM system, e.g., departments, teams, site-specific groups

Your Agile administrator may have created or renamed subclasses. The administrator defines new objects by creating subclass objects under each object class. For example, under the Deviations class, you could see new subclasses such as "MechDev," "SWDev," and "Part Switch" in addition to the default subclass, Deviation.

Discovery and Read Privileges

Together, the Discovery privilege, the Read privilege, and the Enforce Field Level Read privilege determine which Agile objects you can find and open, and which object fields you can view.

The Discovery privilege lets you discover the existence of an object in the Agile database. If you do not have Discovery privilege for an object, you cannot view the object, and you cannot find, or discover, the object in the Agile database. This includes viewing users in the address book; there may be some users that you cannot view due to lack of privileges.

Once you have the privilege to discover an object, your Read and Enforce Field Level Read privileges for that object determine whether you can open and view it, and which individual fields you can view. You may be able to read an object, but you may not have Read privilege for every field of that object. So it is possible for you to open an object and, at the same time, be unable to view specific fields of that object. For more information about the Discovery and Read privileges, see the *Agile PLM Administrator Guide*.

Routable and Non-Routable Objects

Each class represents a specific process or kind of entity:

- **Routable objects** are created from classes that represent *processes*, such as a change in the change control process, or a transfer order, or a product service request. These objects can be routed to Agile users for approval or other input via workflows (see Workflows on page 77).
- **Non-routable objects** are created from classes that represent *entities* or things, such as parts, sites, RFQs, users, prices, or reports. These objects can be "flagged" for progress via lifecycle phases. Note, however, that non-routable objects—especially parts and documents—can be changed by the process of information-gathering via workflows, which are created through such routable objects as change orders or change requests.

Note File folder objects have lifecycle phases and, as they represent the entity of "attachment wrapper," are not considered routable objects; however, the File Folders class has a default, non-editable workflow with a single Review status (and no other status), which provides a **Routing Slip** tab where approvers can sign off and comment.

Routing Managers

Any object that can be routed for approval is a **routable object**. The user who oversees the routing and approval process is the *routing manager*. The various routing managers (see the table below) are simply roles assigned to users by the administrator. Once a user has been assigned a role of, say, change analyst, his name appears on the Change Analyst List and can be selected manually by a Java Client or Web Client user. Routing managers evaluate and assign routable objects, and they receive email notifications pertaining to the objects to which they are assigned.

The following table lists routable objects and the corresponding default routing manager.

Routable Object (with base class)	Default Routing Manager
Changes base class: Change orders (ECOs), Change Requests (ECRs), Stop Ships, Deviations, Site Change Orders (SCOs)	Change analyst
Changes base class: Manufacturer Orders (MCOs)	Component engineer
Changes base class: Price Change Orders (PCOs)	Price administrator
Declarations base class: Part Declarations, Substance Declarations, Homogeneous Material Declarations, JGPSSI Declarations, Supplier Declarations of Conformance	Compliance manager
Packages base class: Packages	Program manager
Product Service Requests base class (PSRs): Problem Reports and NonConformance Reports (NCRs)	Quality analyst
Programs base class: Activities and Gates	PE program manager
Quality Change Request base class (QCRs): Corrective and Preventive Actions (CAPAs) and Audits	Quality administrator
Transfer Orders base class: Content Transfer Orders (CTOs) and Automated Transfer Orders (ATOs)	Content manager

Other Important Concepts in Agile

Familiarity with the topics discussed in this section will help you use the full features of Agile.

Login Security and Passwords

Depending on how your Agile administrator has configured your password settings, you may have two separate passwords for login and approval, or you may have one password for both login and

approval.

Your username and approval passwords are the same for both Java Client and Web Client.

For system security, your administrator may configure the Agile system so that you are not allowed to log in after a specified number of password failures (entering the wrong password). The lockout applies to your login password only, not your approval password.

Depending on system settings, one of the following occurs:

- The login lockout lasts until a specified time has passed (for example, one minute).

  After the specified time has passed, a small Login dialog box appears, telling you that there have been too many login failures. Click **OK** and continue.

- The login lockout lasts until your Agile administrator unlocks your account by changing your password. If you are locked out, Web Client does not accept further input for the time period specified by the Agile administrator (for example, one minute), before you can attempt to log in again.

If you are having difficulty logging in to Agile, or had a failed logon and the lockout is lasting too long, see your Agile administrator.

Object Subscriptions, Relationships, and Sharing

"Sharing," "subscriptions," and "relationships" all describe operations with objects in Agile PLM that provide better collaboration and enhanced automation as they proceed through the manufacturing process. These features are detailed in Working with Business Objects on page 85.

- **Object sharing**—Lets you grant one or more of your roles to another Agile user for specific objects and specific classes listed in object tabs.
- **Object subscription**—You can subscribe to objects so that you are notified when certain events happen to that object. For example, you could subscribe to a change in order to be notified whenever the change was promoted to a new status.
- **Object-to-object relationships**—Lets you set up communication between Agile objects, and the actions resulting from (triggered by) that communication. For example, the implementation of an ECO could trigger the close of a related ECR.

File Folder Objects and Attachment Files

Attachments to objects may contain information about the object or a manufacturing process. You can attach files and URLs by referencing them in a *file folder* object. The file folder holds pertinent content, or attachments.

In previous versions of Agile, files and URLs that are attached—associated—to parts or other business objects are called *attachments*. In Agile 9, attachment files and URLs may be referred to generally as attachments, but it is important to remember that what is really attached to Agile business objects are file folders.

You can still view, copy, delete, and print attachment files. With appropriate roles and privileges, you can mark up or redline an attachment file in the AutoVue for Agile viewer. See Viewing and Redlining Attachment Files in the AutoVue for Agile Viewer on page 290.

The **Attachments** tab of an Agile object lists attached file folders. The **Files** tab of a file folder object lists the files and URLs that are referenced, and it is where you add and remove files and URLs in the file folder. A file folder's **Where Used** tab is populated automatically with any objects that have a link to the file folder. A single file folder object can be referenced from the **Attachments** tab of multiple objects.

For more information, see Working with Attachments on page 255. For details about searching attachment content, see Full Text Search for Content in Attachment Files on page 156. Also see *Viewer Supplement*.

Searching for Data

When you want to find data in the Agile system, you perform a search. Agile provides several types of searches:

- *Simple searches* find objects of all types that match the text you specify.
- *Quick searches* find objects that match two basic conditions: the text and the object type that you specify. They also have the ability to search attachment file content.
- *Advanced object searches* find all the objects with fields that match the conditions of the search. For example, you could search for parts where the **Description** field contains "Computer."
- *Where-used searches* (a specific type of advanced search) find the assemblies in which the BOM contains the items that match the search criteria.
- *Relationship searches* (a specific type of advanced search) find objects related to the objects that meet the search criteria. For example, you can search for the problem reports that appear on the **Relationships** tab of changes that meet search criteria.
- *Attachment content searches* find attachment objects that contain attachment files including the text specified in the search conditions.

For instructions about searching, see Finding Agile Data with Searches on page 145.

Agile Packages

Agile packages are sets of product information that can be created, viewed, and routed through Agile to users up and down the supply chain.

For example, suppose an electronic manufacturer service (EMS) provider must receive a certain set of documents to respond to a request for quotation from an original equipment manufacturer (OEM). The EMS defines the required documents in Java Client or Web Client. OEM employees then log in to Web Client, where they create Agile packages and are prompted to attach the required files. The Agile packages are submitted to the program manager at the EMS.

The EMS is immediately notified when the OEM submits the packages. The EMS can review the packages and their contents. The packages pass through workflow stages in Agile, where they are routed for review, accepted, or returned to the submitting partner if additional work is needed.

OEM personnel can monitor all this activity anytime they log in to Web Client for that EMS provider. The OEM can also use Agile Content Service (ACS) to automatically create and populate the Agile package in the Agile system of the EMS.

Exporting Data

Users at Agile sites can export product definition data to a file. Export files can be comma-delimited text format (CSV) or Product Definition eXchange (PDX) format.

PDX is the Product Definition eXchange standard designed for the e-supply chain. The standard is based on XML because it provides a simple yet powerful and flexible way to encode structured data into a format that is both human- and machine-readable. The PDX standard provides a way to describe product content (BOMs, AMLs, drawings, and so on), ECRs, ECOs, and deviations in an XML format.

In a typical case, an OEM with Agile has a design to communicate to an EMS, also called contract electronics manufacturer (CEM), who builds the component or assembly. The product data might include items, BOMs, approved manufacturer lists, drawings, and so on. When a design changes, the manufacturer needs to communicate the changes to the EMS. The Export wizard can create a text file or PDX package of this information from the Agile database to be sent to the EMS.

At the receiving end, the EMS then views that data (in Agile eXpress, if the file is a PDX package) and prints it or extracts it as needed for use in spreadsheets or other applications. The EMS can use Agile Import to import the PDX package or text file into the Agile database.

Agile Import and Export are documented in *Agile Import and Export Guide*.

For more information about the PDX standard, visit the PDX organization Web site at http://www.pdxstandard.org.

Product Collaboration Process

Agile's Product Collaboration (PC) solution helps supply chain partners define, store, change, and manage product content information. The PC solution is central to Agile PLM, and most Agile users will need to be familiar with BOMs, AMLs, and the change control process.

Bills of Material

Bills of material (BOMs) show all the items (parts, documents) that make up the current part or subassembly. (Documents may or may not have bills of material, depending on your system settings.) Items on a BOM can be a single item or an assembly of several items. The BOM for each part appears on its **BOM** tab.

Approved Manufacturer Lists

An approved manufacturers list (AML) is the list of manufacturers that have been approved to supply a particular item. The list identifies the manufacturer part for that item. The AML for a part, plus the manufacturer's part numbers and other information, appears on its **Manufacturers** tab.

Change Control Process

The change control process includes all procedures that manage changes or requests for change to any part, document, step, or instruction in your company's manufacturing process.

Objects and Change Control

Items are subject to change control, that is, modification by an approved and released change order. To modify an item's **BOM** or **Manufacturers** tab, you must create a change against the item.

The **Title Block** and **Sites** tabs of items are not under change control; this means, with the appropriate privileges, you can edit them at any time. Site objects and manufacturers are also not under change control.

Affected Items

The **Affected Items** tab of a change lists the items that are affected by the change. Users with sufficient privileges can use the **Affected Items** tab to:

- List the items affected by the change, and assign a pending revision (or *rev*) to the affected items of the ECO
- Open the affected items
- Work with BOM, manufacturer, and attachment redlines

Redlining BOMs, Manufacturers, and Attachment Files

When you redline a BOM, you change it in some ways. For example, you can add or delete parts and assemblies from the BOM or change quantities of existing parts. Likewise, when you redline an AML, you can change associated manufacturer parts information. When you redline an attachment file, you mark it up in the AutoVue for Agile viewer by adding new drawing lines, adding annotations, or adding measurements.

Redlining activities begin on the **Affected Items** tab of an ECO (for BOMs, AMLs, or attachment files), SCO (for BOMs or AMLs), or MCO (for AMLs).

Workflows

A workflow is a sequence of statuses that a routable object (such as a change) follows. Workflows automate many processes; for example, when a change is released, Agile users on the notification list receive automatic email with this information.

Agile provides default workflows for routable objects, and your Agile administrator can create workflows. For each workflow made available to Agile users, the administrator specifies workflow name, ID number, names of the statuses, and the properties that define each status.

Agile workflows are covered in detail in Routing Objects with Workflows on page 209.

Change Control Tasks

With the necessary server license, you can create changes against items and route them to Agile users for approval. Agile PLM lets you do the following:

- Approve or reject the routed changes
- Attach comments to changes

- Change the lifecycle phase of an item without changing its revision (MCO)
- Add, edit, and delete bill of material, manufacturer, and price data on items
- Change site-specific information on an item
- Redline attachment files associated with an item.

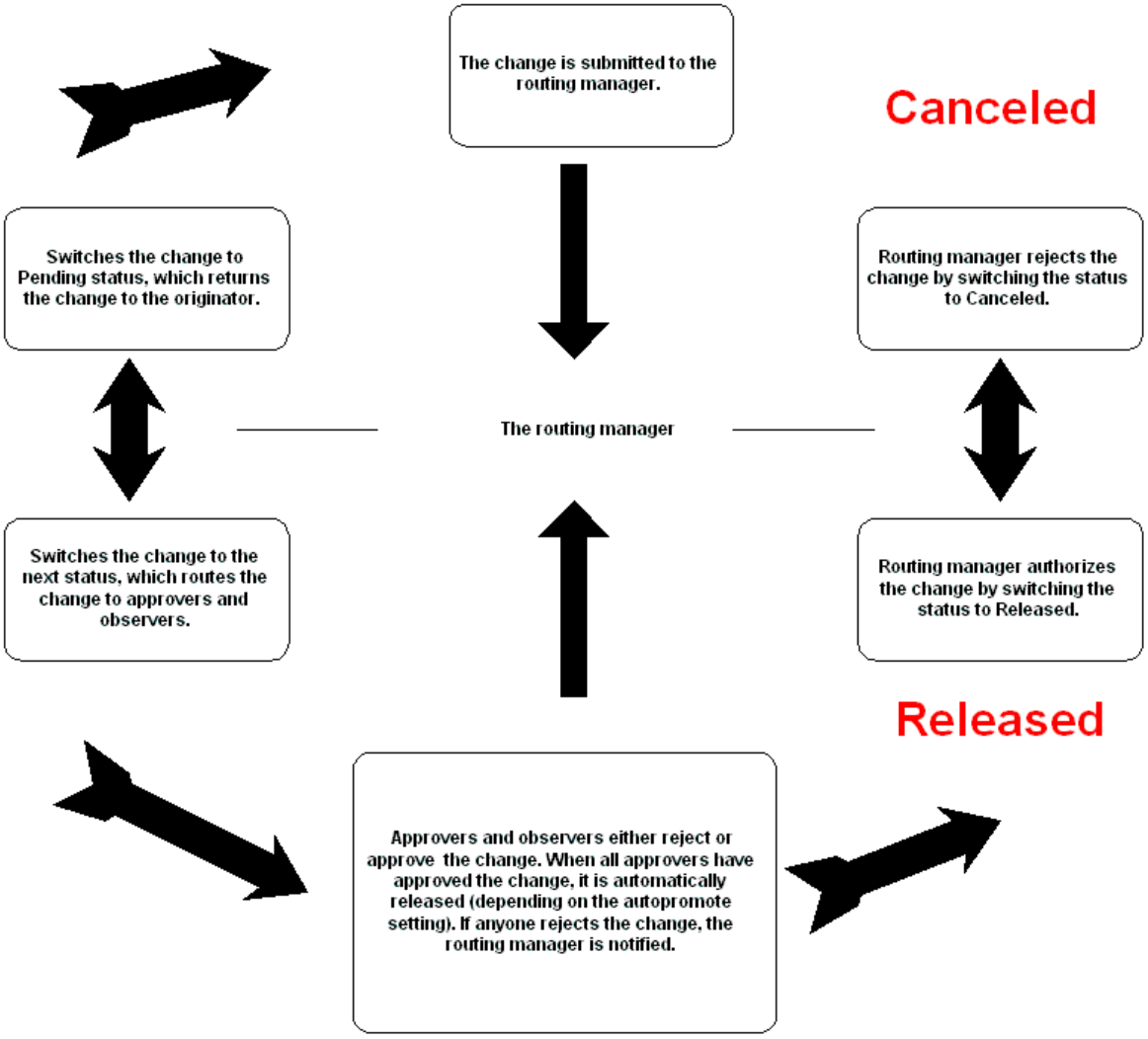
A Typical Change Control Process

Agile supports change control processes, including default and custom Agile workflows.

The following is an example of a typical change control process for a change using Agile workflows:

1. An Agile user creates a change (for example, an ECO or MCO), and then selects a workflow to route this change.
2. The user selects approvers (members of the change control board) and observers for the change, then submits it to the routing manager.
3. The routing manager switches the change to the next status, which routes the change to the specified approvers and observers.
4. The members of the change control board, or CCB, enter their approval or rejection on the **Workflow** tab of the change.
5. If all the approvers approve the change, it is automatically promoted to the next status (depending on the AutoPromote setting). If any approvers reject the change, the routing manager is notified. The routing manager may elect to do any of the following:
   - Cancel the change by switching the status to Canceled.
   - Return the change to the originator by switching the status to Pending.
   - Release the change in spite of the rejection.

The following figure illustrates this change control process. Agile packages and content transfer orders can follow a similar process.



Product Portfolio Management Process

Agile Product Portfolio Management (PPM) is a Web Client application for program management that allows you to:

- Plan a program in terms of its schedules, resources, and deliverables
- Execute and manage multiple related programs and projects in a collaborative environment
- Associate product deliverables – such as Items, RFQs, ECOs, and CAPAs – to tasks on a project plan
- Establish project plan templates for rolling out best-practice processes

- Allocate work to users or resource pools and monitor capacity and future demand
- Establish executive dashboards for cross-program rollups and quick access to high risk activities

The program management process involves:

- Scheduling
- Task management
- Issue management
- Document management
- Phase/Gate management
- Resource management
- Deliverable management.

Common Terms in PPM

Listed below are some of the common terms used in PPM:

- Program: A set of related activities and gates that is created to monitor and manage progress on a specific project.
- Phase: A segment of a program, also referred to as a stage. Phases are often used to define the activities required to create a set of deliverables.
- Gates: Indicates the completion of a set of related activities, such as a phase. The status of a gate is closed until all its deliverables are complete, at which time it opens.
- Task: A segment of work that one or more resources can complete over a period of time. Tasks may be embedded in programs, phases or other tasks.
- Deliverable: An Agile PLM object whose state change can trigger a state change in the program element that contains it. Deliverables are used to control the status of gates.
- Gantt Chart: A program management tool that helps you to plan, administer, and track programs from start to finish.
- Content: Contains all program-related content including deliverables.
- Activity: A program, task or phase.

For more information on PPM, see *Agile Product Portfolio Management User Guide.*

Product Quality Tracking Process

The Agile Product Quality Management (PQM) solution consists of a comprehensive set of tools that allows companies to track and manage quality data across the enterprise. This includes customer complaints, field failures, product or manufacturing defects, and requests for enhancements or corrective and preventive actions. PQM unifies the company's organizations in customer service, field sales, manufacturing, and engineering, and links the organization to its customers and partners.

PQM features offer these benefits:

- Integration with external enterprise Customer Relations Management (CRM) systems—The ability to import customer complaints, manufacturing issues, and additional quality-related information from other enterprise applications streamlines the quality tracking process and offers a central repository for tracking product quality data.
- Improved product quality—Tracking defects, finding trends, and determining the root causes of defects in a timely manner are the keys to effective defect reduction and improved product quality.
- Improved customer satisfaction—The ability to track problem reports and customer complaints lets you respond quickly to customers and resolve problems quickly.
- Lower production, repair costs, and warranty costs—Tracking and correcting defects can help reduce scrap, cycle time, and costs associated with rework and repair.
- New features enable compliance with ISO-9000, FDA, and other regulations.

The Agile PQM solution consists of Product Service Requests (PSRs) and Quality Change Request (QCRs). The two types of PSRs are Problem Reports and Non-Conformance Reports (NCRs). The two types of QCRs are Audits and Corrective and Preventive Actions (CAPAs). You can associate QCRs with problem reports.

Common Terms in PQM

Listed below are some of the common terms used in PQM:

- Product Service Request (PSR): A PSR is used to report a defect or a quality incident about a product. The PSR can be either a Problem Report or a Non-conformance Report.
  - Problem Report (PR): Contains a basic description of a problem, issue, or incident that occurred, from the customer's perspective.
  - Non-Conformance Report (NCR): Reports a basic material deviation from specifications or requirements in one or more products.
- Quality Change Request (QCR): Creates and manages quality records that aggregate problems related to products, documents, suppliers, and customers.
  - Audit: The pro-active process of verifying compliance with quality requirements.
  - Corrective and Preventive Action (CAPA): A formal process of addressing any quality problem and analyzing the root cause to implement corrective and preventive action.
- Related PSR: A list of all similar product service requests that are combined to form a single PSR.
- Affected Items: A list of items that are affected by the change in either a PSR or a QCR.
- Relationship tab: Creates a relationship with other Agile objects; the relationship is bi-directional.
- Relationship Rule: Specifying a rule for a relationship defines how the related Agile objects affect each other. Rules are optional; you can create a relationship between two objects without specifying a rule.
- Preview Pane: When you add a relationship to an object, the details of the Relationship are

displayed in the Preview pane. It also displays the attributes and actions that can be performed on the relationship object.

For more information on PQM, see *Agile Product Quality Management User Guide.*

Product Cost Management Process

Agile's Product Cost Management (PCM) solution consists of the Product Sourcing and Price Management components. They allow you to integrate and leverage price and cost information within your company's business processes in the Agile Web Client.

A sourcing project holds the data you gather, such as items and assemblies, bills of material, and approved manufacturers lists. Using the project, multiple users can work as a team to complete sourcing and pricing activities, since the project lets multiple users view and modify the same components. Sourcing projects allow you to execute sourcing activities, including RFQs and analysis, on your Item Master content.

The Price Management solution provides you with a single controlled process for managing price and terms information that can be leveraged across organizations, business processes, and key analyses.

Common Terms in PCM

Listed below are some of the common terms used in PCM.

- Approved Manufacturer's List (AML): Lists all the preferred or alternate manufacturer parts that correspond to an internal part.
- Sourcing Projects: An entry point for sourcing and pricing. Tracks data required for sourcing and pricing, to perform analysis for effective pricing.
- Item Master: The entire collection of Items - Parts, Documents, and other user-defined subclasses of the Items class maintained under change control in the Agile system.
- Project Items: Items added to a project. These can be items that exist in the Item Master, created within the project or imported into the project.
- Project Data: Information about the supplier, item, manufacturer, manufacturer part number, revision, price information, RFQ response information of a project.
- Subscriptions: Subscribing to an object sets you up to receive notification of events that happen to the object.
- Target Price: The price you quote for an item with the standard cost in mind. Standard cost is the market cost per unit of the item or the manufacturer part.
- Commodities: Lets you categorize parts for sourcing and analysis process. By associating each item with a commodity, you can distribute RFQs to suppliers based on the commodities they offer.
- Request for Quotes (RFQs): Using RFQs, you request quotes for items involved in the project and suppliers respond to the Quote. RFQs can be sent to one or more suppliers.

For more information on PCM, see *Agile Product Cost Management User Guide*.

Product Governance and Compliance Process

Agile Product Governance and Compliance (PG&C) is designed to help OEM manufacturers audit the amount of regulated substances used in their products, and show that they responsibly dispose of, recycle, or reuse electronics containing those substances.

PG&C helps companies address the growing number of environmental specifications and policies that affect product definition, the import and export of products, and the disposal of restricted substances. It provides a solution that manages the entire product compliance process:

1. Collection of data from vendors through a Request For Information (RFI)
2. Determination of compliance by analyzing data and comparing it to established standards
3. Documentation of compliance by running reports

The RFI process is initiated by Compliance Manager, who creates a new declaration, or modifies an existing declaration, to specify the components for a parts assembly. An RFI is comprised of a Material Declaration, which lists the parts in a product assembly and shows the substances and materials that comprise those parts. It is linked to specifications which may restrict how much of a particular substance that product assembly may contain.

Common Terms in PG&C

Listed below are some of the terms used in PG&C.

- Specification: Tracks the different legislations with which an assembly or part must comply. Environmental specifications are substance-based, and contain a list of banned substances or substances of concern and their threshold values. In Agile, specifications are used to validate declarations and assess the compliance of parts by evaluating whether a given restricted substance in the composition of a part surpasses its specified threshold value.
- Declaration: A structured way of bringing information concerning the environmental compliance of parts into Agile PLM. Each declaration is for a single supplier.
- Composition: A composition represents the total collection of information contained in a completed declaration and is not a configurable "business object" in Agile PLM.
- Substance: A substance is any chemical element or compound that is tracked within Agile PLM.
- Bill of Substance (BOS): A way to manage compliance information-gathering with regard to the parts and materials used in the manufacturing process.
- Alias: Informs the PG&C system of "substitute names" of substances. For example: When a supplier provides information about substances for a part, there is no guarantee that a substance with the same name exists in the buyer's system. The system adds the invalid substance as an alias to the substance. Whenever the same invalid substance is imported, it automatically maps to the objects.
- Supplier: A supplier is a company that provides compliance information about parts that are used in your company's manufacturing process.

For further information about PG&C, see *Agile Product Governance & Compliance User Guide.*

Chapter 5

Working with Business Objects

This chapter includes the following:

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- Creating Objects 92
- Direct Addition of Objects to BOM, AML, and AI Tables 96
- Modifying Date and Time Fields 97
- Printing Object Tabs 99
- Emailing Objects 100
- Quick Access to Objects and Files 101
- Discussion Objects 102
- Sharing Objects with Other Users 103
- Subscribing to Objects 105
- Relationships and Dependencies Between Objects 107
- Relationships Tab 108
- Deleting Agile Objects 117

Interacting with Agile Objects: Actions and Tabs

Finding and opening Agile objects is a straightforward process: the easiest way is to run a simple search. You can type a word in the **Simple Search** field—on the main toolbar of both clients—that describes the Agile content you are interested in. For example, typing **computer** will return a list of all objects with the word "computer" in their name or description. If you already know an object's ID number, typing it in the **Simple Search** field returns the object.

For more information about finding objects or data in Agile, see Finding Agile Data with Searches on page 145.

Once you have found an object that you will want to refer to often, you can bookmark it to return to it easily.

The two main ways of interacting with Agile business objects are, with an object open, via the **Actions** menu or via the fields and attributes on its various tabs.

Actions Menu

An important feature for working with objects in both clients is the **More** menu (Java Client) and the **Actions** menu (Web Client). Generally, objects in Web Client have an **Actions** button that opens to a drop-down list of available actions. In Java Client, right-click anywhere in the opened object to see a shortcut menu with the same commands as the **More** menu.

Note In Java Client, on most tabs, if you right-click outside any table rows within the object, that object's main shortcut menu opens (**Changes**, **Quality** and **Where Used** tab excepted). However, on any tab with a table, you can also select a row in a displayed table and right-click, and a shortcut menu for the object referenced in that row opens.

Command	Description
Save As	Creates a new object based on the current object.
Delete	Deletes the object (a "soft delete"). For more information about deleting objects, see Deleting Agile Objects on page 117.
Print	Choose either **All Tabs** or the tabs you want. The list of tabs changes with the current object's class.
Copy URL to Clipboard	In Web Client, copies the URL of the object to the clipboard, so it can be pasted elsewhere. For Internet Explorer: the URL is copied when you click the action; the prompt indicates it is copied. For Netscape: when you click the action, a popup displays the URL, manual **Ctrl-c** copies the URL.
Incorporate and Unincorporate	Available for items: incorporation locks the checkout and checkin capabilities of file folders on the **Attachments** tab of the item. This important capability is available only on the **More** menu. For more information about incorporating, see the *Product Collaboration User Guide*.
Bookmark or Add Bookmark	Saves a pointer to the object on your Bookmarks (or "Favorites") list.
Send	Opens the address book and lets you select one or more users to send the object to, including a comment. A notification is then sent to the designated users with a link to the object.
Share or Sharing	Opens a page linked to the current object that lets you share the object or delete an existing share. For more information, see Sharing Objects with Other Users.
Subscribe or Subscriptions	Allows user to subscribe to receive a notification when certain attributes change. Offers a list of subscriptions for the current object: Lifecycle Phase Change or Status Change, Add File, Delete File, Checkin File, Checkout File, and Cancel Checkout File. See Subscribing to Objects on page 105.
Export	Opens to the Export wizard in Web Client (even if you have activated it from Java Client).
Process Extensions	Offers a list of currently available process extensions, which have been created by your administrator.
Audit Status	Audits the remaining statuses in the object's workflow to test whether the workflow can advance through those statuses.
Audit Release	Audits the remaining statuses in the object's workflow to test whether the workflow can be released per the existing conditions in the statuses.

Command	Description
View Workflows	Shows eligible workflows for this (routable) object, in visual form. Offers drop-down list to select another workflow to view.
Create Change	Creates a new change order with the open item (part or document) already added to the **Affected Items** tab.
Create Product Service Report, Create Quality Change Request	Creates a new PSR or QCR with the open item already added to the **Affected Items** tab.
Create Declaration	Create a new Declaration with the open item already added to the **Affected Items** tab.
Actions available from selecting a row in a table	
Open, Copy, or Paste	Select a row in a table, then open the object on the selected tab, or copy the selected tab and paste it into another table.
Print	Select a row in a table, then print the object's selected tab or tabs.
Create Product Service Report, Create Quality Change Request	Creates a new PSR or QCR with the item in the selected row already added to the **Affected Items** tab.

Object Tabs

Tabs are used to organize the content of Agile objects. A brief list of the most common tabs found in many objects across Agile PLM's solutions follows. This table gives basic information about tabs that is elaborated on later in this manual and elsewhere in the Agile documentation set, such as the platform-specific user guides. Some Agile solutions—such as Product Cost Management and Product Portfolio Management—have specialized tabs not listed below.

Note For more information about Web Client tab indicators (a grey or red dot that appears next to the tab name when you view the object), see Web Client Tab Content Indicator Icons.

All the out-of-box business classes with all their default tabs are described in the *Agile PLM Administrator Guide*.

Note Remember that part of Agile PLM's flexibility includes the administrator's ability to rename business classes and subclasses, tabs within objects, and fields within tabs, so some tabs listed below may have a different name within all classes or within a particular class of object that your company works with.

Important Your ability to see or work with any object or any tab in Agile is governed in large part by your roles and privileges. If you are having trouble opening, seeing, or modifying an object, tab, or field, see your Agile administrator.

Tab	Description: what information this tab collects	Found in these classes of business objects
"Page One"	The **Cover Page** tab is the Page One for all routable objects—the Change, PSR, QCR, Transfer Order, Package, and Program base classes—as well as RFQ and RFQ Response objects. The **Title Block** tab is the Page One for all item and file folder objects. The **General Information** tab is the Page One for all remaining (non-routable) classes.	All objects have a "Page One" that uses one of the names to the left.
Page Two and Page Three	Further information about the object. These are added by the administrator as extensions of "Page One." **Page Two** fields are the same for all objects in same business object class. **Page Three** fields are the same for all objects in the same subclass. Both "Page Two" and "Page Three" can be replaced by more specific names.	Depends on how classes have been set up.
History	Summary of actions taken on this object. History is recorded for all objects in your Agile system's database, and shows all actions by users and administrators. The **History** tab is populated automatically.	All.
Attachments (and Files)	View, copy (get), or print attached files. Attach files and URLs to the current object by adding them to a file folder. Access Viewer to redline attached files (once the object is on an ECO, only from the Redline Attachment table on the **Affected Items** tab). **Note** The **Files** tab lists all contents of file folder objects; so, an item's **Attachments** tab lists file folder objects, and file folder objects have a **Files** tab listing contents. (For more information, see Working with File Folders on page 303.)	All objects except file folders (which contain attachment content) and reports.
Changes	Information about change objects that involve the item or published price object. Pending Changes and Change History tables are the two tables on the **Changes** tab.	Items and published prices.
BOM	All the items that make up the current part. (Documents may or may not have bills of material, depending on your system settings.) Items on a BOM can be a single item or an assembly of several items.	Items.

Tab	Description: what information this tab collects	Found in these classes of business objects
Manufacturer	Lists manufacturers that have been approved to supply a particular item. The list identifies the manufacturer part for the current item.	Items & Sourcing Projects.
Where Used	Lists other objects where the current object is used. The **Where Used** tab is populated automatically. To open an object listed on the tab, click its Number or Name link; in Java Client, double-click the row. The type of objects that appear on the **Where Used** tab depends on the current object: **Item**—Assemblies and manufacturing sites that use the item. **Manufacturer**—(**Item/MPN Where Used** tab) Parts and assemblies that use manufacturer parts provided by the manufacturer. **Manufacturer Part**—Parts and assemblies that use the manufacturer part. **File Folder**—Objects with attachments contained in the file folder. **Discussion**—Objects that use the discussion, including projects, RFQs, RFQ responses, activities, and gates.	Items, Manufacturer Parts, Discussions, File Folders.
Affected Items (in PCOs: **Affected Prices**)	Lists the items that are affected by the current change object. Users with sufficient privileges can use the **Affected Items** tab to: List the items affected by a change and give the affected items of an ECO a pending revision (or *rev*) Open the affected items Work with BOM, manufacturer, and attachment redlines **Affected Prices** replaces **Affected Items** in PCOs. **Note** When you add an item to the **Affected Items** tab of a change, if the site you have selected during the "add" process is not associated with the item, you are prompted to add the site association to the item. That site association remains in effect for that item, even if the change is canceled or if you remove the item from the **Affected Items** table of the change.	Changes, PSRs, QCRs

Tab	Description: what information this tab collects	Found in these classes of business objects
Workflow (routable objects only)	Shows where the routable object is in the assigned workflow (via a flow chart), and lists present and past signoff information. Add or remove approvers and observers. Move the object to another status in the workflow. **Summary table** lists signoff information for the current workflow status. **Signoff History table** lists past workflow and signoff information for the routable object.	Changes, PSRs, QCRs, Packages, Transfer Orders, Programs
Sites	Shows where each object is being produced at specified manufacturing locations within the company. See the Note for **Affected Items** in this table.	Items
Escalations	When a workflow status exceeds its escalation time period without a signoff, user groups or individual users can be notified. This tab shows whose escalations (other users') can be signed off by the current user (myself). Note that the settings in a user's **Allow Escalation Designation Approval** property (on the **General Info** tab) comes into play.	Users and User Groups
Shares	A user's or user group's **Shares** tab – it exists for these objects only – lists those objects for which the user/user group has been granted "shared roles" by a different user. The user (or members of the named user group) can then perform actions permitted by the roles for that object only. See Sharing Objects with Other Users.	Users and User Groups
Subscriptions	See Subscribing to Objects on page 105.	Users

Tab	Description: what information this tab collects	Found in these classes of business objects
Relationships (in programs: **Content**)	The relationships and dependencies between this object and other routable objects or non-routable objects (with lifecycle phases). If the current object is a routable object, the **Rule** column displays the rule that defines how the workflow status or lifecycle phase of other objects affect the workflow progression of the current routable object, or how the workflow progression of the current routable object affects the workflow progression of the related objects. If the current object is a non-routable object (with lifecycle phases) and the related object is a routable object, you can specify a rule for the relationship, thus creating a dependency between the current non-routable object and the routable object. A relationship with a rule indicates a routable object whose workflow progression is affected by the lifecycle phase of the current non-routable object. A relationship with no specified rule does not limit or affect the workflow progression of the related routable object. You can use non-rule relationships to record objects that are somehow related to the current object, but do not have any dependencies with the current object. You cannot specify a rule for a non-routable object relationship with another non-routable (lifecycle phase) object. See Relationships and Dependencies Between Objects. In Product Portfolio Management objects (Programs), relationships are included on the **Content** tab. All Program object Content table rows with rules are named *deliverables*. You can add file attachments to the **Content** tab as program content. By default, the Program object **Attachments** tab is disabled and not visible. You can enable this tab from Java Client Administrator. Attachments that were already added in the **Attachments** tab are not displayed in the **Content** tab. To transfer existing attachments from the Attachments tab to the **Content** tab, contact your support team.	All classes (except Actions Items and Reports) For Programs classes, relationships are included on the **Content** tab and relationships with rules are named *deliverables*.
Prices	**Prices** tab of an item includes information about price objects associated with the item, including “priceline” information. **Prices** tab of a manufacturer part includes information about price objects associated with the manufacturer part.	Items & Manufacturer Parts

Tab	Description: what information this tab collects	Found in these classes of business objects
Quality	Information regarding PSRs and QCRs created with regard to the item. Those objects have these cross-linked tabs: **Related PSR** tab for PSRs **PSR Items** tab for QCRs **PSRs** tab for Suppliers and Customers	Items

Creating Objects

To create an object, you must be assigned the Create privilege for the kind of object that you want to create. See your Agile administrator.

In Java Client, you can create a business object in these ways:

- use the **New Object** menu to choose a base class and a class from the expanded lists
- use the **File** > **New** command to choose a base class and a class from the expanded lists
- use the **File** > **Save As** command if you have an object open

In Web Client, you can create a business object in these ways:

- use the **Create** menu to choose a base class and a class from the expanded lists
- use the **Actions** > **Save As** command if you have an object open

You can also create some objects as you add them to an Agile table. For example, you can create an item to add it to the **BOM** tab of a parent item or to the **Affected Items** tab of a change.

There are some options to create objects from "within" another object. For example, from within an item, the **Actions** menu includes **Create Change, Create PSR**, **Create QCR**, and **Create Declaration**. From within a manufacturer, you can choose **Create Manufacturer Part**.

Once you create an object, that item exists until you delete it. If you create a new object, then decide you do not wish to keep it, be sure to delete the object; otherwise, the new object is still in the database and the object's identifier (such as the item number) cannot be reused. See Deleting Agile Objects on page 117.

Note Although all characters are supported within Agile PLM, and should not create issues within Agile PLM clients, it is recommended that you avoid using the following characters when creating objects, due to issues that could potentially arise in integrations or custom applications written on the SDK.

, comma . period (dot) : colon ; semicolon = equal sign

Creating Objects in Java Client Using the New Command

The process for creating new business objects in Java Client involves two main steps: creating an empty object, then filling in the object tabs with information specific to the object.

To create and complete an object in Java Client:

1. Choose **File** > **New** on the main menu bar or click the **New Object** button on the main toolbar.
2. From the drop-down menu that opens, choose the base class for the business object you want to create. Any base class with two classes expands to offer choices in all possible child classes (for this reason, **Transfer Order** will offer Content Transfer Order but not Automated Transfer Order). The New dialog box opens.
3. The New dialog specifies the object type and, for some objects, assigns an Autonumber.

   The autonumber format and sequence are determined by the Agile administrator. The administrator also determines whether using autonumbers is required or optional.
4. Click **OK**. The new object appears with the **Cover Page**, **Title Block**, or **General Information** tab showing.

   Fill in information on the object's tabs, as necessary. Some tabs are completed automatically, such as the **Changes**, **Where Used**, and **History** tabs. You do not enter information on these tabs.

Note that in Java Client, the object has been created as of step 4 in the procedure. (In Web Client, objects are created through wizards.) All object-required fields are depicted by the name of the field appearing in bold type. If you attempt to close the object with any required fields empty, an error message will advise "**You have not completed all required fields. Please complete all fields in bold.**"

Creating Objects in Web Client Using the Create Command

A wizard in Web Client leads you through the process of creating an object and specifying information on its tabs.

To create and complete an object in Web Client:

1. Click the **Create** button on the main toolbar.
2. From the drop-down menu that opens, choose the base class for the business object you want to create. Any base class with two classes expands to offer choices in all possible child classes (for this reason, **Transfer Order** will offer Content Transfer Order but not Automated Transfer Order). The Create wizard opens.
3. Follow the instructions onscreen to complete the wizard. Some points about the wizard:

   All object-required fields will be present in the first screen of the wizard – the "required" aspect is depicted by the name of the field appearing in bold type. All these fields must be filled in to create the object. If you attempt to finish the wizard with any required fields empty, an error message will advise "**You have not completed all required fields. Please complete all fields in bold.**"

   If you click the **Continue Creation in Wizard** checkbox, **Continue** or **Next** buttons are available.

   If you leave the **Continue Creation in Wizard** checkbox unfilled, the **Finish** button is available. You can click **Finish** at any point in the wizard, and the object will be created. Later, you can open

the object and enter more data.

You can always click **Cancel** to end the wizard without saving the new object.

The Autonumber format and sequence are determined by the Agile administrator. The administrator also determines whether using Autonumbers is required or optional.

4. As you proceed through the steps of the Create wizard, the process flow diagram in the navigation pane is interactive. For information about using the process flow diagram, see Adding Data during Create with the Process Flow Diagram on page 94.

5. Click **Finish**. The new object appears with the **Cover Page**, **Title Block**, or **General Information** tab showing.

   Fill in information on the item tabs, as necessary. Some tabs are completed automatically, such as the **Changes**, **Where Used**, and **History** tabs. You do not enter information on these tabs.

Adding Data during Create with the Process Flow Diagram

While you proceed through the steps of the Create wizard in Web Client, the process flow diagram (see Using the Wizard Process Flow Diagrams on page 37) in the navigation pane tracks the steps of the wizard. The steps that you have not reached can be accessed—if a step is enabled, you can open and close it at any time you are in the wizard, and you can fill in information or not as you choose. Some common steps you will see are **Enter Cover Page Information, Add Attachments**, and **Add Affected Items**.

When you have clicked an “Add step” in the process flow diagram, a dialog opens. This dialog will vary according to the kind of information you are adding, but it will be familiar and self-guiding, for example, using Available and Selected tables.

Most of these dialogs have, of course, an **Add** button . If you click the drop-down triangle, you can choose **Create new** or **Search**. If you click the **Add** button itself, a full dialog opens, where **Create** and **Search** buttons are often present:

- **Create** (button) and **Create new** (menu choice) open a dialog to create a new object. Follow the task preceding this topic.
- **Search** (button and menu choice) opens a dialog with three Search tabs (see Add Files by Search Options on page 277).
- For Add procedures that involve items (parts or documents), the **Item Number(s):** field can be used to type in known object ID numbers, one per line. After entering one or more ID number, click **Add**, you are returned to the Create wizard with the objects you listed added as appropriate.

These “Add” elements are meant to make certain procedures easier, but they could be somewhat confusing while you are learning Agile. The main thing is that you can go in and out of them without “harming” the wizard you are in. The Add steps become more useful as you work in Agile PLM every day.

If you check the **Edit Items After Adding** checkbox, the newly added items will be displayed in Edit mode (after they are added to the table).

Add with Search Options

In various “create” or “add” operations that are detailed in this manual, when you click the **Add** button, the dialog that opens may have a **Search** button. This is the procedure to decide what route to take to identify objects in the database that you can select in your “add” operation.

- **Search** (button and menu choice) opens a dialog with three Search tabs:
  - **Search** tab lets you run a simple search by entering a value in the field and clicking the **Search** button.

    Click the **Advanced Search** link to set up an advanced search.

    Click the **Search Attachment Contents** checkbox to include attachment files in your search.

    When the results of your search are returned, you can select and move objects from the **Results** table to the **Selected** table.

    Then Click **OK**, and you are returned to the Create wizard, and the objects you selected have been added where appropriate.
  - **Saved Searches** tab opens to your navigation pane where you can browse in search folders, select a search, and run it. Again, returned results may be moved to the Selected Items table, and click **OK**.
  - **Shortcuts** tab opens to your navigation pane where you can select objects from **My Bookmarks** or **Recently Visited**. The system displays shortcuts to only those objects that are appropriate to the operation you are performing.

Generally you can run multiple searches before completing the wizard step. Also, after the object is created, you can still run multiple searches.

Creating an Object Using Save As

Using the Save As feature is a quick way to create an object that is similar to an existing object.

Note	In general, you should not use Save As to create an object in a different class or subclass from the original object. The different classes or subclasses may not have the same tabs or defined fields, and you may lose access to some data in the newly created object. For example, parts generally have a **BOM** tab. By default, documents do not. When you save a part as a document, you cannot view the part’s BOM in the resulting document unless your Agile administrator has configured your system to permit documents to have BOMs.

To create an object using Save As in Java Client:

1. Select and open an existing business object.
2. Choose **File** > **Save As**. The Save As dialog appears.
3. The two fields in the Save As dialog box are (object) Type and (Auto)Number. Choose an available object type from the drop-down list, and click for an autonumber or fill in an ID number manually.
4. Depending on the selected object type, the Save As dialog may display additional required

fields. Complete any required fields.

5. Click **OK**. The new object is created and automatically opens.
6. Make any appropriate modifications on the tabs of your new object.

To create an object using Save As in Web Client:

1. Select and open an existing business object.
2. From the **Actions** menu, choose **Save As**. A dialog appears with the heading: “Save [object] [ID number] As...” with defaults naming the object and number.
3. The two fields in the dialog are Subclass and (Auto)Number. You can choose an available subclass from the drop-down list, and fill in an ID number manually if you want.
4. Depending on the selected object type, the Save As dialog may display additional required fields. Complete any required fields.
5. Click **Save**. The new object is created and automatically opens.
6. Make any appropriate modifications to the tabs.

If the Agile administrator has set the appropriate preferences, fields in the optional **Page Two** and **Page Three** sections are copied to the new object. For information about the behavior of **Page Two** and **Page Three** fields in your Agile system, see your Agile administrator.

Save As copies data from a field in the existing object to the same field in the new object. If a field or list value in the existing object is not available in the new object, then that field or list value is not copied to the new object.

Note	Because **Page Three** data applies to a specific subclass only, if you use Save As to create a new business object in a different subclass, the **Page Three** data is *not* copied to the new object.

Site Change Order Save As Limitations

You cannot initiate Save As from a non-Site Change Order (SCO) change object in order to create an SCO object, nor can you initiate Save As from an SCO object in order to create a non-SCO change object. Because Site Change Orders (SCOs) affect only site-specific information, and other types of changes are not limited to site-specific information (for example, ECOs and MCOs), SCOs can be Save-As-created only from another SCO. The Site Change Order's site-specific only usage makes it incompatible with other change types when using the Save As feature.

Direct Addition of Objects to BOM, AML, and AI Tables

The *Product Collaboration User Guide* describes procedures for adding objects—for example, parts, documents, manufacturer parts—to BOM tables on items, AML tables on items, and Affected Items tables on changes. Generally, you have to search for each object to add it to a table. An additional method is called direct addition of objects.

Note	The “direct addition” capability applies only to Java Client. However, this process in Java Client is very similar to Web Client’s Adding Data during Create with the Process Flow Diagram on page 94.

In the tables just listed, when you click the drop-down arrow next to the **Add** button , you are given the option to **Search...** for the object(s) you want to add, **Create...** an object you want to add, and to **Type in known number(s)...** of objects you want to add.

When you select the latter, a popup dialog appears called, for example, Add BOM. This method is useful when you work with certain items or subassemblies every day, and you are familiar with their Agile numbers. You simply type in the number of the item that you want to add (one per line), and click the **Add** button. The item is added to the table and the popup dialog disappears.

Item Addition Rules

Whenever a user adds an item to a BOM or adds an affected item to a change, the user is prompted to set a warning mask (by choosing Yes or No). If an item then happens to violate an "Item Addition Rule," the system knows how to handle it.

These are some item addition rules, that is, the question stemming from a potential violation of the rule:

- If there are duplicate items, would you still like to continue?
- Some items may not be associated with some sites; would you like to add the association?
- If one item does not exist, do you want to use it anyway?
- Do you want to add items whose lifecycle phase is in the warning list to the BOM?

Modifying Date and Time Fields

In both Java and Web clients, you can modify date fields by using the calendar tool, as well as by typing in the field.

Using the Calendar to Modify Date Fields in Java Client

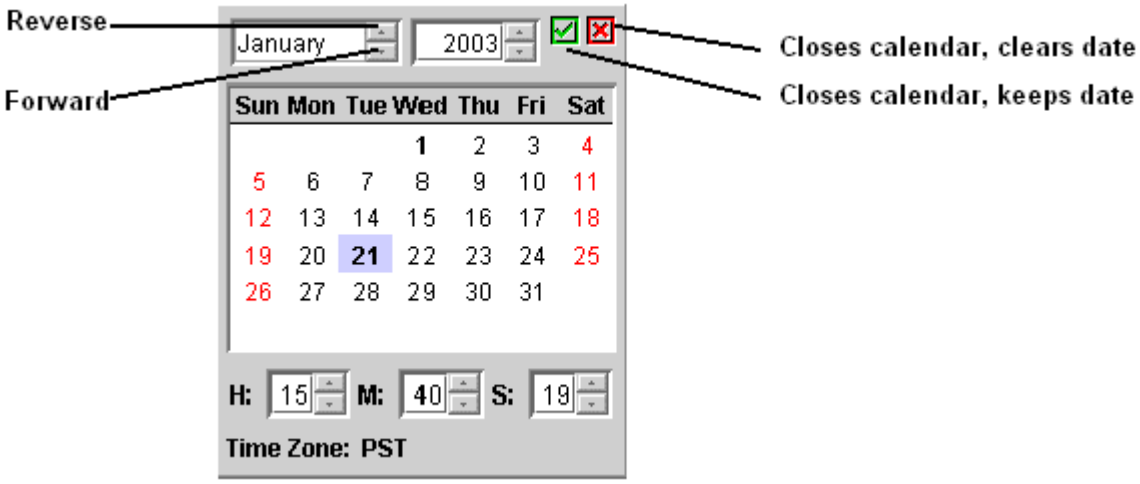
To use the calendar tool in Java Client:

1. In a date field, click the calendar icon to open the calendar (if it is enabled).
2. Select a date from the calendar. Java Client enters the new date and sets the times to 12:00:00 am.

Note	The default time format is "12 hours" with am and pm.

   Double-clicking the date enters it directly to the field.
3. To switch to a different month or year, click the appropriate **Forward** or **Reverse** button.

4. Click the red icon to close the calendar and clear any date you entered.
   Click the green icon to close the calendar and keep your date entry.
   There is also a button in the right bottom corner (not pictured) that sets the date back to the present day.



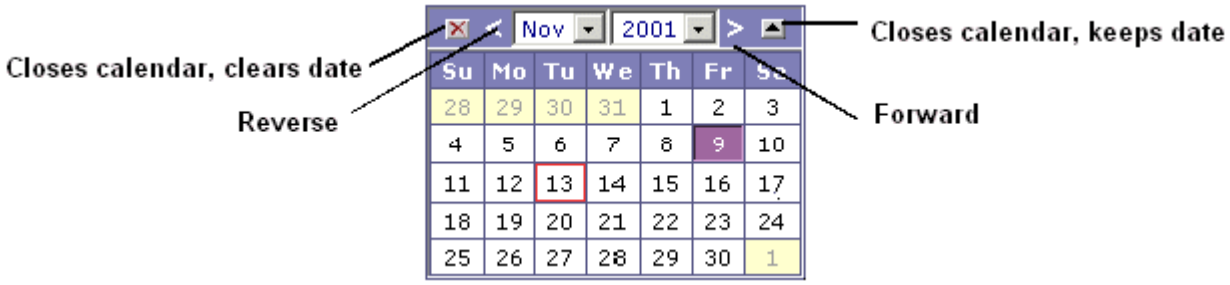
Using the Calendar to Modify Date Fields in Web Client

To use the calendar tool in Web Client:

1. In a date field, click to open the calendar (if it is enabled).
2. Select a date from the calendar. Web Client enters the new date and sets the time to 12:00:00 am.

Note	The default time format is “12 hours” with am and pm.

   Double-clicking the date enters it directly to the field.
3. To switch to a different month or year, click the **Forward** or **Reverse** button.
4. Click the **x** button to close the calendar and clear any date you entered.
   Click the **^** button to close the calendar and keep your date entry.



Manually Modifying Date and Time Fields

To edit the date and time:

1. Select the date and time you want to change.
2. Enter the new date in the format specified in your user profile (by default, mm-dd-yyyy).
3. Press the Spacebar.
4. Enter the time in the format specified in your user profile. This step is optional; if you do not enter a time, by default the time displays midnight in the specified format.

Note	Web Client does not accept the new date without a space between the date and time.

To edit just the timestamp:

1. Select the time you want to change.
2. Enter the new time in the hh:mm:ss format.
3. Press the Tab key or the Enter key.

Printing Object Tabs

You can print information from any tabbed object.

Attachments are printed from their native applications or from the AutoVue for Agile viewer. For more information, see Printing Attachment Files on page 270.

To print an object in Java Client:

1. Open the object.
2. To print all tabs, click the **Print** button in the object window. To print a single tab only, click the down arrow next to the **Print** button and select the appropriate option.

Note	If any of the tabs are blank, that is, contain no visible fields, you cannot print all tabs. Instead, select individual tabs to print.

3. If you select the BOM, the Choose BOM Depth dialog box appears. Select the levels to print, or select the **All depth** checkbox to print all levels. Click **OK**. A preview of the printout appears in a separate dialog box.
4. Click the **Print** button in the Print dialog box.

To print an object from within a table in Java Client:

1. In a table, such as Search Results, select the row you want to print. If you want to print more than one object at a time, use the Ctrl and Shift keys to select the objects, and then right-click.
2. Choose **Print**.
3. Specify the data that you want to print—all tabs, or a specific tab of information.

Note	If the selected objects belong to different subclasses (and therefore may contain different tabs), the specific first tab name is replaced by **Page One**. For example, for parts and documents, choosing **Page One** prints the **Title Block**.

4. A preview of the printout appears in a separate dialog box. Click the **Print** button in the Print dialog box.

For information about the buttons in the Print dialog, click the Help button from within the dialog.

To print an object in Web Client:

1. Open the object.
2. Choose **Print** from the **Actions** menu. Indicate whether you want to print all tabs or just the current tab.

   If you choose **All tabs**, specify whether you want the printout to include all levels (for example, of the BOM).
3. Click **OK**. A preview of the printout appears in a separate window. A Print dialog box opens.
4. Click the Print button.
5. Make sure the appropriate print options are selected, and click **Print**.

Emailing Objects

You can email any Agile object to another user listed in the Agile address book. Email is sent to the email address specified in the Agile user profile. The email contains a URL that links to the mailed object, and the recipient can click the URL to view the object in Agile PLM.

Note	The Agile administrator sets your user profile **Preferred Client** preference to determine whether you receive links to Web Client or Java Client.

To email an Agile object in Java Client:

1. Open the object.
2. Choose **File** > **Send**, or click the **Send** button.
3. In the Send dialog box that opens, click **To** to open the address book.
4. In the address book, use the right arrow to move names to the **Recipients** list, and click **OK**.

   For information about using the address book, see Selecting Users and User Groups from the Address Book on page 22.
5. Enter any comments in the **Comment** field.
6. Click **Send** to mail the object.

To email an Agile object in Web Client:

1. Open the object.
2. Choose **Actions** > **Send**.

   An **Available Values** list appears on the Send page. Use the right arrow to move names to the

Selected Values list.

3. Enter any comments in the **Comments** field.
4. Click **Send** to mail the object.

Quick Access to Objects and Files

You can generate quick access URLs that provide direct pointers to either Agile objects or to Agile attachment files.

These quick access URLs can be pasted into other applications or files such as spreadsheet files, word processing files, a company Intranet web page or WIKI page, or into an email.

For information about quick access to Agile objects using quick access URLs, see:

- Agile-Generated Quick Access Object URLs on page 101
- Formats for User-Generated Smart Object URLs on page 101
- Using Quick Access Object URLs on page 102

For information about quick access to attachment files using attachment quick access URLs, see:

- Generating Attachment Quick Access URLs on page 293

Agile-Generated Quick Access Object URLs

From Web Client, you can generate Agile PLM object quick access URLs from the Web Client **Actions** menu.

To generate an Agile PLM object quick access URL:

1. Login to Agile PLM Web Client and open the desired object.
2. In the **Actions** menu, choose **Copy URL to Clipboard**.
3. The URL is copied to your clip board. You can then paste it into another application or file, such as a word processing file, a spreadsheet file, or an email.

Formats for User-Generated Smart Object URLs

The Agile Smart Object URL feature is designed to enable effective collaboration through email, spreadsheets, documents, WIKIs, and so forth. Users or automated tools can generate smart readable URLs that point to a specific object in Agile. By using the following format, a user does not need to log into Agile to generate the object URL. Automated tools can also use this format to generate object URLs.

Smart Object URLs can be used for objects available from Web Client.

Smart Object URL Format

URLs for pointing to Agile objects use the following format:

http://server:port/VirtualPath/object/ObjectType/ObjectName

The following table defines the Smart Object URL parameters:

Parameter	Description
http://server:port/<VirtualPath>/object/<ObjectType>/<ObjectName>	
server port VirtualPath	Server, port, and VirtualPath identify the Agile PLM instance.
object	The text "object" indicates to Agile that the URL is an object URL.
ObjectType	ObjectType refers to the subclass (type) of object, for example, ECO, Part, Manufacturer, File Folder, Program, Activity, or Discussion.
ObjectName	ObjectName refers to the unique identifier for the object. Depending on the object class, the unique identifier is either an object number or a name. **Note** Manufacturer Parts are a special class of objects that are uniquely identified by two parameters: a Manufacturer Name and a Manufacturer Part Number. Therefore, a URL referring to a specific Manufacturer Part uses the following format: http://server:port/VirtualPath/object/ObjectType/MfrName/MfrPart *Number*

Agile PLM identifies and handles special tags (such as %20) added to URLs to handle special characters (such as spaces and other special characters such as asterisk "*") in an object's unique identifier. For example, the URL

http://server:port/VirtualPath/object/Manufacturer/Philips%20Semiconductor

resolves to the manufacturer "Philips Semiconductor".

Using Quick Access Object URLs

When a user clicks a Quick Access Object URL, the user actions are the same whether the URL is an Agile-generated quick access URL or a user-generated Smart Object URL:

1. The user clicks the URL and the Agile PLM login screen is displayed in a browser window.
2. The user enters her login information.
3. Upon successful login, Agile PLM searches for the object specified in the link.

   (If the object is not found, Agile PLM displays an error and returns to the user's Home page.)

When the object is found, Agile PLM verifies that the user has the appropriate privileges to read the object and displays the object's first tab, for example, the **Title Page**.

Discussion Objects

A Discussion can be created from the main toolbar **Create** menu, or from a business object's

Discussions tab. Discussions were implemented for the Product Portfolio Management solution, and are also applicable to the Product Cost Management solution; however, discussions can be created without special licensing, and their utility can be applied to the other Agile PLM solutions, Product Collaboration, Product Governance & Compliance, and Product Quality Management.

Discussions are always created and viewed in Web Client. To access a discussion while using Java Client, you can search to locate an existing discussion and open the object, which will open Web Client. Or you can simply open Web Client and proceed from there, including creating discussions. A discussion object always displays as a popup.

The following objects classes have a **Discussions** tab: Sourcing Projects, Request for Quote, RFQ Responses, Activities, and Gates.

Creating and Viewing Discussions

When you create a discussion, starting at the Create menu (see Creating Objects in Web Client Using the Create Command on page 93), you fill in information on the **Discussion** tab and click **OK**. The new Discussion object appears as a "pop-up," that is, it displays differently than all other business objects in Agile. On the **Discussion** tab of a discussion, there are four main sections:

- **Page One**–type information, such as the discussion's ID number, Subject, Status, Priority, Subject, and Notify List
- **Message Thread** table, which is a list of all the replies in the discussion
- **Message** table, which is the specific reply message based on the row selection in the **Message Thread** table
- **Action Items** table, which lists action items that have been associated with the discussion

At the top are navigation buttons: **Add Action Item**, **Add Attachment**, **Join**, **Print**, and the **Actions** menu. The Join action adds the user to the Notify List.

When you click the **Preview Message** checkbox, the **Message Thread** table expands to show the beginning of the reply message. The message is truncated; you can "mouse over" the reply message to see the full reply message as a tooltip. You can also click on a reply message to see the full reply message in the **Message** table.

Adding To and Editing Discussions

When the owner/creator opens the Discussion popup, the **Page One**–type information is editable. The owner can update the discussion.

When you select a specific reply in the discussion thread table, and then click the **Reply** button, you can add users to the Notify List—but not remove any—and enter a reply. The author of any reply can edit the reply at any time.

Action Items can be created or deleted by users (on the Notify List) who have sufficient privileges.

Sharing Objects with Other Users

Sharing lets you grant one or more of your roles to another Agile user or user group for specific objects. The capability to share a given role requires being assigned the Grant privilege specific to

that object. You can share only your assigned roles, that is, the roles that are listed in the **Roles** field on the **General Info** tab of your user profile, and the roles that are listed in the **Roles** field on the **General Info** tab of any groups of which you are a member.

You cannot share roles that have been shared with you by another user, and you cannot share roles that have been shared with a user group to which you belong.

When a role has been shared with a user (or members of a user group), each user can then perform actions permitted by the roles for that object only; a user does not "acquire" the role in any permanent or far-reaching way.

A user's or user group's **Share** tab lists those objects for which the user has been granted "shared roles" by a different user. Click the **Share** tab in your user profile to see objects being shared with you and what role(s) allow and define your interaction with each object. If you belong to a user group, you can see objects being shared with you via the user group by opening the group object and clicking the **Share** tab.

To share an object in Java Client:

1. Display the object.
2. Right-click anywhere in the object and choose **Sharing**.

   Or, use the **More** menu and choose **Sharing**.

   The Share <*named object*> window appears.
3. Click the **Add** button. The Add Access Control Entry dialog box appears.
4. Click ; the Address book appears. Select the **Names** or **Groups** tab, and move those you want to the **Recipients** list.
5. Click **OK**. All users in the Selected Users list will appear in the Users field.
6. Now select an appropriate role or roles for your chosen users to have available in connection with this object.
7. Click **OK**. The Share <*named object*> window appears again displaying the selected users and selected roles.
8. Click **Close**. This returns you to the original object. Click **Refresh**. Note that when you right-click and choose **Sharing,** the Share window now shows you the complete list of users who have access to this object and the roles you specified.

To share an object in Web Client:

1. Display the object.
2. In the **Actions** menu, choose **Sharing**. The Access Control List: Share with Users page appears.
3. Click **Add**. The Identify Users page of the Add to Access Control List wizard appears.
4. Use the **Filter by** drop-down list to choose All Users, All Groups, or a specific group. The list you selected appears, and you can select one by one or select multiple users/user groups.

   You may type a user's name, fully or partially, but you have to select a group first to populate the **Available Users** list.

   The **Save As Group** button allows you to create a group on the fly of the users that appear in the **Selected Users** list. Note, however, that this process only creates a new user group (personal or global); it does not add the new group to the Share list.

5. Click **Next**. The Assign Roles page appears. Select appropriate role or roles for your chosen users to have available in connection with this object.
6. Click **Finish**. The Share with Users page appears again displaying the selected users and selected roles.
7. Click **Return**. This returns you to the original object. Note that choosing **Actions** > **Sharing** now shows you the complete list of users who have access to this object and the roles you specified.

To remove a shared object from the **Share** tab of your user profile, select the object and click **Remove**.

Subscribing to Objects

Subscribing to an object sets you up to receive notification of events that happen to that object. For example, you might subscribe to a change in order to be notified when the change is released, or you might subscribe to an attachment in order to be notified when the attachment is checked in. You can also be notified when specified fields are modified. You select the events about which to be notified. If you want to be notified when certain fields change, you specify those fields.

You must have the Subscribe privilege for a specific object class to be able to subscribe to that class's objects. See your Agile administrator if you need to be assigned additional privileges.

On the **Subscription** tab of your user profile, you can view the objects to which you have subscribed. To cancel or remove a subscription, select the object, and click **Remove**.

Subscription events trigger two types of notifications: Email and Inbox. Email notifications are sent only if your Receive Email Notification preference is set to Yes; this field is on the **Preferences** tab of your User Profile. The ability to edit user information is determined by your privileges.

Subscribing to an Item or Price Revision

It is possible to subscribe to an item revision change and a price revision change. Since you cannot subscribe to specific status change (for example, changed to Released) for a change that "revs" the Item (an ECO) or the Price object (a PCO), subscribing to the object itself—the part, document, or price—is the way you can be notified that the object has been "rev'd."

Subscribing to Attachments via the File Folder

Should you want to be notified of changes to a file folder, subscribe to its Checkin File events. The version number of File Folder objects automatically increments every time they are checked in. However, it is not possible to subscribe to file folder versions, which work differently than item revisions. So, subscribing to a file folder's Checkins is the way you can be notified that the file folder has been altered; file folders are not subject to changes (objects from the various change classes).

Subscribing to Objects in the Clients

To subscribe to an object in Java Client:

1. Display the object.

2. Right-click the object and choose **Subscribe**.

   Or, use the **More** menu and choose **Subscribe**.

3. Indicate whether you want to be notified when the subscribed object is modified by selecting the appropriate **Subscriptions** checkboxes. You can select one or more:
   - Lifecycle Phase Change (or Status Change if it is a routable object)
   - Field Change

     Select from the displayed list of fields. Your Agile administrator determines which fields are available for subscription.
   - Revision Change (items and prices)
   - Add File
   - Delete File
   - Checkin File
   - Checkout File
   - Cancel Checkout File
4. Click **Save**. A message indicates that your subscription was saved.

To subscribe to an object in Web Client:

1. Display the object.
2. Choose **Actions** > **Subscribe**. The Define Subscriptions page appears.
3. Indicate whether you want to be notified when the subscribed object is modified by selecting the appropriate **Subscriptions** checkboxes. You can select one or more:
   - Lifecycle Phase Change (or Status Change if it is a routable object)
   - Field Change

     Select from the displayed list of fields. Your Agile administrator determines which fields are available for subscription.
   - Revision Change (items and prices)
   - Add File
   - Delete File
   - Checkin File
   - Checkout File
   - Cancel Checkout File
4. Click **Save**.

Subscription in Product Portfolio Management

The events you can subscribe to vary per object. Product Portfolio Management has the following Activity-specific subscription events that do not apply to other objects:

- Add Discussion
- Reply to Discussion

- Add News
- Add Action Item
- Modify Schedule

The **Apply to Children** checkbox in activities and gates "push" a subscription to all child objects. If you subscribe to an activity that has a schedule and select this checkbox, you will automatically subscribe to all of the activity's programs, phases, and tasks (that is, any object created in the out-of-box subclasses of Activities class). Because **Page Two** and **Page Three** fields can be defined differently for programs, phases, and tasks, any of the attributes that do not apply are ignored.

Relationships and Dependencies Between Objects

This section includes the following topics:

- What are Relationships? on page 107
  - Relationships Tab on page 108
  - Relationships Tab Views on page 108
  - Relationship Tab Actions in Java Client on page 109
  - Relationship Tab Actions in Web Client on page 110
  - Using the Table Filter on page 111
- Adding Relationships to Objects on page 112
- Editing the Relationships Table on page 113
- Removing Relationships on page 113
- What is a Relationship Rule? on page 114
  - Relationship Rule Guidelines on page 114
  - Adding a Rule to a Relationship on page 115
  - Editing a Relationship Rule on page 116
  - Removing a Relationship Rule on page 116
- Relationships in PQM on page 117

What are Relationships?

You can associate objects to each other by using the Relationships tab. A relationship between two Agile objects is bi-directional and is displayed on the **Relationships** tab of both objects.

Note	In Agile PPM, relationships are called *deliverables* and are managed on the PPM object **Contents** tab. For more information about the PPM **Contents** tab, see *Agile Product Portfolio Management User Guide*.

Specifying a rule for a relationship defines how the related Agile objects affect each other. For example, you can define a relationship rule so that ECO_100 affects ECR_250. When ECO 100 reaches the Implemented status, ECR_250 is promoted to the Complete status automatically.

Note	Rules are optional; you can create a relationship between two objects without specifying a rule.

A relationship is created when you add an object to a table in the **Relationships** tab of another object. The classes of objects that can reference each other on a **Relationships** tab are:

- All object classes, except Reports and Action Items.
- For Agile PPM Programs classes, relationships are named *deliverables* and are included on the **Content** tab.

Your Agile administrator configures the Agile PLM system to enable the **Relationships** tab for each object class, making it visible. If you find that you want to create a relationship between objects and those tabs are not visible, see your Agile administrator.

Once you create relationships between objects, you can also create an advanced search for such relationships. See Relationship Searches on page 192.

A relationship without a rule is a simpler, less dynamic instance of object-to-object relationship; it simply lists references to other objects. It can be thought of as “bi-directional” information, because relationships without rules do not trigger events.

Relationships Tab

By default, the Relationships table for each object class displays the following columns. Your Agile administrator may enable additional columns. If you have questions about the configuration of the **Relationships** tabs in your Agile system, see your Agile administrator.

Default attribute	Description
Criteria Met	If the relationship has a rule, the **Criteria Met** icon in this column indicates that the criteria specified in the rule has been met.
Name	The object name or object number that uniquely identifies the related object.
Description	The description that appears in the **Description** field of the related object.
Current Status	The current workflow status or lifecycle phase of the related object.
Rule	The rule defined for the relationship. If no rule is defined, this column is blank.
Type	The object type (or subclass) of the related object.

Relationships Tab Views

Use the **View** drop-down list to sort the relationships table rows. See also Using the Table Filter on page 111.

View option	Description
All Relationships	Displays all relationship table rows.

View option	Description
All Relationships	Displays all relationship table rows.
Complete	Displays relationships that have a rule specified and the criteria of the rule has been met.
Pending	Displays relationships that have a rule specified and the criteria of the rule has *not* been met.
Rule Not Specified	Displays relationships that do not have a rule specified.

Relationship Tab Actions in Java Client

In Java Client, buttons on the **Relationships** tab allow you to add, edit, and remove relationships and relationship rules.

Button or	Description
Edit Relationship	Allows you to edit the selected rows. See Editing the Relationships Table on page 113. If your Agile administrator has enabled relationship table attributes in addition to the default attributes, you can edit the additional attributes if you have the appropriate privileges.
Add > Search	Add a relationship to the table by searching for the object you want. See Adding Relationships to Objects.
Add > Create	Add a relationship to the table by creating a new object. See Adding Relationships to Objects on page 112.
Remove Relationship	Removes the selected relationship table rows. See Removing Relationships.
Edit Rule	Edit the rules in the selected relationship table rows. See Editing a Relationship Rule.
Add Rule	Adds a rule to the selected row by opening the Relationship Rule dialog for you to specify a rule. See Adding a Rule to a Relationship.
Remove Rule	Remove the rules from the selected relationship table rows. See Removing a Relationship Rule.
Show Filter **Hide Filter**	Opens the filter tool, which allows you to sort the relationships table by multiple criteria. If the filter tool is presently displayed, clicking this button hides the filter tool. See Using the Table Filter.

Relationship Tab Actions in Web Client

In Web Client, buttons on the **Relationships** tab and buttons in the preview pane allow you to add, edit, and remove relationships and relationship rules.

Button or	Description
Edit Relationship	Allows you to edit the selected rows. See Editing the Relationships Table on page 113. If your Agile administrator has enabled relationship table attributes in addition to the default attributes, you can edit the additional attributes if you have the appropriate privileges.
Add > Search	Add a relationship to the table by searching for the object you want. See Adding Relationships to Objects on page 112.
Add > Create New	Add a relationship to the table by creating a new object. See Adding Relationships to Objects on page 112.
Remove	Removes the selected relationship table rows. See Removing Relationships on page 113.
Show Filter	Opens the filter tool, which allows you to sort the relationships table by multiple criteria. See Using the Table Filter on page 111.
Modify rule buttons which appear in the preview pane:	
Add Rule	Add a rule for the selected relationship. See Adding a Rule to a Relationship on page 115.
Edit Rule	Edit the rule for the selected relationship. See Editing a Relationship Rule on page 116.
Remove Rule	Remove the rule from the selected relationship. See Removing a Relationship Rule on page 116.

Relationships Tab Preview Pane in Web Client

In Web Client, when you select a row in the relationships table, additional information about the related object is displayed in the preview pane, which is the lower pane under the table.

For all Agile objects that are listed on the relationships table:

- The relationship rule is displayed in the preview pane. Use the buttons in the preview pane to add, edit, or remove a rule.
- The attachments table is displayed in the preview pane.

In addition, specific Agile object types include additional information and actions in the preview pane:

- For Item objects, you can view and perform actions:
  - Use the **Revision** drop-down list to select a different revision to view.

- Pending Changes table. You can use the **Create Change** button to create a new change for that item.
- Attachments table. You can use the **Remove**, **Add**, **Checkout**, **Cancel Checkout**, **Checkin** buttons to work with the item's attachments.

- For Change objects, you can view:
  - Affected Items table.
- For File Folder objects, you can view:
  - Files table.
- For Agile PPM Gates objects, you can view:
  - Contents table
  - Signoff table
- For Agile PPM Activity objects, you can view and perform actions:
  - Contents table. You can **Open** the content objects.

Using the Table Filter

The **Relationships** tab in both Java Client and Web Client includes a table filter.

The **Show Filter** and **Hide Filter** button toggles the display of the table filter. The table filter allows you to define filter criteria based on any column in the table. You can define multiple filter criteria, which are combined in an AND search of the table rows.

For example, you can filter for relationships whose **Description** column includes the word **marketing** and the **Rule** column is **Not Null** (the relationship has a rule).

The format of each filter criteria row is similar to an Agile search criteria:

<attribute> **is** *<Match If Operator> <value to match>*

To use the Table **filter:**

1. On the **Relationships** tab, click **Show Filter** to display the **Filter:** criteria.
2. In the first filter drop-down list, labeled **--Select an Attribute--**, choose from a list of the columns in the assignments table.
3. In the next drop-down list, choose a Match If operator. The list of available Match If operators depends on the attribute type you chose as the **--Select an Attribute--** drop-down list.

   For more information, see Search Operators and Attribute Types on page 177.
4. In the remaining field, enter the filter values.
   - To add a filter criteria row, click the **Add Row** at the end of the row. A filter criteria row is added to the display.
   - To delete a filter criteria row, click the **Delete Row** at the end of the row. The row is deleted.
5. Click **Apply** to filter the relationships table. Only relationships that match your filter criteria are displayed.

6. To define different set of filter criteria, click **Clear** to clear the criteria and begin again.

Adding Relationships to Objects

You can add objects to the relationships table of any object. The relationship is listed on the **Relationships** tabs of both objects. You must have the appropriate modify privileges for both objects in the relationship: the object to which you are adding the relationship and the related object.

To add a relationship to an object in Java Client:

1. Go to the **Relationships** tab of the object.
2. To add by search, click the **Add** button drop-down list and select **Search**.
   a. In the Add Relationship dialog, choose a search method:
   - Enter the value to search for and click **Search** to perform a quick search.
   - Define an advanced search.
   - Run a saved search.
   - Select a bookmarked or recently visited item (Shortcuts).

   a. In the search results, select the objects you want, move them to the Select Related Objects list.
   b. When you are finished, click **OK**. All the objects in the Selected Related Objects list are added to the relationships table.
3. To add by creating a new object, click the **Add** button drop-down list and select **Create.**
   a. In these New dialog, select a type from the **Type** drop-down list.
   b. If appropriate, enter an object number and complete any required fields.
   c. Click **OK.** The new object is added to the relationships table.

To add a relationship or reference to an object in Web Client:

1. Go to the **Relationships** tab of the object.
2. To add by search, click the **Add** button drop-down list and select **Search**.
   a. In the Add Relationship dialog, choose a search method:
   - Quick Search — Enter search criteria and click to run search. See Web Client Quick Search on page 153.
   - Search Folders — Opens a Saved Searches dialog. From your search folders, select a saved search and click **OK**. See Saved Searches on page 149.
   - Bookmarks — Displays the Bookmark table. Click + to open bookmark folders. Select a bookmark, and click **Add Selections**.
   - Recently Visited — Displays the Recently Visited table. Select one or more rows, and click **Add Selections**.
   - Advanced Search — Opens the Advanced Search definition dialog. Define a search, and click **Run**. In the search results table, select one or more rows and click **Add Selections**. See Advanced Searches on page 167.
   - Parametric Search — Opens a parametric search dialog. Define a search, and click **Search**. In the search results table, select one or more rows and click **Add Selections**. See

Pre-configured Parametric Searches on page 159.

a. When you are finished making your selections, click **OK** in the Add Relationships dialog. The objects are added to the relationships table.

3. To add by creating a new object, click the **Add** button drop-down list and select **Create New.**
   a. In the New dialog, select a type from the **Type** drop-down list.
   b. If appropriate, enter an object number and complete any required fields.
   c. Click **OK.** The new object is added to the relationships table.

Editing the Relationships Table

With the appropriate privileges, you can edit the non-default attributes of the relationships table of any object. Default relationship table attributes cannot be edited. For a list default relationship table attributes, see Relationships Tab on page 108. If no non-default attributes are enabled for the relationships table you are viewing, the **Edit** button may be disabled.

Note	You cannot add, edit, or remove relationship rules with the relationship table edit feature. For more information about relationship rules, see Relationships and Dependencies Between Objects.

To edit a relationship in Java Client:

1. Open the object you want and click the **Relationships** tab.
2. In the table, select the rows you want to edit.
3. Click the **Edit** button. The rows are in edit mode.
4. Make the changes, and click **Save**.

To edit a relationship in Web Client:

1. Open the object you want and click the **Relationships** tab.
2. In the table, select the rows you want to edit.
3. Click **Edit**. The fields become editable.
4. Make the changes, and click **Save**.

Removing Relationships

When you remove a relationship, it is removed from the **Relationships** tab of the current object and from the **Relationships** tab of the related object. Any rules associated with the relationship are also removed.

To remove a relationship in Java Client:

1. In the table from which you want to remove objects, select the object that you want to remove.
2. Click the corresponding **Remove Relationships** button. You are prompted to confirm your choice.

To remove a relationship in Web Client:

1. In the table from which you want to remove objects, select the objects you want to remove.
2. Click the corresponding **Remove** button. You are prompted to confirm your choice.

What is a Relationship Rule?

Specifying a rule for a relationship defines the manner in which one Agile object can affect the workflow status of another Agile object. A relationship rule includes a *Source Object*, an *Event*, a *Target Object*, and a *Result*. The format of a relationship rule is shown in the following sentence:

When <Source Object> is <Event>, set <Target Object> to <Result>.

That is, an *Event* in the *Source Object* triggers a *Result* in the *Target Object*.

- A *Source Object* can be either a routable object with a workflow (for example, a change order or a program object) or a non-routable object with a lifecycle phase (for example, a part or a document).
- An *Event* is a change in the workflow status or a change in the lifecycle phase of the *Source Object*.
- A *Target Object* is always a routable object with workflow statuses.
- A *Result* is always a change in the *Target Object*'s workflow status.

Here are some examples of relationship rules:

When ECO_100 **is** Implemented, **set** ECR_334 **to** Closed.

When ECO_565 **is** Released, **set** NCR_009 **to** Closed.

When Part_945 **is** Production, **set** Task_Design_Assembly **to** In Process.

When Document_934 **is** Prototype, **set** ECO_3445 **to** Released.

When Part_D457 **is** Prototype, **set** Task_Promote_BOM_to_Prototype **to** Complete.

When FileFolder0098 **is** Concept, **set** Audit_0061 **to** Initiated.

The resulting change in the *Target Object*'s workflow status also requires that all other the conditions required for the workflow to advance have been met. For example, for a change order to be released, it must pass a release audit. If the relationship rule triggering event occurs, but the change order does not pass the release audit, its workflow status will not change. In a similar manner, if a change order passes its release audit, but the relationship rule triggering event has not occurred, the change order workflow status will not change. In both cases, when all the required criteria are fulfilled and the relationship rule triggering event has occurred, the *Target Object*'s workflow status will change.

Relationship Rule Guidelines

The following guidelines and restrictions apply to relationship rules:

- You cannot define a rule for a workflow object if no workflow has been selected for that object. Rules are based on workflow statuses and workflow statuses are defined by each workflow. If a routable object is Unassigned (it has no workflow assigned) then there is no identified list of

statuses to select when defining a relationship rule.

- Only one rule can be defined for each relationship table row. However, you can add the same object to the relationship table in multiple rows and define a different rule for each row.
- If you want two objects to advance through their respective workflows simultaneously, you create relationship entries for each status.
- The **Criteria Met** column in the relationship tables indicates that the Source *Object's* triggering event has occurred. If the triggering event is that the *Source Object*'s workflow status changes to Status_02, but the workflow status was manually changed to Status_03, skipping over Status_02, the *Target Object*'s event (workflow status change) will not occur. If you remove the relationship row or you remove the relationship rule, the *Target Object*'s event can occur.
- The **Criteria Met** field, once checked (the Complete icon appears) is not "unchecked" if an object is returned to earlier status for other reasons.
- A relationship rule causes the *Target Object* only to advance in its workflow, never to return to a status it has already left.
- A non-routable object with no workflow, for example, an item, can be a *Source Object* but it cannot be a *Target Object*. You can create a rule between a non-routable object and a routable object only when the non-routable object is the *Source Object*.
- You can create a relationship without a rule between two lifecycle phase, non-routable objects. Agile PLM will not allow you to create a rule between two non-routable objects.
- The relationship rule can be defined from the **Relationships** tab of either object.
- You must have the appropriate "modify relationship" privilege for both objects to create a relationship without a rule between two objects. To create a rule between two related objects, you must, in addition, have the appropriate "modify rule" privilege for both objects.

  The "modify rule" privilege allows you to specify a routable object as the *Target Object* in a rule. That is, it allows you to specify a rule that triggers a modification (*Result*) in the *Target Object*.

  When both objects in a relationship are routable objects, if you do not have "modify rule" privilege for one of the objects in that relationship, in any rule you create, that object can be only the *Source Object* (because it will not be modified when the rule criteria is met); it cannot be the *Target Object*.

Note If there are relationships with rules defined for multiple statuses of a single routable *Target Object*, the system checks that related events that apply to earlier result statuses have been met before advancing the workflow. For example, for a specific *Target Object*, if there are events defined for both Submitted and Released statuses, and the events for the Released status are satisfied, the system will not advance the *Target Object*'s workflow to Released status until the events for the Submitted status are also satisfied.

Adding a Rule to a Relationship

To add a rule to a relationship in Java Client:

1. On the **Relationships** tab, select the table row of the related object to which you want to add a rule.
2. Click the **Add Rule** button.

Note	If the **Add Rule** button is disabled, it is not possible to add a rule to the selected relationship because both objects are non-routable objects.

3. In the Relationship Rule dialog, use the drop-down lists to define the rule.
4. When you are finished, click **OK**.

To add a rule to a relationship in Web Client:

1. On the **Relationships** tab, select the table row of the related object to which you want to add a rule.
2. In the preview pane, click the **Add Rule** button.

Note	If there is no **Add Rule** button in the preview pane, it is not possible to add a rule to the selected relationship because both objects are non-routable objects.

3. In the Relationship Rule dialog, use the drop-down lists to define the rule.
4. When you are finished, click **Save**.

Editing a Relationship Rule

To edit a rule to a relationship in Java Client:

1. On the **Relationships** tab, select the table row of the related object to which you want to edit a rule.
2. Click the **Edit Rule** button.
3. In the Relationship Rule dialog, use the drop-down lists to edit the rule.
4. When you are finished, click **OK**.

To edit a rule to a relationship in Web Client:

1. On the **Relationships** tab, select the table row of the related object to which you want to edit a rule.
2. In the preview pane, click the **Edit Rule** button.
3. In the Relationship Rule dialog, use the drop-down lists to edit the rule.
4. When you are finished, click **Save**.

Removing a Relationship Rule

To remove a rule to a relationship in Java Client:

1. On the **Relationships** tab, select the table row of the related object to which you want to remove a rule.
2. Click the **Remove Rule** button.
3. You are prompted to confirm your choice.

To edit a rule to a relationship in Web Client:

1. On the **Relationships** tab, select the table row of the related object to which you want to remove a rule.
2. In the preview pane, click the **Remove Rule** button.
3. You are prompted to confirm your choice.

Relationships in PQM

This is some additional information about relationships as they are used in the PQM solution:

Important	When relationships are created between PQM objects, a blank rule is created for the relationship. You must edit the blank rule to define how you want the PQM objects to affect each other.

- When a QCR affects the PSR, that is, when a QCR and PSR are related and the relationship rule follows the format:

  When <*QCR source object*> is <*event*>, set <*PSR target object*> to <*result*>

  all items from the PSR **Affected Items** tab are displayed on the PSR Items table of the QCR. If the PSR was used to aggregate multiple PSRs, then the related PSRs' affected items are displayed.

- When this QCR is affected by a PSR, that is, when the QCR and the PSR are related and the rule follows the format:

  When <*PSR source object*> is <*event*>, set <*QCR target object*> to <*result*>.

  all items from the PSR **Affected Items** tab and the related PSR's affected items are *not* displayed on the PSR Items table of the QCR.

Deleting Agile Objects

Java Client and Web Client support "soft" and "hard" deletes. When you soft-delete an object in the database, it is not permanently deleted. A soft-deleted object is marked "Deleted" in the database, and its object number is reserved. You cannot create another object with the same type and number as a soft-deleted object.

Note	You *can* undelete a soft-deleted object, if you have the appropriate privileges. If you need to do so, but do not have privileges, contact the Agile administrator.

This section contains the following topics:

- Soft-Deleting an Object on page 119
- Undeleting an Object on page 120
- Hard-Deleting an Object on page 120

When you run a search, soft-deleted objects do not appear in the search results table. To locate soft-deleted objects, you must run the predefined deleted object searches in the **Recycle Bin Searches**

folder.

Note You have access to the **Recycle Bin Searches** folder if **Recycle Bin Searches** is included in the **Searches** field of your user profile. If you have the appropriate privileges, you can edit your user profile and add **Recycle Bin Searches** to the list of searches in the **Searches** field. If you do not have the appropriate privileges to modify the **Searches** field in your user profile, ask the Agile administrator to modify your user profile.

A hard-deleted object is permanently removed from the database.

Caution You *cannot* undelete a hard-deleted object.

Before you can delete an object, it must meet the conditions described in the following table.

Note You cannot delete an object unless all of its relationships and subscriptions are removed.

Class or base class of object	You can delete this kind of object that meets the following conditions:
Item	▫ The item has no released changes against it. ▫ The item is not listed on the **Affected Items** tab of any pending change. (You must first remove the item from the **Affected Items** tab of each pending change before you can delete the item.) ▫ The item has no content on its **BOM** tab for the current revision or any pending revisions. ▫ The item has no content on its **Manufacturers** tab for the current revision or any pending revisions ▫ The item is not used on any other item's Bill of Materials, that is, the item to be deleted is not a child item on the **BOM** tab of a parent item revision, including the latest released revision, past released revisions, or pending revisions of the parent item.
Change	▫ You are the change analyst or component engineer, and the Agile administrator has given change analysts or component engineers the appropriate privileges to delete a change. ▫ The change is at the Pending status type or the Unassigned status. ▫ You have Discovery and Read privileges for any items on the Affected Items table, otherwise, you cannot delete the change. **Note** To delete a change that has already been released, you must first unrelease the change. You need the appropriate privileges to unrelease a change by using the **Workflow** tab to switch it to a different status.
Manufacturer	▫ It is not listed on the **Manufacturers** tab of an item. (Check the **Where Used** tab of the manufacturing object.) ▫ If the object is a manufacturer, no manufacturer parts are associated with it. **Note** If all manufacturer parts associated with a manufacturer have been deleted, then the manufacturer can be deleted as well. However, you will not be allowed to undelete the

Class or base class of object	You can delete this kind of object that meets the following conditions:
	soft-deleted manufacturer parts until the soft-deleted manufacturer object is undeleted.
Site	**Note** Unlike other Agile objects, site objects can be soft deleted, but soft-deleted sites cannot be undeleted or hard deleted. If you are no longer using a site, Agile recommends that you disable it. ▫ The site does not appear on any item's **Sites** tab. ▫ The site is not associated with any other Agile object. ▫ The site has a lifecycle of Disabled. **Note** If it meets the conditions listed above, a disabled site can be soft-deleted even when it is listed in the **Sites** or **Default Site** field of user profiles. The deleted site is automatically removed from the **Sites** list in any user profile where it is listed. Once the site has been associated with an item, you can change its status to Disabled, but you cannot delete it.
Package	▫ You are the program manager, and the Agile administrator has given program managers the appropriate privileges to delete a package. ▫ The package is at the Pending status type or the Unassigned status.
Transfer Order	▫ The Agile administrator has given you the appropriate privileges to delete a transfer order. ▫ The transfer order is at the Pending status type or the Unassigned status.
PSR or QCR	▫ The Agile administrator has given change analysts or component engineers the appropriate privileges to delete a PSR or QCR. ▫ The PSR or QCR is at the Pending status type or the Unassigned status. ▫ You have Discovery and Read privileges for any items on the Affected Items table; otherwise, you cannot delete the PSR or QCR. **Note** To delete a PSR or QCR that has already been released, you must first unrelease it. You need the appropriate privileges to unrelease a PSR or QCR by using the **Workflow** tab to switch it to a different status.
RFQ	▫ The RFQ has no released changes against it.

Soft-Deleting an Object

To soft-delete an object in Java Client:

1. Select and open the object you want to delete.
2. Click the **Delete** button , and respond **Yes** to the confirmation prompt.

The object is soft-deleted. It is no longer available for use. However, until it is hard-deleted, its number or name is reserved in the Agile database and cannot be reused.

To soft-delete an object in Web Client:

1. Select and open the object you want to delete.
2. Choose **Actions** > **Delete**, and respond **OK** to the confirmation prompt.

The object is soft-deleted. It is no longer available for use. However, until it is hard-deleted, its number or name is reserved in the Agile database and cannot be reused.

See also: Deleting Agile Objects on page 117, Undeleting an Object on page 120, and Hard-Deleting an Object on page 120.

Undeleting an Object

You can undelete soft-deleted objects.

To undelete an object in Java Client:

1. Run the appropriate Deleted <*objects*> search from the **Recycle Bin Searches** folder.
2. Open the deleted object you want to restore.
3. Click the **Undelete** button .

To undelete an object in Web Client:

1. Run the appropriate Deleted <*objects*> search from the **Recycle Bin Searches** folder.
2. Open the deleted object you want to restore.
3. Choose **Actions** > **Undelete**.

See also: Deleting Agile Objects on page 117, Soft-Deleting an Object on page 119, and Hard-Deleting an Object on page 120.

Hard-Deleting an Object

Soft-deleted objects still exist in the database. To remove an object permanently, you hard-delete it. While an object is still only soft-deleted, you can undelete it. Run the appropriate Deleted *object* search from the **Recycle Bin Searches** folder.

To hard-delete a soft-deleted object (if you have the appropriate privileges) in Java Client:

1. Run the appropriate Deleted <*objects*> search from the **Recycle Bin Searches** folder.
2. Open the object.
3. Click the **Delete Object** button , and respond **Yes** to the confirmation prompt.

To hard-delete a soft-deleted object (if you have the appropriate privileges) in Web Client:

1. Run the appropriate Deleted <*objects*> search from the **Recycle Bin Searches** folder.
2. Open the object.

3. Choose **Actions** > **Delete**, and respond **OK** to the confirmation prompt.

See also: Deleting Agile Objects on page 117, Undeleting an Object on page 120, and Soft-Deleting an Object on page 119.

Chapter 6

Working with Agile Reports

This chapter includes the following:

- About Reports 123
- General Info Tab 125
- Layout Tab 126
- Schedule Tab 134
- Historical Report Tab 135
- History Tab 136
- Working with Standard Reports 136
- Working with Custom Reports 137
- Working with External Reports 141
- The Report Output Window 142

About Reports

Reports provide you with the basic information you need to analyze your business processes. By accessing and summarizing this information in a meaningful way, reports provide an insight into your business processes and can help guide better-informed decisions. Agile PLM provides a robust reporting platform that allows you to:

- Measure and monitor business performances using standard out-of-the-boxes reports. These standard reports capture the best practices in product lifecycle management business processes.
- Configure reports with Agile's custom reporting to obtain the specific information you need.
- Use a single point of access to all relevant reports - even those developed outside of the Agile PLM application - through Agile's external reporting capability.

Types of Reports

Agile provides the following types of reports:

Report type	Image type	Descriptions
Standard Reports		Standard reports provide you with the information you commonly need to analyze your business processes. You select predefined criteria and specify the results you want. Each solution has its own set of reports. Specific reports are described in the user guides. For more information, see Working with Standard Reports on page 136.

Report type	Image type	Descriptions
Custom Reports		You can create custom user-specific or company-specific reports directly within Agile. You define your query using the Query Definition feature, which is similar to an Advanced Search. The custom reports provide a high level of flexibility. You can select which objects to report on, define the filtering criteria, and specify report output. For more information, see Working with Custom Reports on page 137.
External Reports		You can create reports outside of Agile using any third-party solution, such as SDK or other tools. You can then create linked access directly within Agile to launch those external reports. This is accomplished through configuring process extensions in Agile Administrator and adding URLs. For more information, see Working with External Reports on page 141 and see *Agile PLM Administrator Guide*.

How Your Roles and Privileges Affect Reports

The reports that you are allowed to manage or run, and the content of those reports, are affected by the privileges assigned to you, for both business objects and report objects.

You can create, view, edit and delete reports depending on the roles and privileges assigned to you. To run a report on a particular type of object, a user must be granted the following privileges:

- Business object privileges

  If you do not have the Discovery privilege for a given business object, you cannot include that object in a report. Parts for which you do not have the Discovery privilege are displayed in the same way as they are displayed on BOMs.

  All the Discovery privileges that are set up for your Agile content will be observed when you run a report with that content, including all Discovery-related SmartRule settings and warnings that the Agile administrator has specified. For more information about Discovery privilege and SmartRules, see *Agile PLM Administrator Guide*.

- Report object privileges for standard reports

  To run and view standard reports, you must have Run Report, Discover, and Read privileges for the standard report you want to run. Agile supplies a number of predefined roles that provide the ability to use specific types of business objects and to run standard reports relating to those business objects. For example, depending on your assigned roles, you may be able to run standard reports in the Products Reports folder, but not standard reports in the Quality Reports folder.

- Report object privileges for custom reports

  In addition to Run Report, Discover, and Read privileges, custom reports require additional privileges: Create, Delete, Modify. The Undelete, SaveAs and Send privileges provide additional custom report capabilities.

- Report management privileges

  To modify and delete report schedules and layouts, or to create and delete global reports folders, you need the Manage Report privilege.

  To manage Static Template framework you need the Manage Report Templates privilege along with the Administrator and Manage Report privileges. In addition to performing the static template management you can also Create, Edit, Remove, Get, Replace template files.

The Agile-provided predefined roles Report User and Report Manager contain the privileges you need to work with custom reports.

Note	In addition to assigning Agile-provided predefined roles, your Agile administrator is able to create customized roles for your company. Your assigned roles (either predefined roles or customized roles) determine which types of standard reports you can run and whether or not you are able to create and run custom reports.

For more information about the privileges that affect reports or about roles and predefined roles, see *Agile PLM Administrator Guide*. If you have questions about your assigned roles and privileges or about your ability to run reports, contact your Agile Administrator.

General Info Tab

The **General Info** tab contains the general information about the reports. It has the following fields by default; your Agile Administrator may have modified the fields:

- **Name** — the name of the report.
- **Report Type** — indicates the report type (subclass) for each class of reports.
  - **Standard Report Type** — indicates the standard report type, either Standard or Administrator.
  - **Custom Report Type** — indicates the custom report type (subclass). The default is **Custom Report**; your Agile administrator may define additional custom report types.
  - **External Report Type** — indicates the external report type (subclass). The default is **External Report**; your Agile administrator may define additional external report types.
- **Description** — text that describes the report.
- **Folder** — click to specify the report folder location. You can choose to share or not share the report folder location with users.
- **Query Definition** — (Custom Reports only) allows you to define criteria on which to base the search.
- **Process Extension** — (External Reports only) a drop-down list of Process Extensions that are set by your administrator.
- **Lifecycle Phase** — the lifecycle phase of the report: Active or Inactive.
  - Custom Report — the lifecycle phase is Inactive if the report cannot be executed because it does not have a query defined or a layout defined yet.
  - External Report — the lifecycle phase is Inactive if no Process Extension is defined, and the report cannot be executed.

- **Create Date** — the date the report was created.
- **Modified Date** — the date the report was last saved.
- **Create User** — the name of the user who created the report. This field is blank on standard reports.

This tab has the following buttons **standard**:

- **Edit** — appears when the **General Info** tab is not in edit mode. To edit the **General Info** tab, click **Edit**.

  Custom reports include the following **General Info** tab edit variations:

  - **Edit Information** — appears when the custom report **General Info** tab is not in edit mode and you place the pointer over the **Edit** button. To edit the **General Info** tab, click **Edit Information**.
  - **Edit Query** — appears when the custom report **General Info** tab is not in edit mode and you place the pointer over the **Edit** button. To edit the query, click **Edit Query**. Make any changes to the query on the Define Query page. To save changes that you made on the Define Query page, click **Finish**.
- **Save** — appears when the **General Info** tab is in edit mode. To save the changes that you made to the tab while it was in edit mode, click **Save**.
- **Cancel** — appears when the **General Info** tab is in edit mode. To undo the changes that you made to the tab while it was in edit mode, click **Cancel**.

You can use the **Actions** menu on the **General Info** tab to perform various actions on the standard report. These commands are **Bookmark**, **Save As**, **Delete**, **Copy URL to Clipboard**, **Send**, and **Sharing**.

For more detailed information about bookmarking and other commonly used functions, see Navigating in Agile Web Client on page 27.

Layout Tab

Some standard reports do not include a **Layout** tab; the layout is predefined for you. For example, the IP Transfer does not include a **Layout** tab.

Use the **Layout** tab to add or modify a standard report or a customized report layout with the fields your business requires in the required order.

To create a layout, click **Create**. To edit the information on the **Layout** tab or to delete a layout, select the appropriate checkbox, and click **Edit** or **Delete**.

- Standard report layouts

  Each standard report that includes a **Layout** tab which has a default layout. If you have the appropriate privileges, you can edit the default layout.

  You can create layouts for standard reports that are available only to you (personal layouts), or you can make the layouts available to all users (global layouts).

  To edit the layout fields, click the **Layout** icon. You can select fields from the **Available Values** list. Some standard report layouts allow you to select values for a main heading and an additional subordinate heading. For more information, see Creating Standard Report Layouts

on page 127.

- Custom report layouts

  The custom report default layout is used to create a new custom report. You can create layouts for custom reports that are available only to you (personal layouts) or you can make layouts available to all users (global layouts).

  To edit the layout fields, sorting and grouping, click the **Layout** icon. You can select fields from the **Available Fields** list. You can change the filter criteria on the Select Layout Fields page. For more information, see Creating Custom Report Layouts on page 130.

The **Layout** tab contains the following buttons:

- **Edit** — lets you edit the attributes; like paper size, orientation on the **Layout** table.
- **Delete** — deletes the layouts you have selected.
- **Create** — lets you create a layout using the Create Report Layout wizard.

The **Layout** tab has the following fields by default; your Agile administrator may have modified the fields:

- **Name** — the name of the given the layout.
- **Access** — indicates whether the layout is available to all users (Global) or only to you (Personal).
- **Paper Size** — the size of the paper the report will be printed on, such as Legal or Letter.
- **Orientation** — the page orientation: Landscape or Portrait.
- **Owner** — the name of the user who created the report.

To edit the Layout tab table:

1. Display the **Layout** tab.
2. Select the layouts you want to edit, and then click **Edit**.
3. In the Name, Access, Paper Size, and Orientation fields, make the desired modifications.
4. Click **Save**.

Note	External reports do not have a **Layout** tab. The third-party solution that generates the report also defines the report layout. If you have questions about external reports on your Agile PLM system, contact your Agile administrator.

Creating Standard Report Layouts

Use the Create Report Layout wizard to create a new layout for a standard report.

About Standard Report Layouts with Multiple Headers

Some standard report layouts include two headings in both the **Available Values** list and in the **Selected Values** list. The values under the first header are field attributes of the object the report is intended to locate. The values under the second header are field attributes of objects that are

subordinate to the report object. For example, in layouts for the Change Activity report, the values under **Main Header Attributes** are fields of the change objects upon which Agile PLM is reporting. The values under the **Affected Items** header are fields of the affected items of each change that appears in the report.

When you run the Change Activity report, each change is listed in its own row. Under each change row are rows with a different background color that list each of the affected items of the change; these affected items appear on the **Affected Items** tab of the change object. In a similar manner, the Item Manufacturers report has a header for item field attributes and a subordinate header for field attributes of the manufacturer parts that are listed on the item's **Manufacturers** tab.

When you create a standard report layout with multiple headers, keep these tips in mind:

- You can sort each header section independently. For example, you can sort the attributes under the main header without affecting the order of the attributes under the subordinate header.
- The **Available Values** list is also organized by headers. You must select values under the appropriate **Available Values** header in order to add it under the corresponding **Selected Values** header.
- Attributes under one header cannot be moved to be under a different header, although you can select as many attributes as you want under each header.
- You are not required to specify any attributes under the subordinate header. For example, in a Change Activity report, if there are no values under the Affected Items header in the **Selected Values** list, then no affected items will be listed on the report; only a list of changes will appear on the report.
- The Change Package report, which assembles all the information about a change in an easy-to-read, printable format, includes more than two headers in the **Available Values** and **Selected Values** lists. Each tab of the change object has a header (for example, Cover Page, Affected Items, or Workflow). In addition, depending on which type of change you select in the **Layout Type** drop-down list, additional headers may also be available. For example, under Affected Items.BOM you can select field attributes of the items that appear on the **BOM** tabs of the affected items listed on the change's **Affected Items** tab. For example, you might select Items.BOM.Qty and Items.BOM.Find Num.

Generating Reports using BI Publisher

Oracle Agile PLM 9224 introduces **BI Publisher,** a reporting tool. Using **BI Publisher**, standard and custom report layouts can be defined and generated in multiple output formats like WORD, PDF, HTML, EXCEL, and XML. In 9224, **BI Publisher** does not support all reports. Some of them continue using the existing reporting layout. The next release plans to use **BI Publisher** technology for all reports.

Note	Ensure to set **Enable BI Publisher for Reports** preference to Yes in Java Client for reports to be generated in multiple output formats.

To generate reports in multiple output formats using BI Publisher:

1. In the navigation pane, select the standard report you want customize.
2. Click **Layout** tab.

3. Click **Create**. The Create Report Layout wizard appears.
4. Populate details in all the fields.
5. Click **Save.**
6. Click **Execute** to run the report.
7. To generate reports in multiple output formats, check **Use BI Publisher** check box. Additional field options with lists appear.

Note	Reports can also be generated using the existing reporting layout.

8. Select a **Layout** from the list
9. Select the **Output Format** in which the report will be generated from the list, like PDF, WORD, EXCEL, and HTML.

Note	The function 'Columns to repeat across pages' is supported for PDF output anonly. th Word format. Note
Note	that this functionality is supported for PDF output only.

10. Check **Save the Report** check box to save report. The generated reports can then be stored or downloaded.

For more details on BI Publisher see, http://xdo.us.oracle.com/?tab=Home.

Template Behavior

In Java Client, to enable the BI Publisher Report template, add Manage Report Template privilege to the 'Applied to' list of the Administrator privilege.

Once the Administrator is assigned the Manage Report Template privilege in Java Client, you can navigate to Tools>Administration>Template Management>Report Template in the Web Client.

Dynamic Template

All custom reports and most of the standard reports use the **Dynamic Template** to define and generate reports in multiple output formats like PDF, WORD, EXCEL and HTML.

Static Template

In 9224, only the BOM Explosion Report and the Manufacturer BOM Report support **Static template** and generate files in RTF. An additional output format, the XML format appears in the list only when you select both **Use BI Publisher** and **Use Template for Layout** check boxes.

Important	If the file server is down, templates will not generate reports as they are stored in the file server.

The following reports will continue using the existing reporting layout since they do not support BI publisher technology.

- Change Package Report
- Change Metrics
- Change Backlog

- Change Cycle Time
- Quality Metrics
- Quality Backlog
- Quality Cycle Time
- Failure Trend
- RFQ Export
- IP Transfer
- Program Actual vs Budgeted Cost Report
- Baseline Comparison Report
- Portfolio Cost Report
- Resource Pool Consumption Report
- All PCM Reports

For more details on BI Publisher see, http://xdo.us.oracle.com/?tab=Home.

Note In 9224, BI Publisher does not support Websphere.

Creating Custom Report Layouts

Use the Create Report Layout wizard to create a new layout for a custom report.

To create a custom report layout:

1. In the navigation pane, select the report you want customize. Click **Layout** tab, and then click **Create**. The Create Report Layout wizard appears.
2. Type a name for the layout.
3. In the **Access** list, select the location for the layout. Your report layout can be Global—available to all—or Personal—available only to you.
4. Select the paper size and orientation from the corresponding drop-down lists.
5. Select the fields you want in the report.
   - To add values to the **Selected Values** list, select them in the **Available Values** list, and double-click (or click the right arrow button).
   - To remove values from **Selected Values** list, select them and double-click (or click the left arrow button).
   - To change the order of fields, select a field and use the up arrow or down arrow button to move it.
6. In the **Sort By** and **Then By** lists, you can specify how you want the report data to be sorted. Select **Ascending** or **Descending** to specify the sort order. You can also select the **Group By** check boxes to further organize the report data.
   - The first level **Sort By** list is applied to all the report rows.
   - The second level **Then By** is applied if there are any ties in the first level of sorting.
   - The third level **Then By** is applied if there are any ties in the second level of sorting.

- **Group By** organizes the report by grouping the results according the value selected in the sort-by list.

7. Click **Save**.

Important	Avoid using special characters in reports using BI Publisher, as they tend to fail.

Creating a Standard Layout

To create a standard report layout:

1. In the navigation pane, select the report you want customize. Click **Layout** tab, and then click **Create**. The Create Report Layout wizard appears.
2. Type a name for the layout.
3. In the **Access** list, select the location for the layout. Your report layout can be Global—available to all—or Personal—available only to you.
4. Select the paper size and orientation from the corresponding lists.
5. If there is a **Layout Type** list, choose a layout type from the list. For example, the Change Activity report allows you to create layouts for change orders and price change orders.

Note	The **Layout Type** list appears on only a few specific report layouts. If you do not see a **Layout Type** list, ignore this step.

6. To generate reports in multiple output formats check **Use BI Publisher** check box.

Note	Reports can also be generated using the existing reporting layout.

7. Select the fields you want in the report.
   - To add values to the **Selected Values** list, select them in the **Available Values** list, and double-click (or click the right arrow button).
   - To remove values from **Selected Values** list, select them and double-click (or click the left arrow button).
   - To change the order of fields, select a field and use the up arrow or down arrow button to move it.
8. If there are multiple headers in the **Available Values** and **Selected Values** lists, select the appropriate values under each header and arrange them in the order you want. For more information, see About Standard Report Layouts with Multiple Headers on page 127.

Note	Multiple headers do not appear on all standard report layouts. If you see only one header (for example, Main Header Attributes) in the **Selected Values** list, ignore this step.

9. When you are finished, click **Save**.

Executing a Report

To execute a report:

1. In the navigation pane, select the standard report you want customize. Click **Layout** tab, and

then click **Create**. The Create Report Layout wizard appears.

2. Populate details in all the fields.
3. Click **Save.**
4. Click **Execute** to run the report. The Run Report Wizard with the Select layout and Configuration Page appears. You are given the option to use **BI Publisher** to generate reports. Reports can also be generated using the existing reporting layout.
5. To generate reports in multiple output formats, check **Use BI Publisher** check box.

Important	Before checking the Use BI Publisher check box, ensure to enable Automatic Prompting for File Downloads in IE settings to save generated output formats of the report on to the local machine.

On checking **Use BI Publisher** check box, additional fields with lists appear.

6. Select a layout from the **Layout** list.
7. Select an output format from the **Output Format** list like WORD, PDF, EXCEL or HTML.
8. Check **Save the Report** box to save report.
9. Click **Next**.
10. When you have populated all the fields, click **Finish**.

    A message appears: “Server is generating the report. Please wait.” Once the Report is generated you can download the file and view it.
11. Select the encoding type from the list. Click **Continue**.
12. Follow directions in the **Save As** dialog boxes to save file to disk and choose a location to save it.
13. Modify filename to include report date and time.
14. When the download is complete, click **Close** in the dialog box.

Note	Reports generated are based on selections of layout and output format. In addition, the standard product reports **BOM Explosion** and **Manufacturer BOM** allow you to select BI Publisher templates that the Agile administrator has configured.

Editing Standard Report Layouts

You edit a report layout on the Report Layout Details page. For information about how to change the information in the fields on the **Layout** tab, see Layout Tab on page 126.

To edit a standard report layout:

1. Display the Report Layout Details page in one of the following ways:
   - In the navigation pane, select the report you want customize. Click the **Layout** tab, and then click the **Layout** icon for the layout you want to edit. The Report Layout Details page appears.
   - Select the report you want to customize. Click the **Execute** button. On the Select Layout and Configuration page of most Report wizards, click **Layout Manager**. The Report Layout

Details page appears. Click the **Layout** icon for the layout you want to edit.

2. Change the fields you want the report to include, as necessary.
   - To add values to the **Selected Values** list, select them in the **Available Values** list, and double-click (or click the right arrow button).
   - To remove values from the **Selected Values** list, select them and double-click (or click the left arrow button).
   - To change the order of fields, select a field and use the up arrow or down arrow button to move it.
3. If there are multiple headers in the **Available Values** and **Selected Values** lists, select the appropriate values under each header and arrange them in the order you want. For more information, see About Standard Report Layouts with Multiple Headers on page 127.
4. Click **Save** to save your changes to the layout.

Editing Custom Report Layouts

You edit a report layout on the Report Layout Details page.

To edit a report layout:

1. Display the Report Layout Details page in one of the following ways:
   - In the navigation pane, select the report you want customize. Click the **Layout** tab, and then click the **Layout Manager** icon for the layout you want to edit. The Report Layout Details page appears.
   - Select the report you want to customize. Click the **Execute** button. On the Select Layout and Configuration page of the Custom Report wizard, click **Layout Manager**. The Report Layout Manager page appears. Click the **Layout** icon for the layout you want to edit. The Report Layout Details page appears.
2. Change the fields you want the report to include, as necessary.
   - To add values to the **Selected Values** list, select them in the **Available Values** list, and double-click (or click the right arrow button).
   - To remove values from the **Selected Values** list, select them and double-click (or click the left arrow button).
   - To change the order of fields, select a field and use the up arrow or down arrow button to move it.
3. Change the sort order and select or clear the **Group By** check box as necessary.
4. Click **Save** to save your changes to the layout.

Deleting Report Layouts

You can delete report layouts that are no longer used.

To delete a report layout:

1. Display the **Layout** tab.

2. Select the layouts you want to delete, and then click **Delete**. A confirmation message appears. Click **OK** in the confirmation message.

Note	You must retain at least one layout.

Schedule Tab

Use the **Schedule** tab when you want a report to run based on a specific schedule or on a specific date and time. You can add, edit, or delete the schedules.

You must have the appropriate privileges to work with the **Schedule** tab.

This tab has the following buttons:

- **Edit** — lets you edit the schedule. The **Edit** button affects only the schedules you have selected on the **Schedule** tab.
- **Delete** — deletes the schedules you have selected.
- **Create** — lets you add a new schedule frequency (Run Once, Every Day, Weekdays, Mondays, Tuesdays, Wednesdays, Thursdays, Fridays, Saturdays, Sundays, First Day of the Month, and Last Day of the Month) to the report schedule using the Report wizard.

The **Schedule** tab has the following fields by default; your Agile administrator may have modified the fields:

- — click to view the schedule details of the report being run for the schedule. They can be:
- The layout selected
- Fields filled out in the report wizard
- Parametric fields (custom reports only)
- **Enable** — select **Yes** to activate the schedule and run reports automatically, or select **No** to disable the automatic schedule.
- **Schedule Frequency** — a drop-down list with the following options: Run Once, Every Day, Weekdays, Mondays, Tuesdays, Wednesdays, Thursdays, Fridays, Saturdays, Sundays, First Day of the Month, or Last Day of the Month.
- **Schedule Time** — the date and time when the report should run. You specify the date only if the **Schedule Frequency** option is set to Run Once. For any other schedule, you specify only the time.
- **Share W/Users** — list of users who will be notified when the report is generated (based on the schedule) and who will have access to the reports generated from the schedule.
- **Owner** — the name of the user who created the schedule.

To create a schedule:

1. Display the **Schedule** tab for the report.
2. Click **Create**. The Add Schedule wizard appears.
3. Follow each step in the wizard in order to define and specify your report. These are the same wizard steps you use when you click the **Execute** button to run the report. For details about

running specific reports, see the appropriate user guide.

The last wizard step in the Add Schedule wizard is the Define Schedule page.

4. On the Define Schedule page, in the **Schedule Frequency** drop-down list, select Run Once, or select the recurring day you want the report to run.
5. If you select Run Once, click the calendar button and select a date. Specify the time you want the report to run. The default time is 12:00 a.m. If you want to enter a time to run the report, use the time format hh:mm:ss AM or PM. For example, to run the report at 8 p.m., enter 08:00 PM
6. If you select a recurring day you want the report to run, you can specify a time to run the report. The default time is 12:00 a.m. Use the time format hh:mm:ss AM or PM. For example, to run the report at 8 p.m., enter 08:00 PM
7. Click next to the **Share with Users** field to select the names of users who will have access to this report.
8. Click **Finish**.

Note	External reports do not have a **Schedule** tab. If there is a schedule, the third-party solution that generates the report also defines the report schedule. If you have questions about external reports on your Agile PLM system, contact your Agile administrator.

Historical Report Tab

After you run a report, you can save the report results. **The Historical Report** tab displays all previously saved report instances with a date and time stamp and the name of the user who executed the report. To share a report, select the appropriate checkbox and click **Sharing**. To delete or view a report, select the appropriate check box, and click **Delete** or **View**.

To save the generated report as a historical report, click the **Save** button in the Report Output window. If you do not save a report, once you close the report results window, you cannot access that instance of the report again.

If a historical report is generated according to a schedule, then the Type field in the report displays Schedule Generated.

This tab contains the following buttons:

- **Sharing —** lets you specify other users who can view the selected report instance.
- **Delete —** deletes the selected report instance.
- **View —** lets you view the generated Report Output window of the selected report.

The **Historical Report** tab has the following fields:

- **—** lets you view the generated Report Output window of the selected report.
- **Create Date —** indicates the date and time the report was generated.
- **Type —** indicates if the historical report is saved by the user or generated by a schedule.
- **Share W/Users —** users who can view this report instance.

- **Owner** — the name of the user who created the report.

Note	External reports do not have an **Historical Reports** tab. If you have questions about external reports on your Agile PLM system, contact your Agile administrator.

History Tab

The **History** tab shows a summary of actions taken on the report. This tab is completed automatically.

The History table has the following columns by default; your Agile administrator may have modified the table:

- **Action** — the action that was taken.
- **User** — the user who took the action.
- **Local Client Time** — the time that the action was taken, according to the time zone of the user viewing the History table.
- **Details** — the description of the action (for example, the description of the change that was made).
- **Comments** — comments made by users.

Working with Standard Reports

Standard reports provide you with the information you commonly need to analyze your business processes. You select predefined criteria and specify the results you want. These out-of-the-box reports are applicable in most situations. You can run them as they are, modify the default layouts, or create your own layouts. You can run Agile reports from Agile Web Client or Java Client.

Note	When you run standard reports from Java Client, Agile PLM opens a Web Client window with the selected report displayed.

Accessing Standard Reports

Click the + button next to **Reports** in the left pane to view the top-level folders such as **Products Reports** and **Process Reports**. You can access reports from these folders.

To execute a standard report, click the **Execute** button and follow the wizard steps. If the standard report does not have any wizard steps, the report is generated immediately after you click the **Execute** button.

- For information about standard report layouts, see Creating Standard Report Layouts on page 127 and Editing Standard Report Layouts on page 132.
- For information about scheduling standard reports, see Schedule Tab on page 134.

- For information about standard reports **Historical Reports** tab, see Historical Report Tab on page 135.
- For information about running standard reports, refer to the appropriate user guide, listed in the following table.

The **Standard Reports** folder contains the predefined folders as listed in the following table.

Report folder	Description and location to find more information about specific reports
Product Reports	Contains the standard Product Collaboration (PC) reports. For more information about these reports, see *Product Collaboration Guide*.
Administrator Reports	Contains all administrator user reports. For more information about these reports, see *Agile PLM Administrator Guide*.
Sourcing Reports	Contains the standard Product Cost Management (PCM) reports. For more information about these reports, see *Product Cost Management User Guide*.
Quality Reports	Contains the standard Product Service and Improvement (PQM) reports. For more information about these reports, see *Product Quality Management User Guide*.
Process Reports	Contains reports for changes and transfer orders. For more information about these reports, see *Product Collaboration Guide*. For more information about the IP Transfer Report, see *Agile Content Service User Guide*.
Program & Portfolio Reports	Contains standard reports for Product Portfolio Management (PPM) solutions. Sub folders include End User Reports, Portfolio Reports, Program Reports, and Resource Pool Reports. For more information about these reports, see *Agile Product Portfolio Management User Guide*. If your company has installed Portfolio Analytics, then the Portfolio Analytics reports appear in the **Analytics** folder under the **Program & Portfolio Reports** folder. For more information, see *Portfolio Analytics User Guide*.
Compliance Reports	Contains the standard Product Governance & Compliance (PG&C) reports. For more information about these reports, see *Agile Product Governance and Compliance User Guide*.

Working with Custom Reports

You can create user-specific or company-specific reports directly within Agile. When you define

your query on the Define Query page of the Custom Reports Creation wizard, the search looks for objects with fields that match the search conditions that you set up.

You can customize reports in the following ways:

- Change the way each report looks by editing the report layout.
- Specify a schedule (date and time) when you want a report to be executed.
- Save and view report instances.
- See what actions have been taken on the report.

Creating a Custom Report

If you have the appropriate roles and privileges, you can create any user-specific or company-specific custom report from the **Create** icon on the main toolbar.

To create a custom report:

1. Click Create **Report** > **Custom Reports**.
2. The Custom Reports Creation wizard appears. Select the subclass, and type a name for the report.
3. Click the **Continue Creation in Wizard** check box. Click **Continue**.
4. On the General Information page, enter a description. Click ... next to the **Folder** field to select a folder in which to save the report. The Select Folder window appears. All the available report folders are listed on the left side in the **Available Folders** list. Select a folder from the **Available Folders** list and click the right arrow to move it to the **Selected Folders** list. Select one or more folder locations. Click **OK**. The folder field is populated with the selected folder name on General Information page. Click **Next**.
5. The Define Query page appears. On this page, click the appropriate radio button to create a new query or select from an existing query, complete the remaining fields, and click **Next**. The options are described in the following section.
6. The Select Output Fields page appears. In this wizard step, specify which fields to include in the report and how to sort the results table. To include a field, move it to the **Selected Values** list. In the **Sort By** and **Then By** lists, specify how you want the report data to be sorted. Select **Ascending** or **Descending** to specify the sort order. You can also select the **Group By** check boxes to further organize the report data.

   Note The settings specified in this step are saved as the Default Layout for the report. For more information about custom report layouts, see Creating Custom Report Layouts on page 130.

7. Click **Finish** when you have completed the last step.

View general information about the newly created report on the **General Info** tab.

Creating a New Query

To create your own query, select the **Create New** button on the Define Query page. For a new query, complete the **Search Type** and **Search For** fields, and specify at least one search condition. Click **Next**.

This wizard step contains the following options:

- **Search For** — the type of object (class or subclass) that you want to search for—for example, ECO, document, or manufacturer part.
- **Search Type** — the type of search that you are creating. An Object search finds Agile objects that match the search conditions. A Where-used search finds the assemblies that use the items defined by your search criteria. The assemblies in which the defined items are used appear in the search results.
- **Match Case** — if checked, the search will be case-sensitive; that is, it will find uppercase or lowercase values exactly the way that you enter them.
- **Clear button** — clears the information on this page.
- **Field** — the field on which you want to search. The contents of this list depend on the Search For value.
- **Match If** — a search operator, such as Equal To or Contains. The contents of this list depend on the value specified in the **Field** field.
- The **Prompt?** field — check this box if you want to prompt the report user to fill in the value when the custom report is executed. If you check the check box, the Value field is disabled and you do not enter a value now as you create the custom report query; however, when you execute the custom report, you will be prompted to enter a value in a wizard step. See also Executing Custom Reports on page 140.
- **Value** — the value for which you want to search. Click the button and specify a value.
- **And/Or** — used to specify multiple search conditions. If you want both conditions to be met, select And. If only one condition needs to be met, select Or.
- **Add ( )**, **Add [ ]**, and **Remove ( )** buttons — tell the Web Client to group or ungroup conditions. In most searches, use parentheses to group conditions. Use brackets to group conditions in workflow searches.
- **Validate** button — verifies if the query is valid.

For more information about defining a query, see Finding Agile Data with Searches on page 145.

Note	Delete invalid data for queries as the Use Report subclass tends to hang if the data submitted is large.

Conditions to Edit and Save a Query

To edit a Query:

1. Choose **Edit Query** under the General Info tab on the Cover page.
2. In the Define Query page, edit the necessary fields.

Note	Layout settings can be affected when you edit a query. If you edit the values in the Search For, Search Type, or With Related Content fields, custom layout settings are reset to default layout settings. If you only edit the fields under Criteria Conditions, custom layout settings are retained.

3. Click **Finish**.

The General Info page is then displayed with the latest details that have been entered in the Define Query page.

Using a Saved Search

If you select the **Use Saved Search** button on the Define Query page, click to select an existing search to customize. The Define Query page appears. All the search criteria are copied from the saved search. You can modify the criteria to suit your needs. Default Layout output fields are copied from the output display of the saved search.

Executing Custom Reports

You must have sufficient privilege to execute a report. For more information about roles and privileges, see the *Agile PLM Administrator Guide*. The report outputs are displayed only in Web Client.

To run a custom report:

1. Select the report that you want to execute, and click the **Execute** button.
2. In the report wizard, select a layout or click the **Layout Manager** icon to create a new layout. For more information, see Creating Custom Report Layouts on page 130.

   When you are done with this step, click **Finish**. If the **Finish** button is disabled, click **Next**.
3. If there are any parametric fields in the report, the Enter Parameter Values wizard page appears. Fill in the required information. Click **Finish**.

   If there are no parametric fields in the report, this wizard step is omitted.
4. Once the output appears, use buttons at the top of the Report Output window to save, export, or print the report.
   - Click the **Print** button to print the generated custom report.
   - Click the **Export** button to export the report as delimited text files (.CSV) or as Microsoft Excel Workbook files.
   - Click the **Save** button to save the report instance.

     For more information, see Historical Report Tab on page 135.

   You can also use buttons to move from page to page in the report and to change the magnification.

Note	When a scheduled custom report fails a custom report failure notification is sent to all the Users with Administrator privileges.

Deleting and Undeleting Custom Reports

When you no longer need a report, you can delete it from the report folder.

To delete a custom report:

1. Select the report you want to delete.
2. From **Actions** menu, choose **Delete.** A warning message appears asking you to confirm that you want to delete this report. Click **OK**.

To undelete a custom report:

1. Under Searches in the navigation pane, select **Deleted Reports** from the **Recycle Bin Searches** folder.
2. Open the deleted report you want to undelete.
3. From **Actions** menu, choose **Undelete.**

Note	Although the report users can run reports and do analysis on assigned projects, including those to which they do not have direct access, they cannot delete reports that they do not own. Only the report manager can delete reports that belong to other users.

Working with External Reports

You can create reports and generate them from an external report engine. Process extension provides a URL address that can be initiated from within Agile reports and that will launch the specified Web address. Your Agile administrator sets the Process Extensions based on your requirements. If you have any questions or comments about the Process Extension settings, please contact your Agile administrator.

Creating an External Report

If you have the appropriate roles and privileges, you can create an external report from the **Create** icon on the main toolbar. In the Agile Web Client, you can connect to an external resource or URL to generate an external report. Before you create an external report, you must add the URL associated with the report to the Process Extension Library. For more information about Process Extensions, see the *Agile PLM Administrator Guide*.

To create reports in the Agile Web Client, you must have the Create Reports privilege.

To create an external report:

1. Log in to Agile Web Client.

Note	You cannot create external reports in Agile Java Client.

2. Click **Create** > **Report** > **External Reports**. The External Reports Creation Wizard appears.
3. Select a subclass, and type a name for the report.
4. Click the **Continue Creation in Wizard** checkbox. Click **Continue**.
5. Enter the following general information:
   - **Description** — Enter a brief description of the report.
   - **Process Extension** — Select a Process Extension. The Process Extension you select is

associated with a URL, such as the location of Web-based report. The only Process Extensions that appear in this list are those that are designated as “Initiate From: External Reports” in the Process Extension Library.

- **Folder** — Select a folder in which to store the report.

6. Click **Finish**.

Executing an External Report

You must have sufficient privileges to execute a report; see How Your Roles and Privileges Affect Reports on page 124. For more detailed information about roles and privileges, see the *Agile PLM Administrator Guide*.

To run the newly created external report, click the **Execute** button. The Process Extension that references a URL is invoked, and you see the Web page in a new browser window.

The Report Output Window

When you execute a report, you see the report displayed in a new browser window. Once the report output appears, you can use buttons at the top of the Report Output window to save, export, or print the report.

- Click the **Print** button to print the generated custom report.

  Follow the onscreen instructions to print the report.

- Click the **Export** button to export the report. Follow the onscreen instructions.

  The report can be exported in one of two formats:

  - File type CSV (comma delimited text file)
  - File type Microsoft Excel Workbook.

  Both file types can then be opened in Microsoft Excel. CSV files can also be opened with any application that uses the CSV file type.

- To move from page to page, use the **Page** drop-down list and the **First Page**, **Previous Page**, **Next Page**, and **Last Page** buttons.

- To change magnification, use the **Zoom In** and **Zoom Out** buttons.

- Click the **Save** button to save the report instance. The saved report instance appears on the **Historical Report** tab.

  For more information, see Historical Report Tab on page 135.

- Click the **Close** button to close the report window.

Chapter 7

Finding Agile Data with Searches

This chapter includes the following:

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- Quick Searches and Wildcard Characters 154
- Full Text Search for Content in Attachment Files 156
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Overview of Search Tools

When you want to find specific Agile objects, content found in documents or attachments, or other kinds of information contained in the database, you perform a search.

The main Searches folder has subfolders of saved searches.

- In Java Client, to display the search window, click the **Search** tab in the left navigation pane. Select the top Search folder and click the **Expand All** icon to display all the searches. Or, for a specific folder, click the **+** icon to display the searches in that folder.
- In Web Client, if the left navigation pane is not already displayed, click the **Searches** icon to display the search folders. Click the **Expand All** icon to display all the searches. Or, for a specific folder, click the **+** icon to display the searches in that folder.

For more information about the predefined searches in Agile PLM, see Saved Searches on page 149.

For more information about saving, editing and managing your personal searches, see Editing and Managing Searches and Search Folders on page 200.

Types of Searches

Several types of searches are available from the toolbar of both Java and Web Clients.

- **Simple Search**— Searches for objects whose name, number, or description matches the criteria in the main toolbar **Search** text box. See Quick Searches and Wildcard Characters on page 154. In a Simple Search, the object class drop-down list is set to All and a wildcard character is used in the main toolbar **Search** text box.

  When the object class drop-down list is set to All, the **Search Attachments Context** check box is inactive and not available.

- **Quick Search**—Searches for objects whose name, number, or description matches the criteria in the main toolbar **Search** text box. See Quick Searches and Wildcard Characters on page 154.

  By default, the Search object class drop-down list is set to All, and Agile performs a Simple Search to search all objects in the database. Narrow your Quick Search by selecting a base class in the drop-down list that limits the search to any object with that base class as its "ancestor."

  You can also extend the Quick Search to attachment files. See Quick Searches on page 151.

- **Pre-configured Parametric Search**—From the **Search...** button drop-down list, select a base class that limits the search to any object with that base class as its "ancestor" similar to a Quick Search. Click the **+** to expand and display the parametric search your Agile administrator has configured. Your Agile administrator configures Agile PLM to present the most commonly used search attributes for that class or type. Select the search operator and search value for one or more of the displayed attributes. See Pre-configured Parametric Searches on page 159.

- **Last Search Results**—Return to the results of the last search that you ran.

- **Attachment content search**—You can use a quick, parametric, or advanced search to find specified content in attachment files. See Full Text Search for Content in Attachment Files on page 156.

- **Advanced Searches**—For greater precision, you can perform an advanced search, which allow you to use more specific search conditions and multiple conditions which have not been pre-configured in the parametric search. See Advanced Searches on page 167.

- **Where-used Searches**—An option in Advanced Search, it searches specific levels of the BOM and revisions, such as "All Levels Latest Released Revision Only." See Where-Used Searches for Items on page 181 and Where-used Searches for File Folders on page 190.

- **Relationship searches**—An option in Advanced Search, it finds objects that are related to the object that meets the search conditions. See Relationship Searches on page 192.

User Roles and Searchable Objects and Attributes

A user's assigned roles determine which Agile objects he can search for and which object attributes he can use for search criteria.

How Discovery Privileges Affect Searches

For Parametric Search and Advanced Search, the base classes, classes and subclasses that appear **Search for:** drop-down lists are determined by the user's Discovery privilege masks.

Discovery privilege masks can be based on criteria for a specific subclass, class, or base class. If the user has a Discovery privilege mask based on a criteria for a specific class, then the user sees and can select any of the subclasses of that class in the **Search for:** drop-down list. Similarly, if a

user has a Discovery privilege mask based on a base class, then all classes and subclasses in the specified base class appear in the **Search for:** drop-down list and the user can select. However, if a user's Discovery privilege masks are limited only to specified subclasses, then the user sees the associated base class and class, but only those specified subclasses in the **Search for:** drop-down lists. The user may select the base class, class or subclass, however, if his discovery privileges are limited to a specific subclasses, only objects of the specified subclasses appear in the search results.

How Field-Level Read Privileges Affect Searches

The business object fields a user can view and select as search criteria in Parametric Searches and Advanced Searches is determined by the user's field-level Read privileges.

In Advanced Searches, the searchable attributes appear in the **Field** drop-down list of each search condition. In Parametric Searches, the Agile administrator configures which attributes are displayed for selection in the parametric search display. In addition, the user must have the appropriate field-level read privilege masks. If the user does not have read privilege for a specific field, that field does not appear in the Parametric Search display, and that field does not appear in the search condition **Field** drop-down list in Advanced Search.

Search Results

In Java Client, when you run a search, the results appear in a search results window. The window title bar displays the name of the search. The search Results icon appears in the left corner of the window title bar.

In Web Client, when you run a search, the results appear in the right pane.

The maximum number of search results that can be displayed is based on the Maximum Query Results Displayed property in Agile Administrator under **Admin** > **Server Settings** > **Preferences**. In addition, your **Maximum Rows Displayed** (MRD) user preference controls how many rows are displayed for you. If the system found more than your MRD user preference allows, a message informs you that the results returned were more than allowed. Refine your search criteria as needed.

For Quick Search and Simple Search, the search results are sorted when the number of search results displayed is less than or equal to 1,000.

Note	If a user's Maximum Rows Displayed user preference is set to fewer rows than Maximum Query Results Displayed systemwide preference, the former value will override the latter value. If the system found more results than the MRD user preference allows, a message informs you of that fact.

If you do not have Discovery or Read privilege for an object, it does not appear in search results. Depending on Agile Administrator SmartRule settings, you may see a warning that rows are missing due to insufficient privileges. For more information, see your Agile administrator.

When you search for items (part or document objects), the items displayed are the latest released revision or the most recent pending revision (which was created when the item was added to the **Affected Items** tab of an ECO or an MCO). See also Searching on Rev-Specific Values on page 181.

Important	The Specify Output Column privilege is removed from Agile PLM; therefore, all users can potentially specify output attributes in advanced searches. However, if you find that you cannot do so, you have probably been assigned the Enforce Field Level Read privilege by your administrator.

To open and view objects in the results table in Java Client, use one of these methods:

- To open one object, double-click the object's row in the search results table.
- To open an object with a specific tab on top:
  a. Select the object's row in the search results table.
  b. Right-click.
  c. In the displayed menu, choose **Open** and the tab you want.
- To open multiple objects:
  a. Select multiple rows in the search results table.
  b. Either press **Enter** on the keyboard or click the **Open** button in the main toolbar.

To open and view objects in the results table in Web Client:

Click the Number link of the object.

To print a list of objects found by the search:

In Java Client, click the **Print** button in the search results toolbar.

In Web Client, click the **Print** button on the Search Results page.

To view the results of the last search you performed:

In Java Client, click the **Last Search Results** button.

In Web Client, click the **Last Search Results** button.

Exporting Search Results

In both Java Client and Web Client, you can export some or all results of a search (Advanced Search or saved search) to a CSV (comma separated value) file for use in another application, for instance, Microsoft Excel or Microsoft Word. You can also export the search results in Microsoft Excel format.

To export search results in Java Client and Web Client:

1. Run a search.
2. In the search results table, click the Export drop-down button and choose a file format: .CSV or Microsoft Excel
3. In the File Download dialog that opens, click **Open** to view the exported file in the chosen format, or **Save** to save the file to your local drive.

Saved Searches

Saved searches are advanced searches that have been saved for future use. They include the predefined searches shipped with Agile, global searches that your Agile administrator created, or personal searches you created yourself.

Global searches are seen by all Agile users with appropriate Discovery and Read privileges. Personal searches are seen only by the user who created the search. Although personal searches are created on a local computer, they are stored on the server. This means you can log in to any computer that runs your usual client and see the personal searches you have created, even if those searches were created on a different computer. Only you can see them, under your own login.

Predefined System Searches

Agile comes with a set of predefined searches. You can use them as they are, or you can use them as a template to modify and save as your own custom searches.

Which searches you see depends on your company's licenses and your user profile settings, roles, and privileges. If you have the Global Search privilege, you can edit or delete the predefined system searches. If you do not have the Global Search privilege, you can still view the system searches.

Note	Some predefined system searches cannot be edited, viewed or saved because they internally defined and are not based on an advanced search. For example, the Recycle Bin searches for soft-deleted objects are not editable.

The search Save As feature allows you to create a shortcut (link) to a non-editable system search, but does not allow you to make a copy of that search in your personal searches folder. For more information, see Using Save As to Save a Search on page 140.

You also need to have the Searches property in your user profile include the kind of searches you want to see. Your administrator may have already set that up when your profile was created as an object in the Agile database; if not, follow this sequence:

To add the capability to see a folder of searches:

1. Display your user profile:
   - In Java Client, click the **View/Edit Current User** button in the main toolbar.
   - In Web Client, choose **Tools** > **My Settings.** On the Settings Home page, click the **User Profile** link to display your profile. Click **Edit** (on the **General Info** tab).
2. On the **General Info** tab, scroll down to the Profile section.
3. At the **Searches** field, click the or button, per your client.
4. Use the multilist dialog box to select the Searches you want access to. When you are done, click **OK**.
5. Click **Save**.

If you have questions about your ability to discover, read, or edit searches, see your Agile administrator.

The Global Searches folder has a subfolder named Workflow Search Samples with additional predefined searches.

Name of folder	Purpose of searches
Compliance Searches	Searches that find product governance and compliance data.
Global Searches > Workflow Search Samples	Workflow Search Samples are described in Workflow Routings on page 14. Also see Searching for Routable Objects with Workflow Attributes on page 194.
Change Analyst Searches	Searches that find changes, items, and redlined attachment files.
Component Engineer Searches	Searches that find manufacturers and manufacturer parts.
Workflow Routings	Searches that find workflows, as described in Workflow Routings on page 14. Also see Searching for Routable Objects with Workflow Attributes on page 194.
Content Manager Searches	Searches that find content transfer orders and packages.
Price Searches	Searches that find prices.
Program Searches	Searches that find programs.
Quality Searches	Searches that find product service requests and quality change requests.
Sourcing Searches	Searches that find requests for quote and sourcing projects.
Supplier RFQ Searches	Searches that find supplier RFQ requests.
Recycle Bin Searches	Searches that find deleted objects in every base class in Agile PLM.
Personal Searches	Searches that you have created.

Running a Saved Search

In Java Client, when you run a saved search, the found objects are listed in the search results window with the name of the search in the window title bar. In Web Client, when you run a saved search, the found objects are listed in the right pane, below the name of the search.

In Java Client, to use searches shipped with Agile, created by your Agile administrator, or saved by you:

1. If the folders of saved searches are not displayed in the **Searches** folder on the Search tab of the left navigation pane, double-click the **Searches** folder.

   Or, highlight the **Searches** folder and click the **Expand All** icon in the Searches toolbar to display all search subfolders and their contents.
2. Double-click the name of the folder that you want to open.
3. Double-click the name of a search in that folder to run it. Results appear in a search results window.

In Web Client, to use searches shipped with Agile, created by your Agile administrator, or saved by you:

1. If the search tools are not already displayed, click the **Search Folders** button in the navigation pane.
2. Click a **Searches** folder to display the list of saved searches in that folder.

   Or, highlight the **Searches** folder and click the **Expand All** icon in the navigation pane to display all search subfolders and their contents.
3. Click the name of a search in that folder to run it. Results appear in the right pane.

Running Saved "Prompt at Runtime" Searches

You can create and save searches that prompt you to fill in the values for which you want to search. Each time you run the saved search, you can specify different search values.

When you run a saved "Prompt at Runtime" search, a dialog appears that allows you to fill in search values.

Fill in the fields provided, then click **Run**.

To create and save a "Prompt at Runtime" search, see Creating an Advanced Search in Java Client on page 169 or Creating an Advanced Search in Web Client on page 172.

Quick Searches

Use the main toolbar quick search features in both clients to run quick searches. Quick searches let you quickly locate objects in the Agile database. The quick search returns a list of all Agile objects whose name, number (ID), or description contain the search criteria that you specified.

Quick Search Overview

In a default quick search (main toolbar class drop-down list set to **All**, also referred to as a simple search) Agile searches all classes to find any object in the database that matches the criteria. When you choose a base class in the drop-down list, Agile limits the search to any object with that base class as its "ancestor." You can also extend the search to attachment files; see Full Text Search for Content in Attachment Files on page 156.

Quick searches behave like **Contains** searches for text strings. The search criteria is treated as a single string and Agile PLM searches for names or descriptions that contain the search criteria string. In the case of ID numbers, Agile PLM searches for an exact match, however, you may use wildcard characters to specify part of an ID number as a search criteria.

The columns included in the search results table depend on what you searched for. You can change the number of rows displayed per page of search results by choosing **Tools** > **My Settings** > **User Profile** (Web Client) or by using the **View/Edit Current User** button (Java Client) to display your user profile. On the **Preferences** tab of your user profile, edit the **Rows per Table Display** attribute.

Using Wildcard Characters on page 154 gives some examples of values for quick searches and the returned results that can be expected.

For detailed information about using quick searches, see:

- Java Client Quick Search on page 152
- Web Client Quick Search on page 153
- Using Wildcard Characters on page 154
- Using Quick Search to Find Attachment File Content on page 157

Java Client Quick Search

The following table shows the Quick Search interface in the Java Client and summarizes what each feature does.

Base Class drop-down list	**Search Attachment Text** checkbox	**Search Criteria** field	**Run Search** button
Use to select a specific base class. Agile limits the search to any object with that base class as its "ancestor." All (default) – searches all object classes in the database.	When you select a base class, this checkbox is enabled. If you want to include the content of attachment files in your search, check the box.	The search criteria text is not case-sensitive. You can enter as search criteria: ▫ a product ID number ▫ an entire word ▫ multiple words ▫ partial numbers or partial words, using the * and ? wildcards.	Runs the search you specify and displays the results in the Search Results window.
See Perform a Quick Search in Java Client on page 153 for more information.	See Full Text Search for Content in Attachment Files on page 156 for more information.	See Quick Searches and Wildcard Characters on page 154 for more information.	See Search Results on page 147 for more information.

The following table lists and describes the search buttons on the main toolbar in Java Client.

Button	Name	Description
	Run Search	Runs a Simple Search or a Quick Search. See Quick Searches and Wildcard Characters on page 154 and Quick Searches on page 151.
	Search...	Opens a dialog box to create an advanced search. See Advanced Searches on page 167.
		Clicking the drop-down arrow displays a list of base classes to select for a pre-configured parametric search. See Pre-configured Parametric Searches on page 159.
	Last Search Results	Displays the results of the last search you performed.

Perform a Quick Search in Java Client

To perform a quick search in Java Client:

1. Enter the search characters in the **Search Text** field in the main toolbar.
2. Use the **Object Type** drop-down list to select the type of object you want to search for. Select a base class to limit the search to any object with that base class as its "ancestor."

   When you select All, Agile performs a Simple Search and searches across all classes. The **Search Attachment Text** checkbox is disabled for Simple Searches.
3. When you select an object type, the **Search Attachment Text** checkbox is enabled. If you want to include the content of attachment files in your search, check the box. See Full Text Search for Content in Attachment Files on page 156 for more information.
4. Click the **Run Search** button. The search returns all objects in the specified base class where the ID number matches or a word in the description contains the search characters.
5. To open an object in the search results table, double-click its row.

Web Client Quick Search

The following table shows the Quick Search interface in the Web Client and summarizes what each feature does.

Base Class drop-down list	**Search Attachment Text** checkbox	**Search Criteria** field	**Run Simple Search** button
Use to select a specific base class. Agile limits the search to any object with that base class as its "ancestor." All (default) – searches all object classes in the database.	When you select a base class, this checkbox is enabled. If you want to include the content of attachment files in your search, check the box.	The search criteria text is not case-sensitive. You can enter as search criteria: ▫ a product ID number ▫ an entire word ▫ multiple words ▫ partial numbers or partial words, using the * and ? wildcards.	Runs the search you specify and displays the results in the Search Results window.
See Perform a Quick Search in Web Client on page 154 for more information.	See Full Text Search for Content in Attachment Files on page 156 for more information.	See Quick Searches and Wildcard Characters on page 154 for more information.	See Search Results on page 147 for more information.

The following table lists and describes the search buttons on the main toolbar in Web Client.

Button	Name	Description
	Run Search	Runs a Simple Search or a Quick Search. See Quick Searches and Wildcard Characters on page 154 and Quick Searches on page 151.
	Search...	Opens a dialog box to create an advanced search. See Advanced Searches on page 167
		Move the mouse pointer over the drop-down arrow to display a list of base classes to select for a pre-configured parametric search. See Pre-configured Parametric Searches on page 159 .
	Last Search Results	Displays the results of the last search you performed.

Perform a Quick Search in Web Client

To perform a Quick Search in Web Client:

1. Use the **Object Type** drop-down list to select the type of object you want to search for. Select a base class to limit the search to any object with that base class as its "ancestor."

   When you select All, Agile performs a Simple Search and searches across all classes. The **Search Attachment Text** checkbox is disabled for Simple Searches.

2. When you select an object type, the **Search Attachment Text** checkbox is enabled. If you want to include the content of attachment files in your search, check the box. See Full Text Search for Content in Attachment Files on page 156 for more information.
3. Enter the search characters in the **Search Criteria** field.
4. Click the **Run Simple Search** button. The search returns all objects in the specified base class where the ID number matches or a word in the description contains the search characters.
5. To open a returned object, click its link in the search results table. To display the next page of search results, click the **Go to Next Page** button ▸.

Quick Searches and Wildcard Characters

You can use wildcard characters when you perform a quick search in Java Client (Java Client Quick Search on page 152) or Web Client (Web Client Quick Search on page 153).

Using Wildcard Characters

Agile accepts two wildcards: the asterisk (*) and the question mark (?), and they can be used in any of the searches. The question mark finds matches with any other single character. The asterisk finds matches with more than one character.

Note For systems on SQL Server, there are some limitations on searches that depend on the available resources of the database server. On SQL Server, the newly created or renamed object cannot be searched on immediately. There is a delay of 10–15 seconds.

Also, on SQL Server, the wildcard search "**value***" is supported. The searches "**value**?", "***value**", "?**value**", "**value***value**", and "**value**?**value**" are not supported.

Here are some examples, using each of the wildcards and no wildcards:

Search criteria	will be returned	will not be returned
Hello World	Java output hello world	Hello Dolly
at	Item is at Phoenix site	bat, atlas
?at	bat, cat (and so on)	splat
*at	bat, cat, splat, big hat	batter, catfood, hatpin
1001-0?2	1001-002, 1001-012, 1001-0A2	1001-0029
1001-0*2	1001-012, 1001-0A2, 1001-0A12, 1001-03742 (and so on)	1001-0129
Semi	ABC Semi Haulers	ABC Semiconductor
Semi*	ABC Semi Haulers, ABC Semiconductor	ABC Nonsemi Haulers

Note The only *advanced search* operator that allows wildcard characters is the Like operator. The Like operator is located in the **Match If** list. (See Advanced Searches on page 167.)

If you need to search for objects that contain "*", type the backslash character (\) in front of the * wildcard (so, "*") to indicate that you mean the * character, not the * wildcard. For example, to search for "10*18", type **10*18** .

Note You cannot search for the "?" character, that is, you cannot enter the string "\?". Nor can you search for the backslash character by entering the string "\\".

Special Characters as Part of Words

The following characters are considered to be *part of* the word or number in which they are found:

_ underscore - hyphen ~ tilde * asterisk ' apostrophe @ at sign # number % percent ^ caret & ampersand

For instance, if an item's number is 10#40, the search treats it as a single word; "10" and "40" would not be found. So, if you use the * wildcard character, 1* would find 10#40 but 4* would not.

Caution	Do not use wildcards to create searches that match too many rows in the database, for example, a search for “P*”. When you run a search with a wildcard, the criteria must be matched against all words in the index (formed by combining autonumbers, descriptions, and text in attachments), which can run into several million rows on a large database. It is a good idea to further refine such a search so performance of the database is not compromised.

If your wildcard search matches too many rows in the database, you may see an error message telling you that your wildcard query resulted in too many results, please refine your criteria and try again. In this case, enter a more specific search string and try again. The more clues you can provide, the more specific your search will be. For example, “Resistor*” is more specific than “R*” and “MOSFET Transistor” is more specific than “Transistor”.

Wildcard searches that specify only one or two characters, including the space character and punctuation characters, may return this error. Whether or not a specific wildcard search matches too many rows in the database also depends on the size and complexity of your database.

If you enter “*” without any criteria, Agile PLM does not attempt to match all the words in the index.

Note	For multi-byte language Agile installations (Japanese and Chinese), simple searches and quick searches, that use wildcard characters to search for text strings that include the following special characters, produce inconsistent results or do not return the correct search results. tilde ~ grave accent ` exclamation point ! at sign @ number sign # dollar sign $ per cent sign % caret ^ ampersand & asterisk * open parenthesis (close parenthesis) hyphen - underscore _ equal sign = plus sign + back slash \ vertical bar | open bracket [open brace { close brace } close bracket] semicolon ; colon : apostrophe ’ quotation mark ” comma , less than sign < period . greater than sign > forward slash / question mark ? Instead, use an *advanced search* to use wildcard characters to search for text strings that include these special characters. Specify **Like** as the search operator. The Like search operator allows you to use wildcard characters in advanced searches. When you have defined the advanced search, you can save it for later use. See Advanced Searches on page 167.

Full Text Search for Content in Attachment Files

You can search attachment files to find a particular word or phrase. You can use Quick Search or Advanced Search to find attachment file content.

Note Full Text Search (FTS) is available in localized versions. Agile PLM 9.2.x localized in French and German are supported for FTS, which works similarly to the English version as these languages are “whitespaced-delimited.” Agile PLM 9.2.x localized in Japanese, Simplified Chinese, and Traditional Chinese are supported for FTS of Asian characters; however, in the Asian versions, FTS for English text may not be fully successful, for example, in wildcard searches using the characters described in Special Characters as Part of Words on page 155.

When you search for attachment file content, the search results list each object that contains files matching the search criteria. Only the latest versions of attachments are listed.

Note If an object contains multiple files, even if only one of the files contains the search text, the entire object is returned. The file that contains the text is not indicated, and you may need to look through all attachment files to find the appropriate one.

For non-English text in documents, Full Text Search is not supported for Stem search or Concept search. Moreover, attachment files that can be returned by a full text search must be created and saved in Microsoft Word (.DOC) or Excel (.XLS). Non-English–text attachment files created in .RTF or .TXT formats are not returned (although .TXT files may work if the encoding type is Unicode).

Using Quick Search to Find Attachment File Content

To include attachment file content in a quick search, select the **Search Attachment Text** checkbox. For detailed information about running quick searches, see Java Client Quick Search on page 152 and Web Client Quick Search on page 153.

"Stop" Words

The following words are called “stop” words and are ignored by the system in searching against attachment files. So, a search for “the mouse” will return all matches for “mouse”—which includes attachment content with the sequence “the mouse” because the stop word “the” is ignored. (To contrast, a simple search of objects – not attachments – for “mouse” would *not* return “the mouse”.

Note On SQL Server, the query string cannot contain any stop words. For example, you would not be able to input “the mouse” as a query string.

- a, about, after, all, also, an, and, any, are, as, at
- be, because, been, but, by
- can, co, Corp, corp, could
- for, from
- had, has, have, he, her, his
- if, in, inc, into, is, it, its
- last
- more, most, Mr, mr, Mrs, mrs, Ms, ms, Mz, mz
- no, not
- of, on, one, only, or, other, out, over
- s, says, she, so, some, such
- than, that, the, their, there, they, this, to
- up
- was, we, were, when, which, who, will, with, would

Using Attachment Content Advanced Search Capabilities

You can search for attachment files in which the file content matches the text criteria you specify. The following table shows an example of an advanced search in Web Client that will find attachment files that contain the words "PCB" and "Layout." (For general instructions about creating advanced searches, see Advanced Searches on page 167.)

Search for:	Items		
Search Type:	Object Search		
Field	**Match If**	**Prompt?**	**Value**
Attachments.Attached Document Text	Contains all Words		PCB Layout

To search for attachment file content, use the attribute Attachments.Attached Document Text.

The following tables describe the attachment content search options available.

Setting	Finds	Example
Contains All Words	Attachment files that contain all the words that you specify, in any order	Search text: PCB layout Search results may include: PCB layout PCB design layout layout of PCB
Contains Any Word or Words	Attachment files that contain at least one of the words that you specify	Search text: PCB layout Search results may include: PCB layout PCB design layout layout of PCB PCB design Circuit board layout
Contains Phrase	Attachment files that contain all the words that you specify, in the order specified	Search text: PCB layout Search results include only: PCB layout
Does Not Contain (or Contains None Of)	Attachments that do not contain the specified text	Search text: PCB layout Search results never include: "PCB" or "layout"
About (for concept searching)	Searches for words that are about the same concept as the specified word.	Search text: sports Search results may include "basketball"

Concept Search and Stem Search

This table describes two specialized search settings, stem searching and concept searching.

Note SQL Server systems do not support concept searching.

Feature	Description	Examples
Concept searching	Searches for words that are about the same concept as the specified word.	**Search text:** sports **Search results may contain:** basketball, baseball
Stem searching	Searches for the root of the specified word and find all attachments that contain the root.	**Search text:** index **Search results may contain:** indexing, indices **Search text:** run **Search results may contain:** running, ran

Pre-configured Parametric Searches

In an advanced search, you can choose from a complete list of the available search attributes. By contrast, in a pre-configured parametric search, a list of the most useful or commonly used search attributes are automatically displayed for you in the search window. For each parametric search attribute, you can select a **Match If** operator and a value for which to search. You define search values for only the attributes you wish to use in your search. You can leave the remaining parametric search attributes blank.

Your Agile administrator defines the parametric search for all Agile PLM users in Agile Administrator. Each object class or type can have a different set of pre-configured search attributes. Contact your Agile administrator if you have questions about pre-configured search attributes in your Agile system.

After you have defined your parametric search, you can save it in your Personal Searches folder for reuse. For more information about saving a parametric search, see Saving a Search on page 163.

Parametric Search Window

The search features in the parametric search window are similar to the quick search.

Important	To display the pre-configured search attributes in the parametric search window, you must select an object type in the second drop-down list. This displays the pre-configured parametric search attributes. Then, select Match If operators and search values for the parametric search attributes you want to use, and click **Run**.

Each search condition you define is added to the search (creating an AND search), including the quick search condition at the top of the page.

Java Client Parametric Search Window

Base Class drop-down list	**Object Type** drop-down list	**Search Attachment Text** checkbox	**Search Criteria** field	**Run Search** button
Use to select a specific base class. Agile limits the search to any object with that base class as its "ancestor." Selecting All in this list disables the **Object Type** list. Agile searches all object classes in the database.	Use to select a specific object class or a specific object subclass (object type) to further limit the search. The available choices in this list are defined by the **Base Class** list selection. **Important!** Selecting an object type in this list automatically displays any pre-configured search attributes.	When you select an **Object Type**, this checkbox is enabled. If you want to include the content of attachment files in your search, check the box.	The search criteria text is not case-sensitive. You can enter as search criteria: ▫ a product ID number ▫ an entire word ▫ multiple words ▫ partial numbers or partial words, using the * and ? wildcards.	Runs the search you specify and displays the results in the Search Results window.
See Perform a Quick Search in Java Client on page 153 for more information.		See Full Text Search for Content in Attachment Files on page 156 for more information.	See Quick Searches and Wildcard Characters on page 154 for more information.	See Search Results on page 147 for more information.

The following search control buttons and menus appear at the bottom of the Java Client parametric search window:

Button	Description
Run	Run the search with the displayed criteria.
Save	Save the displayed search as an Advanced Search. The Save in Folder dialog appears. See Saving a Search on page 163.
Reset	Clears the displayed search criteria in the Search window.

Button	Description
More...	Drop-down list displays additional actions.
Customize Output Display	The Customize Output Display dialog allows you to select which attribute columns appear in the search results table and the order in which you want to appear. See C. Define a Custom Output Display on page 171.
Convert to Advanced Search	Displays the Advanced Search dialog. The parametric search criteria you defined in the parametric search are pre-defined in the Advanced Search dialog. See Saving a Parametric Search as an Advanced Search on page 164.

Running a Pre-configured Parametric Search in Java Client

To define and run a pre-configured parametric search:

1. In the main menu **Search** button drop-down list, select the object class you want for your search.
2. The parametric search window opens with no pre-configured search attributes displayed.

   See Java Client Parametric Search Window on page 160.

   Note You can use the collapsed parametric search display to run a quick search. (See Quick Search Overview on page 151.)

3. To display the pre-configured search attributes, select an object type in the second drop-down list.

   The pre-configured search attributes for the selected object type are displayed in the search window.

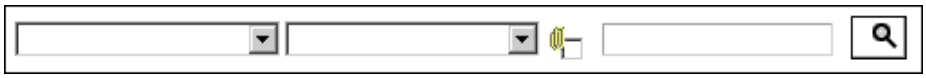
   Use the **-** or **+** to the left of the **Search For** field to collapse or expand the list of pre-configured search attributes.
4. For each attribute you want to include in your search, select a Match If operator.
5. For each search attribute you want to include in your search, enter a search value.

   If you leave a search value blank, that attribute search criteria will not be used in your search.
6. Click **Run**.

   The results are displayed in the search window below the parametric search definition.

The parametric search is an AND search. Each search condition is included in the search with an AND operator.

Web Client Parametric Search Window



Base Class drop-down list Use ▼ to select a specific base class. Agile limits the search to any object with that base class as its "ancestor." Selecting All in this list disables the **Object Type** list. Agile searches all object classes in the database.	**Object Type** drop-down list Use ▼ to select a specific object class or a specific object subclass (object type) to further limit the search. The available choices in this list are defined by the **Base Class** list selection. **Important!** Selecting an object type in this list automatically displays any pre-configured search attributes.	**Search Attachment Text** checkbox When you select an **Object Type**, this checkbox is enabled. If you want to include the content of attachment files in your search, check the box.	**Search Criteria** field The search criteria text is not case-sensitive. You can enter as search criteria: ▫ a product ID number ▫ an entire word ▫ multiple words ▫ partial numbers or partial words, using the * and ? wildcards.	**Run Search** button Runs the search you specify and displays the results in the Search Results window.
See Perform a Quick Search in Java Client on page 153 for more information.		See Full Text Search for Content in Attachment Files on page 156 for more information.	See Quick Searches and Wildcard Characters on page 154 for more information.	See Search Results on page 147 on for more information.

The following search control buttons and menus appear at the bottom of the Web Client parametric search window:

Button	Description
Run	Run the search with the displayed criteria.
Save	Save the displayed search as an Advanced Search. The Save in Folder dialog appears. See Saving a Search on page 163.
Reset	Clears the displayed search criteria in the Search window.
More...	Drop-down list displays additional actions.
Customize Output Display	The Customize Output Display dialog allows you to select which attribute columns appear in the search results table and the order in which you want to appear. See C. Define a Custom Output Display on page 174.
Convert to Advanced Search	Displays the Advanced Search dialog. The parametric search criteria you defined in the parametric search are pre-defined in the Advanced Search dialog. See Saving a Parametric Search as an Advanced Search on page 164.

Running a Pre-configured Parametric Search in Web Client

To define and run a pre-configured parametric search:

1. In the main menu, move the mouse pointer over the **Search** button drop-down arrow to display a list of objects classes. Select the object class you want for your search.
2. The parametric search window opens with no pre-configured search attributes displayed.

   See Web Client Parametric Search Window on page 162.

Note	You can use the parametric search display to run a quick search. (See Quick Search Overview on page 151.)

3. To display the pre-configured search attributes, select an object type in the second drop-down list.

   The pre-configured search attributes for the selected object type are displayed in the search window.

   Use the **-** or **+** to the left of the **Search For:** field to collapse or expand the list of pre-configured search attributes.
4. For each attribute you want to include in your search, select a Match If operator.
5. For each search attribute you want to include in your search, enter a search value.

   If you leave a search value blank, that attribute search criteria will be not be used in your search.
6. Click **Run**.

   The results are displayed in the search window below the parametric search definition.

The parametric search is an AND search. Each search condition is included in the search with an AND operator.

Saving a Search

You can save both parametric searches and advanced searches using a similar save process or save as processes. A saved parametric search returns search results in the parametric search window, and a saved advanced search returns the search results in the advanced search results table.

- When you run a saved parametric search, the search results are displayed in the parametric search window. You can expand the list of pre-configured attributes to modify or refine your search. If you want, you can save the search with the modifications you made.
- When you run a saved advanced search, the search results are displayed in the advanced search results window. To modify the advanced search, use the Edit button in the search results table.

To save a parametric or advanced search in Java Client:

1. Define the search conditions and click **Save**.

   The Save in Folder dialog box appears.

2. Enter a name for the search in the **Search Name** field.

3. Select a folder in which to store it.

   If you do not have sufficient privileges to save a search in the selected folder, you can select another. You can always save a search in the Personal Searches folder.

4. To create a new folder, click the **New** button. In the Create New Folder dialog, enter a folder name and click **OK**.

5. Click **OK** in the Save in Folder dialog box to save the search.

To save a parametric or advanced search in Web Client:

1. Define the search conditions and click **Save**

2. The Save Search As dialog box appears.

3. Enter a name for the search in the **Search Name** field.

4. Then select a folder in which to store it.

   If you do not have sufficient privileges to save a search in the selected folder, you can select another. You can always save a search in the Personal Searches folder.

5. To create a new folder, click the **New** button. In the Create New Folder dialog, enter a folder name and click **OK**.

6. Click **OK** in the Save Search As dialog box to save the search.

Saving a Parametric Search as an Advanced Search

When the parametric search window is open, you can convert the parametric search to a new advanced search. The advanced search is created with all the parametric search conditions predefined in the advanced search. This allows you to define additional search criteria not available in a parametric search and save the advanced search for reuse.

To save a parametric search as an advanced search in Java Client:

1. With a parametric search window open, in the **More** button drop-down list, choose **Convert to Advanced Search...**

   You can either define a parametric search and convert it, or you can run a previously saved parametric search and convert it.

2. The Advanced Search dialog appears. Define the advanced search.

   For more information about defining advanced searches, see Creating an Advanced Search in Java Client on page 169.

3. When you are finished, in the Advanced Search dialog, click **Save**.

   The Save in Folder dialog box appears.

4. Enter a name for the search in the **Search Name** field.

5. Select a folder in which to store it.

   If you do not have sufficient privileges to save a search in the selected folder, you can select another. You can always save a search in the Personal Searches folder.

6. To create a new folder, click the **New** button. In the Create New Folder dialog, enter a folder name and click **OK**.

7. Click **OK** in the Save in Folder dialog box to save the search.

To save a parametric search as an advanced search in Web Client:

1. With a parametric search window open, in the **More** button drop-down list, choose **Convert to Advanced Search...**

   You can either define a parametric search and convert it, or you can run a previously saved parametric search and convert it.

2. The Advanced Search window appears. Define the advanced search.

   For more information about defining advanced searches, see Creating an Advanced Search in Web Client on page 172.

3. When you are finished, in the Advanced Search window, click **Save**

4. The Save Search As dialog box appears.

5. Enter a name for the search in the **Search Name** field.

6. Then select a folder in which to store it.

   If you do not have sufficient privileges to save a search in the selected folder, you can select another. You can always save a search in the Personal Searches folder.

7. To create a new folder, click the **New** button. In the Create New Folder dialog, enter a folder name and click **OK**.

8. Click **OK** in the Save Search As dialog box to save the search.

Using Save As to Save a Search

You can use **More** > **Save As** to:

- Create a new copy of a previously saved search.
- Create a shortcut (link) to a predefined system search in a system folder, for example, the Global Searches folder, in your personal searches folder.

  If the Agile administrator updates or modifies a global search, when you run the search from the shortcut in your personal searches folder, Agile uses runs the most recent updated search.
- Create a shortcut (link) to a non-editable system search .

Note	When you use Save As and select a non-editable system search, creating a shortcut is the default action.

- Create a shortcut to a saved search in a different personal searches folder.

To use save as to save a search in Java Client:

1. Select the search you want to copy or link to, then initiate the save as process:
   - In the Search folder, select the search you want, right-click and choose **Save As**.
   - In the Search folder, select the search you want, right-click and choose **Edit**. In the **More** button drop-down list, choose **Save As**.
   - Run the search, then choose edit from the search results table:

     In a parametric search window, use the **More** button drop-down list, choose **Save As**.

     In an advanced search results table, click the **Edit** button. In the advanced search dialog, use the **More** button drop-down list and choose **Save As.**
2. The Move to Folder dialog appears. The **Create ShortCut** checkbox is checked by default. To create a copy of the search, uncheck the checkbox.

   Note If you have selected a non-editable predefined system search, the checked **Create ShortCut** checkbox is disabled. You are not allowed to create a copy of a non-editable system search using Save As. For more information, see Predefined System Searches on page 149.
3. Select the folder you want for the saved search or shortcut.
4. To create a new folder, click the **New** button. In the Create New Folder dialog, enter a folder name and click **OK**.
5. Click **OK** in the Move to Folder dialog box to save the search.

To use save as to save a search in Web Client:

1. In the Searches folder in the navigation pane, navigate to the search you want to edit.
2. Click the **Edit Search** icon to the right of the search name.

   Alternately, run the search, then choose edit from the search results table:
   - In a parametric search window, use the **More** button drop-down list, choose **Save As**.
   - In an advanced search results table, click the **Edit Search** button. In the advanced search dialog, use the **More** button drop-down list and choose **Save As.**
3. The Save Search As dialog appears. The **Create Shortcut** checkbox is checked by default. To create a copy of the search, uncheck the checkbox.

   Note If you have selected a non-editable predefined system search, the checked **Create ShortCut** checkbox is disabled. You are not allowed to create a copy of a non-editable system search using Save As. For more information, see Predefined System Searches on page 149.
4. Select the folder you want for the saved search or shortcut.
5. To create a new folder, click the **New** button. In the Create New Folder dialog, enter a folder name and click **OK**.
6. Click **OK** in the Move to Folder dialog box to save the search.

Advanced Searches

This section provides the details on using the advanced search capability.

For information specific to searching for attachment file content, see Full Text Search for Content in Attachment Files on page 156.

For information about where-used searches, see Where-Used Searches for Items on page 181. Where-used searches find assemblies that contain items that match the search criteria.

For information about relationship searches, see Relationship Searches on page 192. Relationship searches find objects that are related to objects that match the search criteria.

These are the topics in this section about advanced searches:

- Overview of Advanced Searches on page 167
- Basic Process to Create an Advanced Search on page 168
- Some Caveats about Advanced Searches on page 168
- Creating an Advanced Search in Java Client on page 169
- Creating an Advanced Search in Web Client on page 172
- Selecting Search Operators on page 175
- Using And/Or Values in Advanced Searches on page 178
- Using Parentheses in Search Definitions on page 179

Overview of Advanced Searches

Advanced searches look for all the objects with fields that match the conditions of the search. The object fields and attributes that you can use for advanced searches depend on whether you are searching for an object base class, class, or subclass. (For information about classes, see Introducing Agile Objects on page 65.)

Caution	Your company may need to examine the benefits of indexing specific columns in your database. If the enterprise has an extremely large database, and users discover that advanced searches are taking a long time (longer than 2 or 3 minutes), it is likely that the searching operation is going through every single column in the database. By indexing specific database columns, or setting a “search order” of database columns, the searching capability can run faster for all users. See your Agile administrator if you suspect this is a problem.

For example, Agile can search for the fields on the **Title Block** tab of items, the **Cover Page** tab of changes, and the **General Info** tab of manufacturing objects, as well as fields on the **Manufacturers** tab of items. In both Java and Web Client, if your company uses custom **Page Two** or **Page Three** fields (which appear on the **Title Block** or **Cover Page** tab in Web Client), they may be referred to by a different name on your system. Agile can also search those fields.

When searching for changes, Agile can search for workflow attributes and statuses on changes.

Once you create and save a search, you can:

- Run it by clicking it (Web Client), or double-clicking it (Java Client), in the navigation pane.
- Edit it as described in Editing and Managing Searches and Search Folders on page 200.

Basic Process to Create an Advanced Search

Creating an advanced search is described in detail below for both Java Client and Web Client. The general procedure to creating an advanced search is as follows:

1. Open the Advanced Search dialog from the button in the menu (steps 1 and 2 in the tasks below).
2. Define the **Search Criteria**: the type of object, the kind of search (for example, an object search, a where-used search, or a relationship search), field names, conditions, and values you want to search for (steps 3–9).
3. Define **Options**: specify the output fields you want displayed in the search results table (steps 11–13).
4. Save the search (name and folder), run the search, and print the search results (steps 10, 14, and 15).

Also see the sections immediately following the "create search" tasks: Using And/Or Values in Advanced Searches on page 178, and Using Parentheses in Search Definitions on page 179.

Some Caveats about Advanced Searches

Using Saved Searches to Create your Advanced Search

Creating a successful advanced search can be challenging. Consider using a saved search that has some elements of the search you wish to create. When you start to create an advanced search, there is an option to Use a Saved Search; you browse to the search and it "prepopulates" the search dialog box or wizard. Or you may prefer, with a search selected in Java Client, to click the **View/Edit** button, save the opened search with another name (and directory as needed), and develop your new search by modifying the old one.

Difference in Caching Search Attributes in Java Client and Web Client

You may encounter a situation where a field on Page Three of a business object is available for search in Web Client, but is not available in Java Client. This can happen when the administrator hides a field (changes Visible property to No), but has not yet logged out on his system, so the change has not gone into effect for Java Client users, while the change is immediately in effect for Web Client users.

Complexity between Search Criteria and Output Display

There is potential for ambiguity between the search criteria and the search results output display settings. The search criteria that you define – including the object type (step 3 below) coupled with the object attributes (step 6 below) –determine which objects the search finds. The output display attributes (step 11 below) determine how the found objects are listed in the search results table. The output display attributes do not alter the results of the search, they determine only the manner

in which those results are displayed.

When you search for objects by defining criteria that uses data found on related tables, and select similar criteria to display in the output, you may find unexpected results. It is recommended that, whenever possible, you set up your search against the parent object and not its associated data.

More specifically, if you search an object using an attribute of a related object – data that is pulled from other objects, such as BOM, Affected Items, Related PSRs, Changes, and so forth – as a search criteria, and for your output you choose to display attributes of the related object in your output, *all* the related objects will be listed, not just those that meet the search criteria. You will see the searched-for objects listed multiple times in the search results, once for each related object.

For example, if you choose "PSR" for object type and search against Affected Items (which is associated data) for some criteria such as "quantity > 5," and you display the affected item number and quantity, you may expect that only affected items with quantity > 5 will appear on the search results table; however, *all* the affected items of the found PSRs will be listed, resulting in the PSR itself being listed multiple times.

Searching for Space Characters in Text Fields

A space character by itself is not a valid search value. Agile PLM will return an error if one or more space characters are the only characters specified in the search condition **Value** field.

However, you can specify a search value that includes a space character in conjunction with other characters. For example, you can search for "blue box" to find the text string "blue<*space*>box".

Note	To search for text strings that begin with a space, you can use the Like search operator in the **Match If** field and include a wildcard character in the **Value** field.

When you use a wildcard in the search **Value** field, you must use the Like operator. The only *advanced search* operator that allows wildcard characters is the Like operator.

For more information about wildcard characters, see Using Wildcard Characters on page 154.

Creating an Advanced Search in Java Client

To create an advanced search in Java Client:

A. Select the Search Type, Java Client

1. Click the **Advanced Search** button in the toolbar.

   The Advanced Search dialog appears, ready for you to define the search criteria. The name **Advanced Search** appears in the title bar at the upper left of the dialog box.

2. To create a completely new search, select **Create New**.

   You can also start with a saved search: select **Use a Saved Search**, click the **...** button, and select the search you want to start with.

3. In the **Object Type** drop-down list, select the type of object to find. You can specify a base class, class, or subclass object.

4. In the **Search Type** drop-down list, make sure Object Search is selected.

Note If you select a search type other than Object Search, you must also select an object type in the **With Related Content** drop-down list. For more information, see Where-Used Searches for Items on page 181, Where-used Searches for File Folders on page 190, and Relationship Searches on page 192.

B. Define the Search Criteria, Java Client

1. By default, the search condition table contains one row. (You can add as many rows as you need by clicking **Add** in the search builder window.)

   Click the row to enable the search criteria selection lists.

2. Define a set of search criteria, or conditions:

   a. Click the first drop-down list to select a target **Field** from the list. For example, Title Block.Number represents the **Number** field on the **Title Block** tab of a part or document.

      The **Field** list varies depending on the object selected in the **Object Type** field. For example, if you search for assembly drawings—a part—the Field list includes Title Block.Lifecycle Phase. If you search for ECOs—a change—the **Field** list includes Cover Page.Status.

   b. Click the second drop-down list to select a **Match If** search operator from the list. For more information, see Selecting Search Operators on page 175.

   c. The **Prompt?** field is enabled if appropriate, and the checkbox is unchecked by default. If you leave the checkbox unchecked, the Value field is enabled (see next step). If you check the checkbox, you are not going to fill in the Value field, and, when you run the saved search, you will be prompted to enter a value.

   d. In the **Value** field, select a value from the drop-down list and click **OK**. The value you selected populates the field.

      The **Value** field specifies the content or setting of the field selected from the field list. Depending on the selection in the field list, the value field may contain a list that is relevant to the selection, a calendar button, or a field where you can enter text or numbers. For example, if **Field** is set to Title Block.Lifecycle Phase, then the **Value** field lists the different lifecycle phases; if **Field** is set to Title Block.Description, then you can type text or numbers in the **Value** field.

      If you select Like as a **Match If** search operator, or if you are searching for attachment file content, you can use wildcard characters when entering a value. For information about using wildcards to search for objects, see Using Wildcard Characters on page 154. For information about searching for attachment file content, see Full Text Search for Content in Attachment Files on page 156.

   e. To add an operator setting of “AND” or “OR,” click the **And/...** field and select AND or OR from the list.

      Use AND if both conditions must be met.

      Use OR if either or both conditions can be met.

      If you have selected AND or OR but wish to remove the operator, click the **And/...** field and select the empty space, which will de-populate the field of either operator.

      If you do not use parentheses when defining your search, the search is processed giving precedence to AND values, that is, it processes all rows that end with AND before processing rows that end with OR. In other words, the first line is combined with the second and process order is based on the first line’s AND/OR value.

f. For more information, see Using And/Or Values in Advanced Searches on page 178.To add parentheses, select two adjacent rows using Shift-click. This enables the **( )** button. Click it and the proper parenthesis appears to the left of the first row and right of the second row.

To remove parentheses, select two rows grouped by parentheses, and click the enabled **Remove ( )** button.

For more information about using parentheses, see Using Parentheses in Search Definitions on page 179.

3. To add another row of search conditions, click **Add**. A new row is added at the end of the table. The AND/OR field at the end of the previous row is set to [blank] by default.
4. To insert a search condition row, select a row and click the **Insert** button. The new row is inserted above the selected row. If you want to delete a search condition row, select one or more rows and click **Delete**. The selected rows are deleted.
5. To perform a case-sensitive search where text capitalization matters, click the **Match Case** checkbox.

   If you want to perform a search where text capitalization does *not* matter, click to deselect **Match Case**.

   Selecting the **Match Case** checkbox can help your search run more quickly. If you enter text in the Value field, the search looks for text that is an exact match (uppercase and lowercase letters). If you select a value from a list (such as for Product Line), checking **Match Case** allows the system to use internal database settings to find objects more quickly.
6. When you have finished adding search conditions, you can **Save** the search, or click **Run** to run the search without saving it.

   If you click **Save**, skip to D. Save and Run the Search, Java Client on page 172 and follow step a through step d to save the search. Saving the search now, before you define the Custom Output Display (see C. Define a Custom Output Display, Java Client on page 171), gives you the opportunity to name the Search Criteria you have defined, and to use that search with different output displays later.

   If you click **Run** without saving the search, the results are displayed in the search results window. To further edit the search or to save the search, click the **View/Edit** button .

C. Define a Custom Output Display, Java Client

1. When you have finished adding search conditions, select **Custom Output Display...** in the **More..** button drop-down list. The Custom Output Display dialog appears for you to specify which fields to include in the search results. The Available Fields and Selected Fields tables are displayed.
2. In the Custom Output Display dialog, in the Available Fields table, select the field names you want and use the right and left arrows to move field names to and from the Available Fields and Selected Fields lists. Double-clicking a field name also moves it from one list to the other list.

   The Selected Fields list specifies the field names that will appear in the search results table. Select one or more rows and use the up and down arrows to change the order of field names in the list, which reflects the order of the columns in the search results.
3. To sort the search results, in the Selected Fields list, click in the **Sort** column for the field name by which you want to sort, and select a number from the drop-down list (for example, 1 means

sort by this field name first). You can sort by multiple field names; select a number in the **Sort** column for the each of the field names you want to use to sort. Click in the **Direction** column and select Ascending or Descending order.

Note List and Multilist fields, such as Product Lines, cannot be sorted alphabetically.

4. When you have finished specifying output display fields and sort order, click **OK** in the dialog box.

D. Save and Run the Search, Java Client

1. You may choose to click **Save** to save the search, or click **Run** to run the search without saving it first.
   a. If you click **Save**, the Save in Folder dialog box appears.
   b. Enter a name for the search.
   c. Then select a folder in which to store it. If you do not have sufficient privileges to save a search in the selected folder, you can select another. You can always save a search in the Personal Searches folder.
   d. Click **OK** in the dialog box to save the search.
   e. When you are ready to run the search, click **Run** in the search dialog box.

   The Search Results window shows all the objects that match the search criteria.
2. To print the list of search results, click the **Print** button .

Edit the Search After Running It, Java Client

To edit the search after running it, do one of the following:

- If the search results window is open, click the **View/Edit** button .
- If you saved the search and closed it, in the **Searches** tab of the navigation pane, select the search and run it. Then click the **View/Edit Search** button in the search results window, and edit the search.

Creating an Advanced Search in Web Client

To create an advanced search in Web Client:

A. Select the Search Type, Web Client

1. Click the **Advanced Search** button in the toolbar.

   The Advanced Search dialog appears with the **Search Criteria** tab displayed.
2. To create a completely new search, select **Create New**.

   You can also start with a saved search: select **Use Saved Search**, click , and select the search you want to start with.
3. In the **Search For** drop-down list, select the type of object to find. You can specify a base class, class, or subclass object.

4. In the **Search Type** drop-down list, make sure Object Search is selected.

> **Note** If you select a search type other than Object Search, you must also select an object type in the **With Related Content** drop-down list. For more information, see Where-Used Searches for Items on page 181, Where-used Searches for File Folders on page 190, and Relationship Searches on page 192.

B. Define the Search Criteria, Web Client

1. By default, the search condition table contains one row. (In Web Client, you can add as many rows as you need by clicking the **And/Or** field and selecting AND or OR from the list. See step 2e below.)

   Click the row to enable the search criteria selection lists.

2. Define a set of search criteria, or conditions:

   a. Click the first drop-down list to select a target **Field** from the list. For example, Title Block.Number represents the **Number** field on the **Title Block** tab of a part or document.

      The **Field** list varies depending on the object selected in the **Object Type** field. For example, if you search for assembly drawings—a part—the Field list includes Title Block.Lifecycle Phase. If you search for ECOs—a change—the **Field** list includes Cover Page.Status.

   b. Click the second drop-down list to select a **Match If** search operator from the list. For more information, see Selecting Search Operators on page 175.

   c. The **Prompt?** field is enabled if appropriate, and the checkbox is unchecked by default. If you leave the checkbox unchecked, the Value field is enabled (see next step). If you check the checkbox, you are not going to fill in the Value field, and, when you run the saved search, you will be prompted to enter a value.

   d. Click the **Value** field, one or more value from the drop-down list and click **Close**. The value you selected populates the field.

      The **Value** field specifies the content or setting of the field selected from the field list. Depending on the selection in the field list, the value field may contain a list that is relevant to the selection, a calendar button, or a field where you can enter text or numbers. For example, if **Field** is set to Title Block.Lifecycle Phase, then the **Value** field lists the different lifecycle phases; if **Field** is set to Title Block.Description, then you can type text or numbers in the **Value** field.

      If you select Like as a **Match If** search operator, or if you are searching for attachment file content, you can use wildcard characters when entering a value. For information about using wildcards to search for objects, see Using Wildcard Characters on page 154. For information about searching for attachment file content, see Full Text Search for Content in Attachment Files on page 156.

   e. To add an operator setting of “AND” or “OR,” click the **And/Or** field and select AND or OR from the list.

      Use AND if both conditions must be met.

      Use OR if either or both conditions can be met.

      Note that a second line for your search is added as soon as you select AND or OR.

      If you have selected AND or OR but wish to remove the operator, click the **And/...** field and select the empty space, which will de-populate the field of either operator.

Note that the added line does not disappear. You can still set values for that row, and re-select AND or OR. You can also delete the row using the button to the right.

If you do not use parentheses when defining your search, the search is processed giving precedence to AND values, that is, it processes all rows that end with AND before processing rows that end with OR. In other words, the first line is combined with the second and process order is based on the first line's AND/OR value.

For more information, see Using And/Or Values in Advanced Searches on page 178.

f. To add parentheses, click the appropriate radio buttons to locate both an open and close parenthesis. Then click the **Add ( )** button. The proper parenthesis appears to the left of the first row and right of the second row.

To remove parentheses, click the appropriate radio buttons for the two rows grouped by parentheses, and click the **Remove ( )** button.

For more information about using parentheses, see Using Parentheses in Search Definitions on page 179.

3. To add another row of search conditions, click the **And/Or** field and select AND or OR. A new row is added at the end of the table. You can add as many rows as you like before populating them with criteria.

4. To insert a search condition row, click the **Insert Row in Search Criteria** button. The new row is inserted above the row where you clicked the button. If you want to delete a search condition row, click the **Delete** button for that row.

5. To perform a case-sensitive search where text capitalization matters, click the **Match Case** checkbox.

   If you want to perform a search where text capitalization does *not* matter, click to deselect **Match Case**.

   Selecting the **Match Case** checkbox can help your search run more quickly. If you enter text in the Value field, the search looks for text that is an exact match (uppercase and lowercase letters). If you select a value from a list (such as for Product Line), checking **Match Case** allows the system to use internal database settings to find objects more quickly.

6. When you have finished adding search conditions, you can use the buttons at the bottom of the dialog to **Run**, **Save**, or **Cancel** the search.

   If you click **Save**, skip to D. Save and Run the Search, Web Client on page 175 to save the search. Saving the search now, before you define the Custom Output Display (see C. Define a Custom Output Display, Web Client on page 174), gives you the opportunity to name the Search Criteria you have defined, and to use that search with different output displays later.

C. Define a Custom Output Display, Web Client

1. When you have finished adding search conditions, select **Custom Output Display...** in the **More** button drop-down list. The Custom Output Display dialog appears for you to specify which fields to include in the search results. The Available Fields and Selected Fields tables are displayed.

2. Under Output Fields, in the Available Fields table, select field names you want and use the right and left arrows to move field names to and from the Available Fields and Selected Fields lists. Double-clicking a field name also moves it from one list to the other list.

   The Selected Fields list specifies the field names that will appear in the search results table.

Use the up and down arrows to change the order of field names in the list, which reflects the order of the columns in the search results.

3. To sort the search results, in the Sort By field, use the drop-down list to select the field name by which you want to sort first, and click a radio button for Ascending or Descending. If you want, do the same in one or both “Then By” fields.

Note	List and Multilist fields, such as Product Lines, cannot be sorted alphabetically.

4. When you have finished specifying output fields and sort order, click **OK** in the dialog box.

D. Save and Run the Search, Web Client

1. You may choose to click **Save** to save the search, or click **Run** to run the search.
   a. If you click **Save**, the Save Search As dialog box appears.
   b. Enter a name for the search.
   c. Then select a folder in which to store it. If you don’t have sufficient privileges to save a search in the selected folder, you can select another. You can always save a search in the Personal Searches folder.
   d. Click **OK** in the dialog box to save the search.
   e. When you are ready to run the search, click **Run** in the search dialog box.

   The Search Results window shows all the objects that match the search criteria.
2. To print the list of search results, click the **Print** button .

Edit the Search After Running It, Web Client

To edit the search after running it, do one of the following:

- If the search results window is open, click the **Edit Search** button .
- If you saved the search and closed it, in the **Searches** tab of the navigation pane, click the search, click the **Edit Search** button , and edit the search.

Selecting Search Operators

Search operators are specified in the **Match If** field. Available operators vary depending on the **Field** list selection. For example, if the **Field** setting is Title Block.Description, the **Match If** field includes the Contains operator along with several others; if the **Field** is set to Title Block.Lifecycle Phase, the only operators are In, Not In, Is Null, and Is Not Null.

Operator	Description
Contains	Finds any value that includes the contents of the Value field. For example, if you are searching for objects that contain the value “cap” in their description, the search would find objects described as capacitor, High Capacity Drive, CAP plug, and so on.
Equal To	Finds only an exact match with the contents of the Value field.

Operator	Description
Like	Allows wildcard searches that match any single character.
Not Like	Allows wildcard searches that exclude any single character.
Starts With	Finds values that begin with the characters in the Value field.
Does Not Contain	Finds any value that does not include the contents of the Value field.
Not Equal To	Finds any value other than an exact match with the contents of the Value field.
Does Not Start With	Finds values that do not begin with the characters in the Value field.
Is Null	Finds objects where the field selected from the Field list contains no value.
Is Not Null	Finds objects where the field selected from the Field list contains any value.
Greater Than	Finds dates later than, or duration (in hours) longer than, the contents of the Value field. Finds numbers larger than the contents of the Value field. Finds currency amounts larger than the contents of the Value field.
Greater Than Or Equal To	Finds dates that match or are later than, or duration (in hours) that matches or is longer than, the contents of the Value field. Finds numbers that match or are larger than the contents of the Value field. Finds currency amounts that match or are larger than the contents of the Value field.
Less Than	Finds dates earlier than, or duration (in hours) less than, the contents of the Value field. Finds numbers less than the contents of the Value field. Finds currency amounts less than the contents of the Value field.
Less Than Or Equal To	Finds dates that match or are earlier than, or duration (in hours) that matches or is less than, the contents of the Value field. Finds numbers that match or are less than the contents of the Value field. Finds currency amounts that match or are less than the contents of the Value field.
Between	Finds dates that match or are between the beginning date and ending date specified in the Value field. Finds numbers that match or are between the high number and low number specified in the Value field. Finds currency amounts that match or are between the high amount and low amount specified in the Value field.

Operator	Description
Not Between	Finds dates that do not match or are not between the beginning date and ending date specified in the Value field. Finds numbers that do not match or are not between the high number and low number specified in the Value field. Finds currency amounts that do not match or are not between the high amount and low amount specified in the Value field.
In	Finds a list attribute that matches one of the list values specified in the Value field.
Not In	Finds a list attribute that does not match any of the list values specified in the Value field.
Contains Any	Finds a multilist attribute that matches any (at lease one) of the multilist values specified in the Value field.
Contains All	Finds a multilist attribute that contains all of the multilist values specified in the Value field. **Note**: To find an exact match, use the Equal To operator. To find a multilist attribute that is not empty, use the Is Not Null operator.
Contains None	Finds a multilist attribute that contains none of the multilist values specified in the Value field. **Note**: To find an empty multilist attribute, use the Is Null operator.

Search Operators and Attribute Types

The following table lists the search operators used for each attribute type. The following table explains how to recognize different attribute types by the manner in which you enter data into the field.

Type	What to Enter in the Field
Date	Enter date and time, enter the variable $TODAY to use today's date, or select date and time from a pop-up calendar.
List	Select one item from a list. Select one item from a cascading list.
MultiList	Select one or more items from a multiple-selection list. The list can be a cascading list. **Note**: here is now no limit to the number of list entries in a multi-list field; in previous service packs, multi-lists could only save and populate 31 list entries.
Text	Enter a single line of text; the allowable length varies, but generally it is up to 50 characters.
MultiText	Enter a block of text (up to 4,000 characters) that wraps across multiple lines.
Numeric	Enter a numeric value.
Money	Enter a monetary amount.

Type	What to Enter in the Field
The Agile PLM administrator can set default values (such as the current date, or current user) to automatically appear in a field when new objects are created. For more information, see *Agile PLM Administrator Guide*.	

The following table lists the search operators that apply to each attribute type.

List	Multilist	Date, Number, Money	Text, Multitext
In	Equal To	Between	Equal To
Not In	Not Equal To	Equal To	Like
Is Null	Contains Any	Less Than	Contains
Is Not Null	Contains All	Less Than or Equal To	Starts With
	Contains None	Greater Than	Not Equal To
	Is Null	Greater Than or Equal To	Not Like
	Is Not Null	Not Equal To	Does Not Contain
		Not Between	Does Not Start With
		Is Null	Is Null
		Is Not Null	Is Not Null

- When the time stamp for the date is 12:00:00 AM, Agile PLM assumes the entire day (12:00:00 AM to 11:59:59 PM) for the search.
- If you enter a specific time, Agile PLM uses the exact time in the search. For example, Between 08/20/2007 8:00:00 AM PST and 08/21/2007 5:00:00 PM PST.
- In Advanced Searches, you may also use the search wildcard $TODAY by typing the wildcard into the search value field (as opposed to clicking the calendar button to display the calendar tool).
- $TODAY evaluates true for today's date, all times from 12:00:00 AM to 11:59:59 PM. Date and time are determined by your Time Zone as defined in your user profile.
- Use $TODAY-<integer> or $TODAY+<integer> to includes a number of days before or after today. The integers refer to whole days, not hours. For example, use the $TODAY wildcard to search for:
  - Items with a Release Date >= $TODAY-7, that is, all items released in the last week.
  - Changes with a Date Originated Between $TODAY-10 and $TODAY, that is, all changes created in the last 10 days.

Using And/Or Values in Advanced Searches

When you have two or more conditions defined in a search, the relationship between them is defined as either *AND* or *OR*.

- **AND** narrows the search by requiring that both conditions are met. Each item in the results must match both conditions.
- **OR** broadens the search by including any object that meets either condition. Each item in the results table needs to match only one of the conditions, but may match both.

When you define a search with “Equal to” and AND, both parts of the definition must be true. For example, the following search results in zero objects found.

	Title Block.Product Line(s) Equal to Taurus		AND	
	Title Block.Product Line(s) Equal to Scorpio			

This is because if the first part of the definition is true (that is, the object belongs only to the product line Taurus), then the second part of the definition cannot also be true (that is, the object cannot belong only to the product line Scorpio).

In the example above, if you wanted to search for objects that belong to more than one product line, you could use Contains with And. The following search would find all the objects that belong to both the Taurus *and* Scorpio product lines because both sides of the definition could be true:

	Title Block.Product Line(s) Contains Taurus		AND	
	Title Block.Product Line(s) Contains Scorpio			

Using And/Or — An Example

Knowing when you want to use AND versus OR in constructing your search criteria can help you get the most accurate results from your search and save you valuable time. For example, the following figure shows a search that looks for parts that have *both* a part category equal to Electrical *and* a lifecycle phase equal to Inactive.

	Title Block.Part Category Equal To Electrical		AND	
	Title Block.Lifecycle Phase Equal To Inactive			

If you replace And with Or, the search locates all parts with *either* a part category of Electrical *or* a lifecycle phase of Inactive. Depending on your database, this latter search might locate a very large number of parts.

Using Parentheses in Search Definitions

If you do not use parentheses when defining your search, the search is processed giving precedence to AND values, that is, it processes all rows that end with AND before processing rows that end with OR.

In this case, shown in the following figure, Agile looks for objects with *both* a lifecycle phase equal to Production *and* a product line equal to Scorpio. Then, Agile searches the *rest of the database* for objects with a **Description** field that contains “computer.” Found objects must have a lifecycle phase equal to Production and a product line equal to Scorpio *or* the word “computer” in their **Description** field because the rows are processed in order.

	Title Block.Lifecycle Phase Equal To Production		AND	

	Title Block.Product Line(s) Equal To [Scorpio]		OR	
	Title Block.Description Contains computer			

Parentheses let you group search conditions to determine how the search is performed.

To place parentheses around search conditions in Java Client:

1. Select the rows that you want to enclose in parentheses.
   a. Click a row to select it. The row is highlighted.
   b. Use Shift-click or Ctrl-click to select one or more additional rows.
2. Click the parentheses **( )** button. The parentheses are placed in the first and last rows selected.

To place parentheses around search conditions in Web Client:

1. In the row where you want to place an open parenthesis, select the radio button in the open parenthesis column.
2. In the row where you want to place a close parenthesis, select the radio button in the close parenthesis column.
3. Click the **Add ( )** button. The parentheses are placed in the first and last rows selected.

To remove parentheses from search conditions in Java Client:

1. Select the rows with the open parenthesis and close parenthesis.
   a. Click a row to select it. The row is highlighted.
   b. Use Shift-click or Ctrl-click to select one or more additional rows.
2. Click the **Remove ( )** button. The parentheses are removed.

To remove parentheses from search conditions in Web Client:

1. Deselect the open and close parentheses radio buttons in the rows from which you want to remove parentheses.
2. Click the **Remove ( )** button. The parentheses are removed.

For example, in the search conditions shown in the following figure, the second and third conditions are enclosed in parentheses. Agile first looks for objects with a lifecycle phase equal to Production, then searches *that group* for objects with *either* the specified product line **or** description. All found objects *must have* a lifecycle phase equal to Production, but they can have *either* a product line equal to Scorpio *or* a **Description** field that contains “computer.”

	Title Block.Lifecycle Phase Equal To Production		AND	
(	Title Block.Product Line(s) Equal To [Scorpio]		OR	
	Title Block.Description Contains computer	)		

If the parentheses are placed around different conditions, a different search occurs. For example, in the search conditions shown in the following figure, the parentheses are around the first and second conditions. Found objects will either have lifecycle phase equal to Production and product line equal to Scorpio, *or* the Description will contain “computer” without regard to lifecycle phase or product line.

(	Title Block.Lifecycle Phase Equal To Production		AND	

	Title Block.Product Line(s) Equal To [Scorpio]	)	OR	
	Title Block.Description Contains computer			

Where-Used Searches for Items

Where-used searches are specialized searches that find assemblies that include items that meet the search criteria.

In an object search, the search conditions define the objects you want to find; the objects that meet those search conditions appear in the search results table. In a where-used search, the search conditions specify items that appear on the BOM(s) of the object(s) that you want to find. Therefore, a where-used search finds any assembly that uses the specified items. The assemblies that use the defined items appear in the search results table.

For example, the intent of an object search is

> Create a list of items whose **Description** field contains Computer.

The intent of a where-used search with the same search condition is

> Create a list of assemblies where the BOM contains items whose **Description** field contains Computer.

These are the subsections of “Where-Used Searches for Items”:

- Searching on Rev-Specific Values on page 181
- Where-Used Search Types on page 182
- Where-Used Set Operators on page 185
- Creating a Where-Used Search in Java Client on page 187
- Creating a Where-Used Search in Web Client on page 189

Searching on Rev-Specific Values

When you set up a Where Used search, you may well be seeking information about specific revisions of a part or other object. A revision, or “rev”, explicitly means that the part has been modified in some way by a change order. (These ideas are covered in *Product Collaboration User Guide*.)

You may use or create criteria that includes revision-specific attributes, such as Rev, Lifecycle Phase, Rev. Release Date, Rev. Incorporate Date, as well as fields on the **Manufacturers** tab of the object.

In general, Agile reviews only the latest revision of each item object. The “latest rev” is the most recent revision of the object. If the object has been released (through a change order), this can be called a “released rev.” Because an object might be released, *un*released, and released again (there can be multiple releases), you may want information about the “latest released rev” – presumably the part or assembly that is closest to being finished.

The latest revision can be any of the following, but only one case at a time (see Note below):

1. The **latest released revision** of the item: the item has been released, it has a revision number, and there are no change orders or MCOs pending against the item. A released revision occurs when the change (Change Order or Manufacturer Order) that created the revision is in its workflow at Released or Implemented status types. This is indicated by the revision letter showing in parentheses.
2. The **latest pending revision** of the item: the item is on the **Affected Items** tab of one or more unreleased change orders or MCOs. A Pending revision occurs when the change that created the revision is in its workflow at one of these status types: Unassigned, Pending, Submit, Review, or Hold. This is indicated by the revision letter showing in parentheses.
3. An **Introductory rev** with *no* pending changes: this Introductory item has no revision number or pending revision number. It has never been released and it is not on the **Affected Items** tab of a change order or an MCO.

Note These revision types are listed in hierarchical order: if there is an instance of case 1, that is the latest rev. If there is no released rev but there is an instance of case 2, the system sees that as the latest rev. If there is no released or pending rev but there is an instance of case 3, Agile takes the Introductory rev as the latest rev. Note also that the Introductory rev is considered to be a released revision, so items at Intro rev are expected to be included in Where Used search results.

Where-Used Search Types

There are four types of "where-used" searches, which are defined and described in the following sections. "Level" refers to the BOM.

- **Where-Used – All Levels – Latest Released Revision Only** on page 182
- **Where-Used – Top Level – Latest Released Revision Only** on page 183
- **Where-Used – One Level – Latest Released Revision Only** on page 183
- **Where-Used – One Level – All Released Revisions** on page 184

Where-Used – All Levels – Latest Released Revision Only

This where-used search type returns a list of the latest released revision of assemblies that contain the named object (that is, assemblies *where* that object is *used*). Note that:

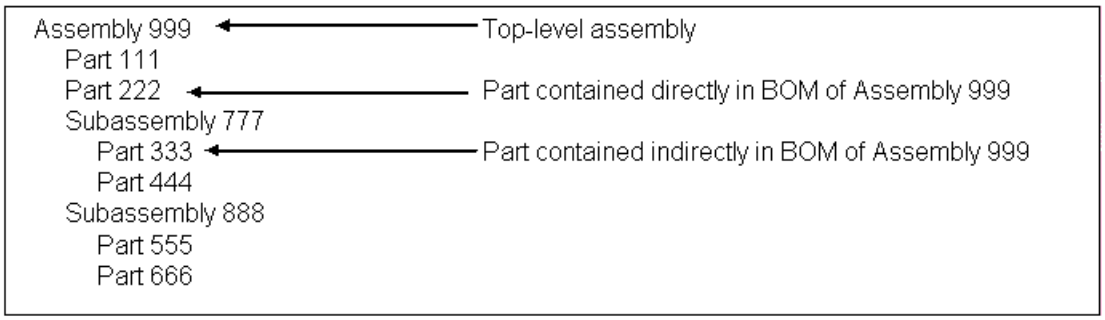
- Pending revisions are *not* included. For items/assemblies with pending change order, the Where Used search result will return the item/assembly labeled Introductory (Intro) revision.
- Introductory revisions are included, and they are treated as if they were released revisions.

The object described by the search conditions is contained, directly or indirectly (defined below), on the BOMs of the returned assemblies. This search returns assemblies that contain the described object at any BOM level.

Refer to the figure below. In Assembly 999, Part 222 is contained *directly* on the BOM of Assembly 999. Also, Assembly 999 includes Subassemblies 777 and 888.

Part 333 is on Subassembly 777, therefore, Part 333 is *indirectly* contained on the BOM of Assembly 999.

A **Where-Used–All Levels–Latest Released Revision Only** search for Part 333 returns both Assembly 999 (where it is indirectly contained) and Subassembly 777 (where it is directly contained).



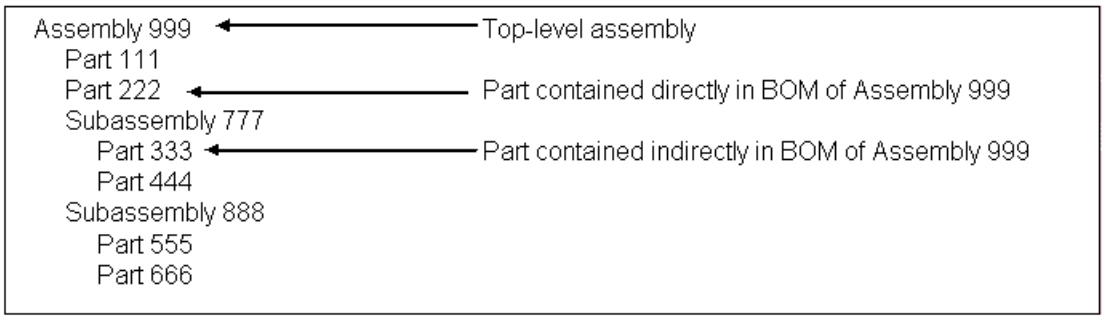
Where-Used – Top Level – Latest Released Revision Only

This where-used search type returns a list of top-level assemblies, latest released revision only. Note that:

- Pending revisions are *not* included. For items/assemblies with pending change order, the Where Used search result will return the item/assembly labeled Introductory (Intro) revision.
- Introductory revisions are included, and they are treated as if they were released revisions.

The object described by the search conditions is contained, directly or indirectly, on the BOMs of the returned assemblies.

For example, in the figure below, a **Where-Used–Top Level–Latest Released Revision Only** search for Part 333 returns only Assembly 999, the top-level assembly.



Where-Used – One Level – Latest Released Revision Only

This where-used search type returns a list of latest released revision assemblies that directly contain the named object. Note that:

- Pending revisions are *not* included. For items/assemblies with pending change order, the Where Used search result will return the item/assembly labeled Introductory (Intro) revision.
- Introductory revisions are included, and they are treated as if they were released revisions.

The object described by the search conditions is contained directly on the BOMs of the returned assemblies.

Refer to the figure below. Assembly 999 has been released five times, named by Revs **A**, **B**, **C**, **D**, and **E**; there is a pending rev, named by Rev **(F)**.

A **Where-Used–One Level–Latest Released Revision Only** search for Part 111 returns Assembly 999 Rev E only, since Part 111 is directly contained on the BOM of the latest released revision – Rev **E** – of Assembly 999; previously released revisions of Assembly 999 also contain Part 111, but they are not included in the search results because they are not the latest released revision.

Rev **(F)** also contains Part 111, but it is not included in the search results because it is a pending revision.

Assembly 999 Rev A	Assembly 999 Rev B	Assembly 999 Rev C
Part 111	Part 111	Part 111
Part 222	Part 333	Part 222

Assembly 999 Rev D	Assembly 999 Rev E	Assembly 999 Rev (F)
Part 111	Part 111	Part 111
Part 444	Part 444	Part 222

Where-Used – One Level – All Released Revisions

This where-used search type returns a list of all the released revision assemblies that directly contain the named object. Note that:

- Pending revisions are *not* included. For items/assemblies with pending change order, the Where Used search result will return the item/assembly labeled Introductory (Intro) revision.
- Introductory revisions are included, and they are treated as if they were released revisions.

The object described in the search conditions is contained directly on the BOM of the released revision of the assembly, even if it is not the latest released revision.

For example, in the figure below, a **Where-Used–One Level–All Released Revisions** search for Part 222 returns Assembly 999 Rev **A** and Rev **C**. Assembly 999 Rev **B** and Rev **D** are both released revisions, but they do not directly contain Part 222. Revision **(F)** does directly contain Part 222, but it is not included in the search results because it is a pending revision.

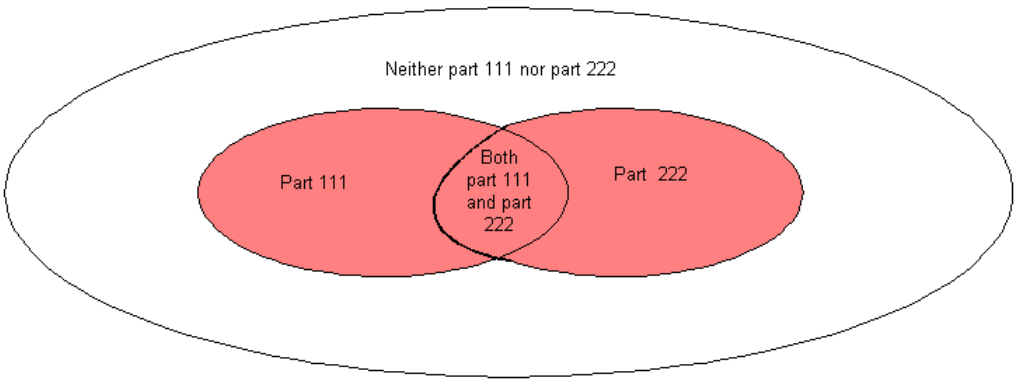
Assembly 999 Rev A Part 111 Part 222	Assembly 999 Rev B Part 111 Part 333	Assembly 999 Rev C Part 111 Part 222
Assembly 999 Rev D Part 111 Part 444	Assembly 999 Rev E Part 111 Part 444	Assembly 999 Rev (F) Part 111 Part 222

Where-Used Set Operators

Where-used set operators allow you to further define relationships between grouped search conditions.

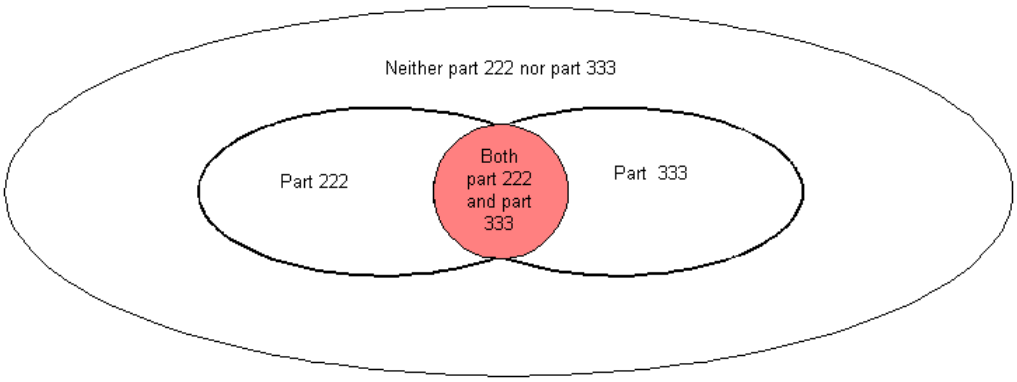
Union

This operator is the equivalent of Or. For example, this allows you to find assemblies that contain only part 111, assemblies that contain only part 222, and assemblies that contain both parts 111 and 222. The search results are the union of these two sets of assemblies.



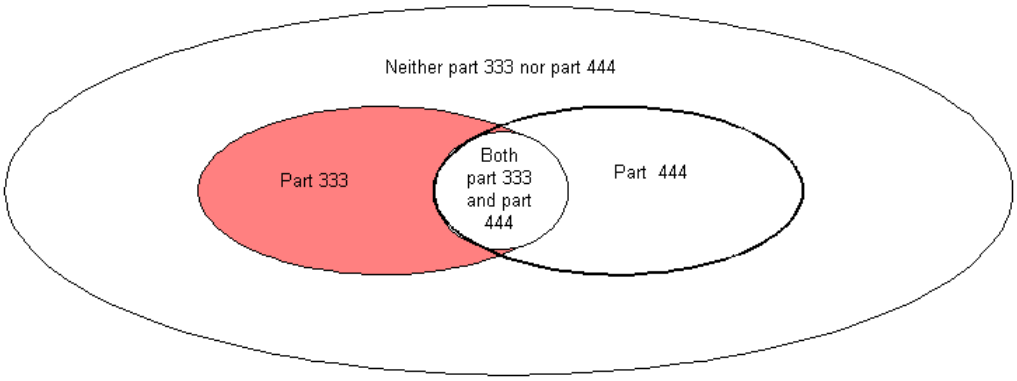
Intersection

This operator is the equivalent of And. For example, this allows you to find assemblies that contain *both* part 222 and part 333, but not assemblies with *only* part 222 or part 333. The search results are the intersection of these two sets of assemblies.



Minus

This operator is the equivalent of Not. For example, this operator allows you to find assemblies that contain part 333, but not part 444. The search results are the assemblies that contain part 333, *excepting* (that is, *not*) the assemblies that contain *both* part 333 and 444, nor the assemblies that contain only part 444.



The following table illustrates how the set operators can be used. This search locates all assemblies that contain (part 111, part 222, or both) *and* part 333, but *not* part 444.

	Title Block.Number Equal To 111			Union
	Title Block.Number Equal To 222			Intersection
	Title Block.Number Equal To 333			Minus
	Title Block.Number Equal To 444			

This where-used search first finds assemblies that contain either part 111 or part 222 (or both). Next, in the resulting list of assemblies, the search then finds assemblies that also contain part 333. In that resulting list of assemblies, the search now subtracts any assemblies that contain part 444.

Creating a Where-Used Search in Java Client

The process for creating a where-used search is similar to the process for creating an object search.

To create a where-used search in Java Client:

1. Click the **Advanced Search** button in the toolbar.

   The Advanced Search dialog box appears with the **Search** tab displayed.

2. In the **Object Type** list, select the type of object on which to base the where-used search.

   The object must be an item, a part, or a document.

3. In the **Search Type** list, select the type of where-used search to perform.

4. By default, the search condition table contains one row. (You can add as many rows as you need by clicking **Add** in the Advanced Search dialog box.)

   Click the row to display the search criteria selection lists.

   Click each drop-down list button, from left to right, to define the target Field, the Match If search operator, and the value.

5. Define a set of search criteria, or conditions:

   a. Click the first drop-down list to select a target Field from the list. For example, Title Block.Number represents the **Number** field on the **Title Block** tab of a part or document.

      The Field list varies depending on the object selected in the **Object Type** field.

   b. Click the second drop-down list to select a Match If search operator from the list. For more information, see Selecting Search Operators on page 175.

   c. If you select the **Prompt ?** checkbox, the value field is disabled and you do not enter a value for which to search. Instead, when you run the saved search, you are prompted to enter a value.

   d. In the last field, enter a value.

      The last search condition field, the **Value** field, specifies the content or setting of the field selected from the Field list. Depending on the selection in the Field list, the **Value** field may contain a list that is relevant to the selection, a calendar button, or a field where you can enter text or numbers. For example, if the first field is set to Title Block.Size, then **Value** lists different sizes; if the first field is set to Title Block.Description, then you can type text or numbers in the field.

      If you select Like as a **Match If** search operator, you can use wildcard characters when entering a value. For information about using wildcards to search for objects, see Using Wildcard Characters on page 154.

   e. If you want to add another row of search conditions, click **Add**.

      A new row is added at the end of the table. The And/Or field at the end of the row is set to [blank] by default.

   f. To modify the And/Or or Union/Intersection/Minus setting, click the And/Or field to select AND or OR from the list. Use AND if both conditions must be met. Use OR if either or both conditions can be met. For more information, see Using And/Or Values in Advanced Searches on page 178.

g. If you want to insert a search condition row, select a row and click **Insert**.

The new row is inserted above the selected row.

h. If you want to delete a search condition row, select one or more rows and click **Delete**.

The selected rows are deleted.

If you do not use parentheses when defining your search, the search is processed giving precedence to AND values, that is, it processes all rows that end with AND before processing rows that end with OR. In other words, the first line is combined with the second and process order is based on the first line's AND/OR value.

For more information, see Using And/Or Values in Advanced Searches on page 178.

6. Choose **Custom Output Display...** in the **More..** button drop-down list to specify which fields to include in the search results and save the search, or click **Run** to run the search without saving it.

   If you click **Run**, the search results window shows all the objects that match the search criteria.

   If you choose **Custom Output Display...** in the **More..** button drop-down list, the Display Fields, Results Range and Case Sensitive settings are displayed.

   Note In these setup steps, **Case Sensitive** is selected by default.

7. Under Display Fields, select fields and use the right and left arrows to move fields to and from the **Available Fields** and **Selected Fields** lists. Double-clicking a field name also moves it from one list to the other list.

   The **Selected Fields** list specifies the fields that will appear in the search results table. Use the up and down arrows to change the order of fields in the list, which reflects the order of the columns in the search results.

8. To sort the search results, in the **Selected Fields** list, click in the **Sort** column for the field by which you want to sort, and select a number from the drop-down list (for example, 1 means sort by this field first). You can sort by multiple fields; select a number in the **Sort** column for the each of the fields you want to use to sort. Click in the **Direction** column and select Ascending or Descending order.

9. If you want to perform a case-sensitive search where text capitalization matters, make sure **Case Sensitive** is selected.

   If you want to perform a search where text capitalization does *not* matter, click to deselect **Case Sensitive**.

   Selecting the **Case Sensitive** check box can help your search run more quickly. If you enter text in the Value field, the search looks for text that is an exact match (uppercase and lowercase letters). If you selected a value from a list (such as for Product Line), checking **Case Sensitive** allows Agile to use internal database settings to find objects more quickly.

10. When you have finished specifying output fields and sort order, click **Run** to run the search, or click **Save** to save it.

    If you click **Save**, the Save in Folder dialog box appears.

11. Enter a name for the search. Then select a folder in which to store it. If you do not have sufficient privileges to save a search in the selected folder, you can select another. You can always save a search in the Personal Searches folder.

12. Click **OK** in the Save in Folder dialog box to save the search.

13. When you are ready to run the search, click **Run** in the search dialog box.

    The search results window shows all the objects that match the search criteria. If there is more than one page, click the right arrow at the top of the window to display the next page.

14. If you want to print the list of search results, click the **Print** button .

    To edit the search after running it, do one of the following:

    - If you saved the search, on the Searches tab of the navigation pane, select the search, and click the **View/Edit** button .
    - If the Search Results window is open, click the **View/Edit** button in the Search Results window.

Creating a Where-Used Search in Web Client

To create a where-used search in Web Client:

1. Click **Advanced Search** . The Define Query page of the Advanced Search wizard appears.
2. In the **Search For** list, select the type of object on which to base the where-used search.

   The object must be an item or a part or document.
3. In the **Search Type** list, select the type of where-used search to perform.
4. Select **Match Case** if you want to perform a case-sensitive search where capitalization matters.

   Selecting the **Match Case** checkbox can help your search run more quickly. If you enter text in the **Value** field, the search looks for text that is an exact match (uppercase and lowercase letters). If you selected a value from a list (such as for Product Line), checking **Match Case** allows Web Client to use internal database settings to find objects more quickly.
5. Define a set of search criteria, or conditions:
   a. Select a target field from the list. For example, Title Block.Number represents the **Number** field on the **Title Block** tab of a part or document.
   b. Select a **Match If** search operator from the list. For more information, see Selecting Search Operators on page 175.
   c. If you select the **Prompt ?** checkbox, the value field is disabled and you do not enter a value for which to search. Instead, when you run the saved search, you are prompted to enter a value.
   d. Enter a value in the **Value** field.

      Value specifies the content or setting of the field selected from the **Field** list. Depending on the selection in the **Field** list, the **Value** field may contain a list that is relevant to the selection, a calendar button, or a field where you can enter text or numbers. For example, if **Field** is set to Title Block.Size, then **Value** lists different sizes; if **Field** is set to Title Block.Description, then you can type text or numbers in the **Value** field.

      If you select Like as a Match If search operator, you can use wildcard characters when entering a value. For information about using wildcards to search for objects, see Using Wildcard Characters on page 154.
   e. If you want to add another row of search conditions, use the **And/Or** field or **Set** field:

      Set the **And/Or** field to AND, OR, or none (empty field) to show whether the search

conditions for either or both rows must be met. Use AND if both conditions must be met. Use OR if either or both conditions can be met. If you do not use parentheses when defining your search, the search is processed giving precedence to AND values, that is, it processes all rows that end with AND before processing rows that end with OR. In other words, the first line is combined with the second and process order is based on the first line's AND/OR value.

For more information, see Using And/Or Values in Advanced Searches on page 178.

6. When you have finished adding search conditions, choose **Custom Output Display...** in the **More..** button drop-down list to specify which fields to include in the search results list and save the search, or click **Run** to run the search without saving it.

   If you choose **Custom Output Display...** in the **More..** button drop-down list, the Customize Output Display dialog appears.

7. In the Customize Output Display dialog, use the right and left arrows to move fields to and from the **Available Values** and **Selected Fields** lists. The **Selected Fields** list specifies the fields that appear in the search results list. Use the up and down arrows to change the order of fields in the list, which reflects the order of the columns in the search results.

8. To sort the search results, select the field by which you want to sort from the **Sort By** drop-down list, and select **Ascending** or **Descending** order. To sort by more than one field, use the **Then By** drop-down lists.

9. When you have finished specifying output fields and sort order, click **OK.**

10. When you are finished defining the search, click **Save**.

11. Enter a name for the search. Then select a folder in which to store it. If you do not have sufficient privileges to save a search in the selected folder, you can select another. You can always save a search in the Personal Searches folder.

12. When you are ready to run the search, click **Run**.

    The Search results page shows all the objects that match the search criteria. If there is more than one page, click the right arrow next to the page number to display the next page.

13. If you want to print the list of search results, click the **Print** button.

Where-used Searches for File Folders

Where-used searches for file folders are specialized searches similar to Relationship Searches on page 192 that find file folders that appear on the **Attachments** tabs of the objects defined in the search criteria.

In a file folder *object* search, the search conditions specify object attributes of the file folders you want to find; the file folder objects that match those search conditions are returned in the search results.

For example, the following search return file folders that Mary Smith has checked out:

Search setting	Specified as:
Search for Object:	File Folder
Search Type:	Object Search
Search Condition:	Title Block.Checkout User Equal to Mary Smith

In a file folder *where-used* search, you select the object where the file folder is used, for example, Changes. This allows you to specify search conditions that include change object attributes, in addition to search criteria that specify file folder attributes.

For example, the following search returns file folders that Mary Smith has checked out that appear on the **Attachments** tab of changes assigned to the Virgo product line.

Search setting	Specified as:
Search for Object:	File Folder
Search Type:	Where Used Search
With Related Content:	Changes
Search Condition:	Title Block.Checkout User Equal to Mary Smith And Where Used.Changes.Cover Page.Product Line(s) Equal to Virgo

For detailed information about defining searches, see Advanced Searches on page 167.

Version-Specific Properties and File Folder Object Searches

File folder objects (File Folder class objects and Design class objects) have multiple versions. When you create a file folder object search that include search conditions based on version-specific properties, the search results table will include a row for each version of a file folder object where the search condition is true. Therefore, the file folder search results table may list the same file folder object multiple times.

The following table lists the version-specific properties that automatically cause the search results to list a file folder object multiple times, regardless of whether or not the version-specific field appears in the search results table, as defined in the advanced search output display.

Note These attributes are visible on the **Title Block** tab only if your Agile administrator has enabled them. They are typically enabled for Design objects.

Version-specific file folder Title Block field	Description
Label	Version-specific text field which indicates a label identifier for the version. Users with the appropriate privileges can modify this field on any checked in or checked out version.
Revision	Version-specific text field which indicates the targeted Revision for the Design Version.
Revision Date	Version-specific date field which indicates a revision date for the Design Version.

Note The search results table can also display an object multiple times depending on the Output Display as defined in an advanced search. For more information about the Output Display, see C. Define a Custom Output Display, Java Client on page 171, and C. Define a Custom Output Display, Web Client on page 174.

See also the chapter Working with Design Objects on page 329.

Relationship Searches

Relationship searches are available for any class that has a **Relationships** tab, that is, all object classes except Action Items and Reports.

In a relationship search you select the related object type, for example, Changes. This allows you to specify search conditions that include change object attributes, in addition to search criteria that specify the attributes of the searched-for object.

Note If the **Relationships** tab is visible for the searched-for object, you will be able to select this search type in the search definition dialog.

For example, the following search returns Non-Conformance Report (NCR) objects where the **Severity** field on the **Cover Page** tab of the NCR equals “Minor” and the NCR **Relationships** tab, Affected By table includes change order objects whose **Cover Page** tab, **Change Analyst** field lists Larry Jones as the change analyst.

Search setting	Specified as:
Search for Object:	Non-Conformance Reports
Search Type:	Relationships
With Related Content:	Changes
Search Condition:	Cover Page. Severity Equal to Minor And Relationships.Change Orders.Cover Page.Change Analyst Equal to Larry Jones

You set up an advanced search to find objects in relationship with each other that fit the criteria you specify in the search. See Advanced Searches on page 167.

Relationship searches allows you to include attributes from the objects on the **Relationships** tab in your search criteria and to search by Relationship tab attributes including, but not limited to:

- Rule - Null or Not Null - Determine if there is a rule
- Criteria Met - Yes or No - Determine if the criteria defined in the rule has been met
- Relationship Type - Affects, Affected By, Reference

You can select from the following relationship searches:

For object classes:	Available relationship searches
All object classes *except* Reports and Action Items.	Relationships Search
Programs (Agile PPM)	Content Search
File Folders	Relationships Search Where Used Search (See Where-used Searches for File Folders on page 190.)
Transfer Orders	Relationships Search Selected Content Search

- **Relationships Search** allows you to include attributes from the objects on the **Relationships** tab in your search criteria, including search criteria about rules and the relationship type (Affected By, Affects, or Reference).
- **Selected Content Search** allows you to include attributes from the objects on the **Selected Content** tab in your search criteria.
- **Content Search** allows you to include Relationships Search attributes and additional Agile PPM content attributes in your search criteria.

For detailed information about defining searches, see Advanced Searches on page 167.

Searching for Users and User Groups

You can search on Users and User Groups. In Quick Search, you can select **Users** or **User Groups** as the base class guiding the system per the search-text. You can define a pre-configured parametric search for users and user groups. In Advanced Search, when you select **Users** or **User Groups** in the Search For field, the drop-down list in the Field column is populated with object-specific attributes. As always, your roles and privileges govern what types of objects you can search for as well as which objects you can open.

For more information about constructing advanced searches, see Advanced Searches on page 167.

Searching for Routable Objects with Workflow Attributes

Workflow Routings on page 14 introduced and described the workflow-based sample searches. This section elaborates on this area.

Agile comes with a large array of predefined search samples based on workflow attributes. These are designed to complete the majority of tasks for change analysts, observers, and approvers, but they can be used by any users if they are assigned the appropriate privileges.

Note Your ability to use workflow attributes to create searches may be limited depending on the Agile Server licenses at your site, and which roles and privileges you have been granted. For more information, see your Agile administrator.

These predefined workflow searches are also modifiable for use as templates. Building a search with workflow attributes is the same as building standard searches. However, you need to follow some special rules to build a successful search. For more information about building a search, begin with Advanced Searches on page 167. For information about using workflow attributes in searches, see Creating Grouped Conditions for Workflow Searches on page 197.

It is highly recommended that you save the predefined searches with a new name before you modify them. This way you will always have a template to work from if you need to start over.

Creating Workflow Searches

You can search for changes by various attributes relating to the workflow in use for those changes. You can combine some of the workflow attributes with other workflow attributes in brackets to create a grouped condition, which further refines the way the workflow attributes work together.

In general, you can use the workflow attributes with other non-workflow attributes; however, not all the workflow attributes work together in a search with other workflow attributes, or with non-workflow attributes. If you have selected search attributes that cannot be used together, an error message is displayed. For information about creating grouped conditions, see Creating Grouped Conditions for Workflow Searches on page 197.

The following table displays each workflow attribute, its operators, and the expected results of using it in a search. Use this table to verify that the attributes you wish to search will deliver the information you require.

Note $CurrentStatus limits searches on workflow activities to the change's current workflow status. $User limits searches on users or user actions to the current user, that is, the user running the search.

Search attribute	Match If operators	Value	The change found has these attributes
Cover Page.Status	In	Any workflow status; any status type; Unassigned	The specified status matches the current status on the Cover Page.

Search attribute	Match If operators	Value	The change found has these attributes
	Not In	Any workflow status; any status type; Unassigned	The specified status does not match the current status on the Cover Page.
	Is Null	(None)	The **Cover Page.Status** field is empty.
	Is Not Null	(None)	The **Cover Page.Status** field is not empty.
Workflow.Workflow Status	Equal To	Any workflow status; any status type $CurrentStatus	The specified status matches the current status of the change.
	Not Equal To	Any workflow status; any status type $CurrentStatus	The specified status does not match the current status of the change.
Workflow.Next Status	Equal To	Any workflow status; any status type	The specified status matches the next status of the change.
	Not Equal To	Any workflow status; any status type	The specified status does not match the next status of the change.
Workflow.Approver	Contains	One or more users or user groups from the address book; $User	The specified user or user group is included in the list of approvers.
	Does Not Contain	One or more users or user groups from the address book; $User	Specified user or user group is not included in the list of approvers.
	Is Null	(None)	The approver list is empty.
	Is Not Null	(None)	The approver list is not empty; there is at least one user, department, or group on the list.
Workflow.Observer	Contains	One or more users or user groups from the address book; $User	The specified user or user group is included in the list of observers.
	Does Not Contain	One or more users or user groups from the address book; $User	The specified user or user group is not included in the list of observers.
	Is Null	(None)	The observer list is empty.
	Is Not Null	(None)	The observer list is not empty; there is at least one user, department, or group on the list.
Workflow.Notify Users	Contains	One or more users or user groups from the address book; $User	The specified user or user group is included in the list of persons to notify.
	Does Not Contain	One or more users or user groups from the	The specified user or user group is not included in the list of persons to notify.

Search attribute	Match If operators	Value	The change found has these attributes
		address book; $User	
	Is Null	(None)	The Notify list is empty.
	Is Not Null	(None)	The Notify list is not empty; there is at least one user, department, or group on the list.
Workflow.Signoff User	Contains	One or more usernames from the address book; $User	The specified user performed the signoff action.
	Does Not Contain	One or more usernames from the address book; $User	The specified user did not perform any signoff action.
	Is Null	(None)	No users have performed any signoff actions.
	Is Not Null	(None)	At least one user has performed a signoff action.
Workflow.Status Changed By	In	One username from the address book; $User	The specified user caused the change to be moved out of this status.
	Not In	One username from the address book; $User	The specified user did not cause the change to be moved out of this status.
	Is Null	(None)	The change was autopromoted.
	Is Not Null	(None)	The change was manually promoted.
Workflow.Duration Must be used in conjunction with Cover Page.Status.	Number of hours. Any positive number; decimal point allowed.	All numerical comparison operators: >, <, >=, <=, =, <>	The change was moved to the specified status within the number of hours specified. Cannot be used with Cancel or Hold status types.
Workflow.Approver Action Workflow.Observer Action **Note:** When used in a grouped condition with Workflow.Approver or with Workflow.Observer, these attributes represent the action	Contains	Awaiting Approval	One or more approvers/observers have not signed off.
		Approved	One or more approvers/observers have approved.
		Rejected	One or more approvers/observers have rejected.
		Returned	One or more approvers'/observers' signoff request has been returned.
	Does Not Contain	Awaiting Approval	All approvers/observers have signed off.
		Approved	No approvers/observers have approved.
		Rejected	No approvers/observers have rejected.

Search attribute	Match If operators	Value	The change found has these attributes
of the particular user specified by the Workflow.Approver or Workflow.Observer. When not used in a grouped condition, these attributes represent the actions taken by all the approvers or observers.		Returned	No approvers'/observers' signoff request has been returned.
	Equal To	Awaiting Approval	All selected approvers/observers have not signed off.
		Approved	All selected approvers/observers have approved.
		Rejected	All selected approvers/observers have rejected.
		Returned	All selected approvers'/observers' signoff request have been returned.
	Not Equal To	Awaiting Approval	Some selected approvers/observers have signed off.
		Approved	Not all selected approvers/observers have approved.
		Rejected	Not all selected approvers/observers have rejected.
		Returned	Not all selected approvers'/observers' signoff request have been returned.

Creating Grouped Conditions for Workflow Searches

One of the powerful functions that you can use for a workflow search is grouped conditions. This option allows you to build powerful search conditions based on certain pairs of workflow attributes. Grouped conditions are enclosed in brackets [ ].

For example, consider the following grouped condition:

[	Workflow.Workflow Status Equal To Status Type.Implemented		OR	
	Workflow.Workflow Status Equal To Status Type.Released	]	AND	
	Workflow.Status Changed By Equal To Sharon			

This grouped condition finds all changes where the status type is either Implemented or Released and Sharon is the person who changed the status.

Use a grouped condition to refine a search based on workflow attributes. These three rules must be followed to create a grouped condition:

- Two workflow attributes are used within a set of brackets.
- The operator is set to And.
- There are no non-workflow attributes used within the brackets.

To group two or more workflow attributes in Java Client:

1. Select the rows that you want to group in brackets.
   a. Click a row to select it. The row is highlighted.
   b. Use shift-click or Ctrl-click to select the last row of the group.
2. Click the **[Group]** button.

   The brackets are placed around the rows selected.

To group two or more workflow attributes in Web Client:

1. In the row where you want to place an open bracket, select the radio button in the open parenthesis column.
2. In the row where you want to place a close bracket, select the radio button in the close parenthesis column.
3. Click the **Add [Group]** button.

   Brackets [ ] are placed around the group of workflow attributes.

To ungroup two or more workflow attributes in Java Client:

1. Select the rows enclosed in brackets.
   a. Click a row to select it. The row is highlighted.
   b. Use Shift-click or Ctrl-click to select the second row.
2. Click the **Remove ( )** button.

   The brackets are removed.

To ungroup two or more workflow attributes in Web Client:

1. Deselect the open and close parenthesis radio buttons in the rows from which you want to remove brackets.
2. Click the **Remove ( )** button.

The following fields qualify for grouped condition searches:

- **Cover Page.Status**
- **Workflow.Duration**
- **Workflow.Workflow Status**
- **Workflow.Next Status**
- **Workflow.Signoff User**
- **Workflow.Approver** when it is set to a valid user's name, and Workflow.Approver Action is set to Equal To or Not Equal To a specific action, and there are no non-workflow attributes within the brackets.
- **Workflow.Observer** when it is set to a valid user's name and Workflow.Observer Action is set to Equal To or Not Equal To a specific action, and there are no non-workflow attributes within the brackets.

When used in a grouped condition, the workflow attribute that pertains to observers or approvers is

set to Contains and the operator for the second workflow attribute is set to either Equal To or Not Equal To, the grouped condition is evaluated in respect to only that specific approver or observer.

If one of the workflow attributes in a grouped condition pertains to a status, and specifies a specific status, then the remaining workflow attributes in the grouped condition are evaluated in respect to only that specific status. For example:

- Search 1: Find all changes where Cathy is an approver and she has approved that change. The approval action applies specifically to Cathy. Note that the use of brackets makes this a grouped condition:

[	Workflow.Approver Contains [Cathy Agile]		AND	
	Workflow.Approver Action Equal To [Approved]	]		

- Search 2: Find all changes where Cathy is an approver and all approvers have approved that change. The approval action applies generally to all the approvers. (Note: this specific search does not work, it should be taken as a sample in the context of this discussion.) Note that there are no brackets; this is not a grouped condition:

	Workflow.Approver Contains [Cathy Agile]		AND	
	Workflow.Approver Action Equal To [Approved]			

In Java Client, grouping is available whenever multiple search conditions are selected. If the **Group** button is disabled (grayed) the selected search conditions do not make up a valid grouped condition. Click the **Group** button to enclose the selected search conditions in brackets [ ]. If the selected search conditions enclosed in brackets do not make up a valid grouped condition, you see an error message when you run or save the search.

In Web Client, grouping is available whenever multiple search conditions are selected. Click the **Add** button to enclose the selected search conditions in brackets [ ]. If the selected search conditions make up a valid grouped condition, Web Client adds brackets. If the selected search conditions do not make up a valid grouped condition, you see an error message. In a similar manner, if you use the **Add** button to enclose in parentheses selected search conditions that make up a valid grouped condition, the selected conditions are enclosed in brackets and become a grouped condition.

Workflow attributes grouped within a set of brackets can be used in conjunction with other search conditions within a single search.

When non-workflow attributes appear in parentheses along with workflow attributes, parentheses are considered precedences rather than a grouped condition. For example:

(	Workflow.Signoff User Contains Ann Agile		AND	
	Cover Page.Change Category Equal To Quick Phase-In	)	OR	
	Cover Page.Product Line(s) Contains [Scorpio]			

Tips and Guidelines for Grouped Conditions

In Java Client, when you attempt to define searches with illegal grouped conditions, Java Client disables the **Group** button.

In Web Client, when you attempt to save searches with illegal grouped conditions, Web Client substitutes parentheses ( ) for the grouped condition brackets [ ].

In some cases, when you attempt to save a search, you may see an error message. If you do, edit your search to correct the error and then save the search again.

Additional restrictions apply to the use of workflow attributes:

- Nested brackets are not supported. You may not include a grouped condition inside the brackets of another grouped condition. (You can, however, use a bracketed grouped condition inside a set of parentheses with other non-workflow search conditions.)
- Each workflow attribute can be used only once within a grouped condition within a set of brackets. For instance, you may not use Workflow.Signoff User twice in the same set of brackets.
- **Workflow.Approver**, **Workflow.Observer**, **Workflow.Notify Users** and **Workflow.Signoff User** may not be used in the same grouped condition.
- **Workflow.Approver Action** and **Workflow.Observer Action** may not be used in the same grouped condition.
- **Workflow.Duration** can be used only in a grouped condition within a set of brackets that contains only **Workflow.Workflow Status** with an operator of Equal To.
- **Workflow.Workflow Status** can be used only along with another workflow attribute within a grouped condition.
- **Workflow.Status Changed By** can be used only with **Workflow.Workflow Status** within a grouped condition.
- Non-workflow attributes cannot be used in a grouped condition, although they may be used with workflow attributes when enclosed in parentheses.
- The Match If logical operator Or cannot be used in a grouped condition.
- If **Workflow.Approver Action** or **Workflow.Observer Action** is used in a grouped condition with **Workflow.Signoff User**, then the Match If operator for **Workflow.Approver Action** or **Workflow.Observer Action** must be Equal To or Not Equal To, and the Match If operator for **Workflow.Signoff User** must be Contains.
- When you search for a specific user for **Workflow.Approver**, **Workflow.Observer**, or **Workflow.Notify Users**, if that user is the member of a group or department, the search also returns changes where the group or department is an approver, observer, or user to notify. For example, if Mary is a member of the Libra Project group, searching for changes where Mary is an approver also returns changes that list the Libra Project group as an approver.

Editing and Managing Searches and Search Folders

If you have sufficient privileges, you can rename, delete, and rearrange both searches and the folders, even some of the default system searches.

Buttons and Right-click Menu Choices in the Java Client Search Toolbar

When you select a search in Java Client, most of the buttons on the Search toolbar in the left pane are enabled; additional functions are enabled on the right-click menu.

The following table lists and describes the buttons used in the Search toolbar in Java Client.

Button	Name	Description
	New	Adds a new search folder *within* the current folder (you can select another folder in the Save In Folder dialog). Available in both Search toolbar and right-click menu.
	Edit Search Right-click menu only	Opens the selected search in edit mode. Available in right-click menu only.
	Save As Right-click menu only	Saves the selected search, with standard Save As dialog box that prompts for a filename and directory. Available in right-click menu only.
	Rename	Lets you rename the selected search (all searches) or the selected user-defined subfolder. Available in both Search toolbar and right-click menu.
	Move To Folder	Moves the selected search or subfolder to the folder you specify. Available in both Search toolbar and right-click menu.
	Delete	Removes the selected user-created search or user-created subfolder. Available in both Search toolbar and right-click menu.
	Organize Search Right-click menu only when the top Search folder is selected.	Opens the Organize Search dialog which allows you to •Create, rename, or remove folders. •Rename or remove searches. •Reorder folders and searches depending on your privileges. Available in right-click menu only.
	Expand All Available only when the top Search folder is selected.	When the Searches folder is highlighted, expands all the subfolders. Available in both Search toolbar and right-click menu
	Collapse All Available only when the top Search folder is selected.	When the Searches folder is highlighted, collapses all the subfolders. Available in both Search toolbar and right-click menu

Button	Name	Description
	Refresh Left Panel Tree	Refreshes the navigation pane of Java Client's user interface

Buttons on the Web Client Search Toolbar

The following table lists and describes the buttons on the Searches page in Web Client.

Button	Description
Expand All	Expands all the search folders in the navigation pane to display all available searches.
Collapse All	Collapses all the search folders in the navigation pane.
Organize Searches	Opens the Organize Searches window.

Organizing Searches

Searches can be organized in the Organize Searches window.

To open the Organize Search window in Java Client:

1. Select the Searches folder at the top of the Search tab in the left navigation pane.
2. Right-click and choose **Organize Search** in the menu.

   The Organize Search window opens.

To open the Organize Searches window in Web Client:

1. In the Search Folders navigation pane, click the **Organize Searches** icon next to the Searches folder.

   Or

   In the Web Client main menu, Click **Tools** > **My Settings** > **Organize Searches**.

   The Organize Searches window opens.

The Organize Searches Window

Use the features in the Organize Searches window to create or remove folders, rename or remove searches, and sort and move folders and searches.

Button	Description
Remove	Removes the selected searches and search folders. See Deleting a Search on page 205 or Removing a Folder on page 206.
Rename	Renames the selected search or search folder. See Renaming a Search on page 204 or Renaming a Folder on page 207.

Button	Description
Add New Folder	Adds a new search folder within the current folder.
(drag and drop)	Allows you to reorder searches and search folders. See Moving Searches and Folders on page 208 below.
Save	Save the modifications you made in the Organize Searches window.
Cancel	Discards the modifications you made in the Organize Searches window and closes the window.

Editing Searches

When you edit a search, you are changing the combination of conditions Agile looks for. You might want to edit a search to either broaden or narrow the scope of the search or change the output fields.

Note Whether a search is editable depends on your privileges.

When editing a search you can:

- Alter the values of search criteria
- Add conditions to the search condition table
- Insert conditions into the interior of the search condition table
- Delete conditions from the search conditions table
- Substitute an And for an Or and vice versa
- Add or remove output columns in search results
- Modify the sort order of search results

Editing a Search in Java Client

To edit a search in Java Client:

1. In the Search folder, navigate to the search you want to edit.
2. Select the search, right-click and choose **Edit Search** in the menu.
3. To edit search conditions, click the row you want to edit. To edit the search, follow the steps in Creating an Advanced Search in Java Client on page 169, Creating an Advanced Search in Web Client on page 172, or Where-Used Searches for Items on page 181.

   To delete a condition, select the row you want to delete, and click **Delete**.
4. When you are finished, click **Save**.

   Note If the search results window is open, click the **View/Edit** button in the search results window, and edit the search.

Editing a Search in Web Client

To edit a search in Web Client:

1. In the Searches folder in the navigation pane, navigate to the search you want to edit.
2. Click the **Edit Search** icon to the right of the search name.
3. To edit the output columns or the sort order, from the **More** button drop-down list, choose **Customize Output Display...**
4. To edit search conditions, follow the steps in Advanced Searches on page 167 or Where-Used Searches for Items on page 181 to edit the search.

   To delete a condition, click the **Remove Row from Search Criteria** button at the end of the row.
   To insert a condition, click the **Insert Row in Search Criteria** at the row below which you want to insert the new conditions.
5. When you are finished, click **Save**.

Renaming a Search

You can rename a saved search to better indicate the type of objects the search is designed to locate.

To rename a search in Java Client Search tab:

1. In the Search tab, select the search you want to rename.
2. Right-click and select **Rename** in the menu.
3. In the dialog, enter a name for the folder and click **OK**.

To rename a search in Java Client Organize Searches window:

1. Select the Searches folder, right-click and choose **Organize Search** in the menu.
2. In the Organize Search window navigate to the search you want to rename and select it.

   Note Your assigned roles and privileges control which searches and folders you can rename. You can always rename searches and folders in your Personal Searches folder.
3. Click the **Rename** button.
4. Edit the name of the search in the **Enter Name** field.
5. Click **OK**.
6. When you are finished, click **Save**.

To rename a search in Web Client:

1. In the Search Folders navigation pane, click the **Organize Searches** icon.
2. In the Organize Searches window navigate to the search you want to rename and select it.

> **Note** Your assigned roles and privileges control which searches and folders you can rename. You can always rename searches and folders in your Personal Searches folder.

3. Click the **Rename** button.
4. In the text field, enter a new name and press the Return key.
5. When you are finished, click **Save**.

Deleting a Search

In Java Client, you can delete a search on the Searches tab if you have the appropriate privileges for that search.

In Web Client, you can delete a search from the Organize Searches page.

To remove a search in Java Client Search tab:

1. In the Search tab, select the search you want to delete.
2. Right-click and select **Delete** in the menu.
3. When the confirmation prompt appears, click **Yes**.

   The search is deleted.

To remove a search in Java Client Organize Search window:

1. Select the Searches folder, right-click and choose **Organize Search** in the menu.
2. In the Organize Search window navigate to the search you want to remove and select it.

> **Note** Your assigned roles and privileges control which searches and folders you can remove. You can always remove searches and folders in your Personal Searches folder.

3. Click the **Remove** button.
4. When you are finished, click **Save**.

To remove a search in Web Client:

1. In the Search Folders navigation pane, click the **Organize Searches** icon.
2. In the Organize Searches window navigate to the search you want to remove and select it.

> **Note** Your assigned roles and privileges control which searches you can remove. You can always remove searches and folders in your Personal Searches folder.

3. Click the **Remove** button.

Using Folders to Organize Searches

You can organize your searches in folders to make them easier to locate and manage. You can use

the existing folders or create new ones.

Creating a Folder

To create a search folder in Java Client Search tab:

1. In the Search tab, select the folder in which you want to create a new folder.
2. Right-click and choose **New Folder** in the menu.
3. In the **Folder Name** field, enter a name for the folder and click **OK**.

To create a search folder in Java Client in the Organize Search window:

1. Select the Searches folder, right-click and choose **Organize Search** in the menu.
2. In the Organize Search window navigate to the folder in which you want to create a new folder.

   Note Your assigned roles and privileges control the folders in which you can create new subfolders. You can always add folders in your Personal Searches folder.

3. In the **Folder Name** field, enter a new name.
4. Click **OK**.
5. When you are finished, click **Save**.

To create a search folder in Web Client:

1. In the Search Folders navigation pane, click the **Organize Searches** icon.
2. In the Organize Searches window navigate to the folder in which you want to create a new folder.

   Note Your assigned roles and privileges control the folders in which you can create new subfolders. You can always add folders in your Personal Searches folder.

3. Click the **New** button.
4. In the text field, enter a new name and press the Return key.
5. When you are finished, click **Save**.

Removing a Folder

You can remove or delete a folder, even if it is not empty.

To remove a folder in Java Client Search tab:

1. In the Search tab, select the folder you want to delete.
2. Right-click and choose **Delete** in the menu.
3. When the confirmation prompt appears, click **Yes**.

   The folder and its contents are deleted.

To remove a folder in Java Client Organize Search window:

1. Select the Searches folder, right-click and choose **Organize Search** in the menu.
2. In the Organize Search window, navigate to the folder you want to remove and select it.

   Note Your assigned roles and privileges control which folders you can remove. You can always remove searches and folders in your Personal Searches folder.

3. Click the **Remove** button.
4. When you are finished, click **Save**.

To remove a search or folder in Web Client:

1. In the Search Folders navigation pane, click the **Organize Searches** icon.
2. In the Organize Searches window navigate to the folder you want to remove and select it.

   Note Your assigned roles and privileges control which folders you can remove. You can always remove searches and folders in your Personal Searches folder.

3. Click the **Remove** button.
4. When you are finished, click **Save**.

Renaming a Folder

To rename a folder in Java Client Search tab:

1. In the Search tab, select the folder you want to rename.
2. Right-click and select **Rename** in the menu.
3. In the **Enter Name** field, enter a name for the folder.
4. Click **OK**.

To rename a search in Java Client Organize Searches window:

1. Select the Searches folder, right-click and choose **Organize Search** in the menu.
2. In the Organize Search window navigate to the search you want to rename and select it.

   Note Your assigned roles and privileges control which searches and folders you can rename. You can always rename searches and folders in your Personal Searches folder.

3. Click the **Rename** button.
4. In the **Enter Name** field, enter a name for the folder.
5. Click **OK**.
6. When you are finished, click **Save**.

To rename a search in Web Client:

1. In the Search Folders navigation pane, click the **Organize Searches** icon.
2. In the Organize Searches window navigate to the folder you want to rename and select it.

   Note Your assigned roles and privileges control which folders you can rename. You can always rename searches and folders in your Personal Searches folder.

3. Click the **Rename** button.
4. In the text field, enter a new name and press the Return key.
5. When you are finished, click **Save**.

Moving Searches and Folders

To use the Search window buttons to move a search or a search folder into another folder in Java Client:

1. Select the Searches folder, right-click and choose **Organize Search** in the menu.
2. In the Organize Search window, navigate to the folder or search you want to move.
3. Click the folder or search to select it.
4. Drag the folder or search to its new location and drop it onto:
   - Highlighted folder – the dropped folder or search is moved into the highlighted folder.
   - Grey line between two names in the list of searches and folders – the dropped folder or search is moved to that location in the list.
5. When you are finished, click **Save**.

To move a search or a search folder into another folder in Web Client:

1. In the Search Folders navigation pane, click the **Organize Searches** icon.
2. In the Organize Searches window, navigate to the search or folder that you want to move. To expand a folder, click its folder icon.
3. Click the folder or search to select it.
4. Drag the folder or search to its new location and drop it onto:
   - Highlighted folder – the dropped folder or search is moved into the highlighted folder.
   - Grey line between two names in the list of searches and folders – the dropped folder or search is moved to that location in the list.
5. When you are finished, click **Save**.

Chapter 8

Routing Objects with Workflows

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About Workflows

Workflows automate the change control process by performing or completing tasks that you previously performed manually. For example:

- When you create a routable object, you can select the appropriate workflow from the list of available workflows for that routable object.
- When the routable object moves into a Review or Released status type, the lists of approvers and observers can be automatically selected.
- When all the approvers have signed off for a Review or Released status type, and all the required fields have been completed, the routable object can be automatically promoted to the next status with the AutoPromote feature.
- By defining a workflow with multiple Review or Released status types, you can sequentially route an object to different lists of approvers and observers.
- When all required fields have been filled in on a routable object, it can be autopromoted to the next status.
- When an approver does not respond within the specified reminder period set by the Agile administrator, a reminder email will be sent automatically.
- If the approver does not respond within the specified escalation period set by the Agile administrator, the routable object will be sent to that user's designated escalation person. The designated escalation person can then approve or reject the routable object in place of the original approver.
- You can transfer your authority to approve the routable object to another user for a specified period of time. If you have the appropriate privileges, you can transfer signoff authority for other users.

Status List

At its most basic level, a workflow consists of:

- A unique name
- A list of matching criteria
- A list of statuses

The status list defines the ordered list of statuses (or steps) that the routable object must go through during the change control process. The Agile administrator can define each workflow to have as many statuses as required. Each status is of a particular status type. Some status types may be used only once in a workflow, while others may be used multiple times.

The following table lists and defines the different status types.

Status type	Constraints	Definition
Before a workflow is selected for a routable object		
Unassigned	"Placeholder"	**Unassigned** is the default initial status name before a routable object has been matched with a workflow.
Basic Status Types (Active)		
Pending	Required. Used once.	▫ An originator is developing the routable object. ▫ A workflow must begin with a **Pending** status type; it is the first status in every workflow.
Submit	Not required Unlimited use.	The **Submit** status type sends the routable object to the specified routing manager, who determines whether or not to promote the routable object to the next status.
Review	Not required. Unlimited use.	The **Review** status type routes the routable object to CCB members (approvers and observers). When all approvers have signed off, and required fields have been completed, the routable object is automatically promoted to next status in the status list if AutoPromote is on. If the AutoPromote is off or it is manually moved by the routing manager.

Status type	Constraints	Definition
Released	Not required. Unlimited use.	▫ When a routable object enters the *first* **Released** type status, the software performs a series of checks; it also creates new revisions of the affected items (ECOs) with the new BOM, incorporates redlines into a new "rev," or updates the manufacturer part information (MCOs). ▫ Like the Review status type, the Released status type may have approvers and observers and be routed for signoff and may be autopromoted. ▫ *Only the* first *Released status actually releases the routable object*. Subsequent Released status types—given distinguishing status names—provide additional review/approval cycles for the released routable object. ▫ Returning a released routable object to any of the first three status types *un*releases the routable object—removes approvals that were gathered.
Complete	Not required. Used once.	▫ If **Complete** status type is used, it must be the last *active* status in the workflow, and it may be used only once.
Cancel **Hold**	Not required. They are a means to inactivate a routable object. They always *follow* the final active status (e.g., Complete) in the status list. **Note**: List Cancel before Hold in the status list if both are present (although a routable object might well be held before it is canceled).	▫ The **Cancel** and **Hold** status types provide two ways to remove a routable object from the workflow. They are added to the *end* of the status list as they are *never* part of the active sequence of statuses. ▫ **Hold** temporarily removes a routable object from the workflow and allows you to reinsert it later. ▫ **Cancel** permanently removes a routable object from the workflow. If the routable object includes affected items with redline changes, the redlines are discarded. ▫ If a routable object has been released, moving to the **Hold** or **Cancel** type status unreleases the routable object. ▫ You manually move a routable object to **Cancel** or **Hold** from any other status in the workflow (assuming it is listed as a valid next status under the Manual Valid Next Status property). ▫ When moved to **Hold**, it stays there until you manually move it back into the workflow. These moves require proper Change Status privileges.

Viewing Workflows

You can view all the workflows used at your company from any open routable object. In Java Client,

click the **View Workflows** button on the toolbar of the object window. In Web Client, choose the **View Workflows** command on the **Actions** menu. This feature allows you to browse through the available workflows and their status lists at any time. You can examine the various workflows before you select one for a routable object. You can also view workflows if you have already specified one for the object.

To view all workflows and their status lists in Java Client:

1. Open the routable object you want to work with.
2. Click the **View Workflows** button. The View Workflows dialog box appears, displaying a flowchart of the statuses in the default workflow for that object type.
3. To see the statuses for a different workflow, select it from the **Select Workflow** drop-down list.
4. When you have finished viewing the workflows, click **Close**.
5. If you want to select a workflow for the object, on the **Cover Page** tab, select a workflow from the **Workflow** drop-down list, and click **Save**. The **Workflow** tab now displays the flowchart for the workflow you selected.

To view all workflows and their status lists in Web Client:

1. Open the routable object you want to work with.
2. Choose **Actions** > **View Workflows**. The View Workflow page appears, displaying a flowchart of the statuses in the default workflow for that object type.
3. To see the statuses for a different workflow, select it from the **Please select a Workflow** drop-down list.
4. When you have finished viewing the workflows, click **Cancel**.
5. If you want to select a workflow for the object, on the **Cover Page** tab, click **Edit**, select a workflow from the **Workflow** drop-down list, and click **Save**. The **Workflow** tab now displays the flowchart for the workflow you selected.

Show/Hide Workflows within a Class

When you open the **Workflow** tab of a routable object, a second button is called **Hide/View workflow chart** in Java Client and **Show/Hide Workflow Overview** in Web Client. Here this button is a toggle: in an ECO, if the workflow is not visible and you click the button, the ECO's workflow appears — and the same is true for the workflow of any ECO you open at this point. If you click the **Show/Hide Workflow** button again, the workflows are hidden in all ECOs. The switch controls the View/Hide mode for all objects in that Agile class (for example, ECOs, PCOs, or Problem Reports). This is on a "per machine" basis, that is, it is not dependent on which user is logged on or other factors.

Default Workflows

Agile PLM includes default workflows for each routable object type. Default workflows provide the same change control process as previous Agile releases.

Sequence	Default Change Orders, Default Site Change Orders	Default Change Requests	Default Deviations	Default Stop Ships	Default Manufacturer Orders
1st	Pending	Pending	Pending	Pending	Pending
2nd	Submitted	Submitted	Submitted	Submitted	Submitted
3rd	CCB	CCB	CCB	CCB	CCB
4th	Released	Released	Released	Released	Released
Final	Implemented	Closed	Expired	Resumed	First Article Completed
The Hold and Canceled statuses are optional and are not part of the sequential status list:					
Optional	Canceled	Canceled	Canceled	Canceled	Canceled
	Hold	Hold	Hold	Hold	Hold

Sequence	Default ATOs	Default CTOs
1st	Pending	Pending
2nd	Released	Review
3rd		Released
Final	Complete	Complete

Sequence	Default Problem Reports and NCRs	Default CAPAs	Default Audits
1st	Pending	Identified	Preparation
2nd	Submitted	Acknowledged	Initiation
3rd	Review	Investigated	Analysis
4th	Released	Implemented	Issued
5th		Validated	Correction
6th			Validation
Final	Closed	Closed	Closed
The Hold and Canceled statuses are optional statuses that are not part of the sequential status list:			
Optional	Canceled	Canceled	Canceled

Sequence	Default Problem Reports and NCRs	Default CAPAs	Default Audits
	Hold	Hold	Hold

Sequence	Default Activities	Default Gates
1st	Not Started	Closed
2nd	In Process	In Review
Final	Complete	Open
The Canceled status is an optional status that is not part of the sequential status list:		
Optional	Canceled	Canceled

Sequence	Default Packages
1st	Pending
2nd	Submitted
3rd	Review
4th	Accepted
Final	Closed
The Hold and Canceled statuses are optional statuses that are not part of the sequential status list:	
Optional	Canceled
	Hold

The Default File Folders workflow has one status, Review. This workflow and the Default ATOs workflow are read-only.

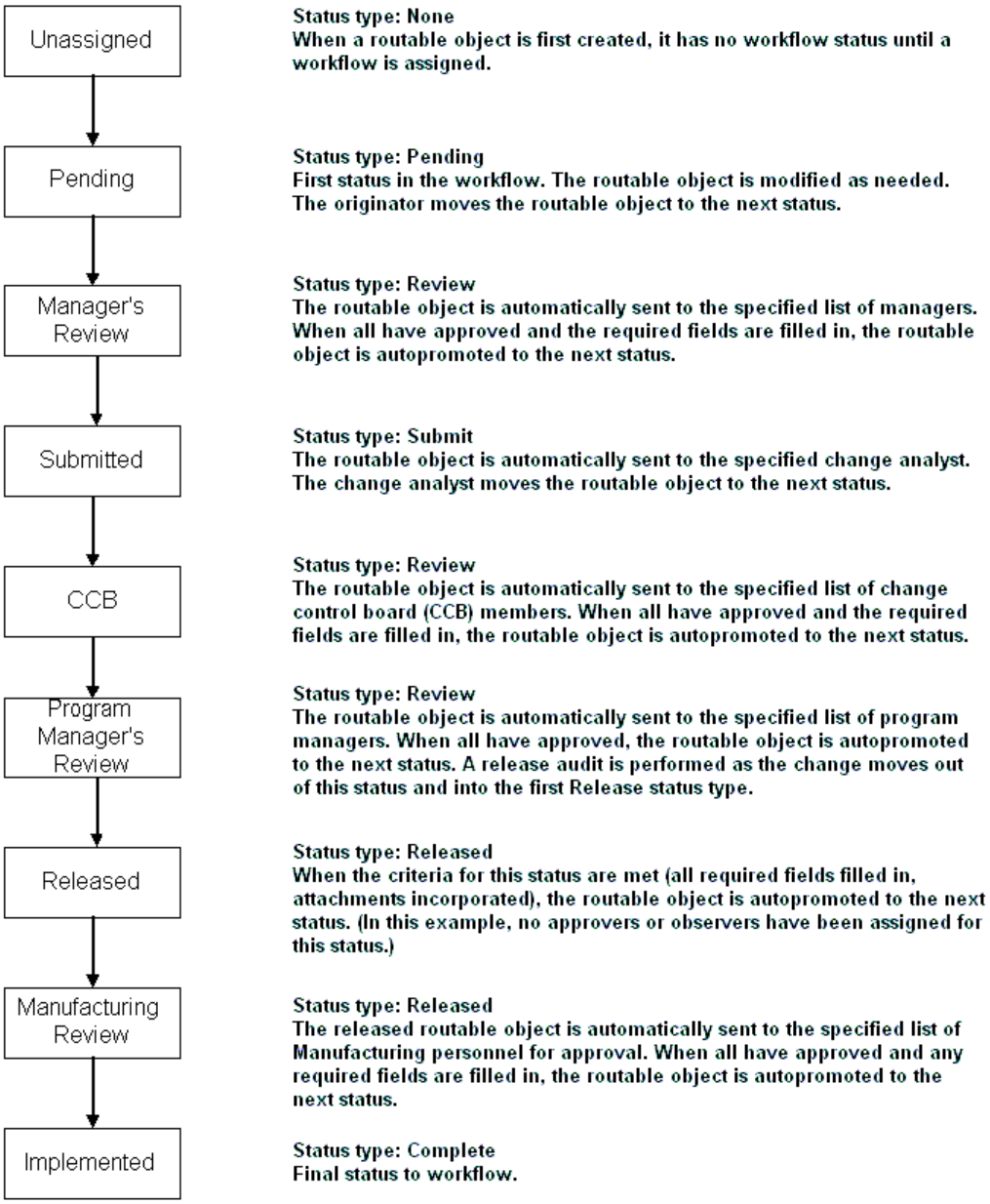
Example of a Customized Workflow

The following figure shows an example of a customized workflow. Notice that this workflow has three different Review status types and two different Released status types. A routable object using this workflow is:

- Routed through an approval cycle (Review status type) before it is submitted to the change analyst.
- Routed through two approval cycles (Review status type) before it is released, with a different group of approvers for each approval cycle.
- Released when it moves into the first Released status type.

- Moved into the second Released status type after the required fields have been filled in and, at this status, routed for approval a final time before moving into the Complete status type.

Customized Agile workflows allow great flexibility in defining change control processes to meet your company's needs.



Using Workflows in the Change Control Process

When a routable object is first created, it has no workflow assigned to it; therefore, it has no workflow status. Until you select a workflow for the routable object, it remains unassigned, and the

Unassigned status stamp is displayed in the upper right corner of the **Cover Page** tab.

You can edit an unassigned routable object the same way you edit a routable object in a Pending status type: fill in fields, add items to the **Affected Items** tab, add files to the **Attachments** tab, and so on.

When you have finished editing an Unassigned routable object, or a routable object in the Pending status type, and you are ready to start the routable object moving through the change control process, use the **Next Status** button.

Selecting a Workflow

Until you select a workflow for a routable object, the routable object remains unassigned, and the Unassigned status stamp is displayed in the upper right corner.

To select a workflow for an unassigned routable object in Java Client:

1. Open the routable object that you want to assign a workflow to.
2. When working with an unassigned routable object, you can use either of these methods to select a workflow:
   - On the **Cover Page** tab, select a workflow from **Workflow** drop-down list.

     Click **Save** in the object window.
   - Or, click the **Next Status** button above the tabs.

     If there is no workflow assigned, you are prompted to select one in the Select Required Fields dialog drop-down list.

     Complete any required fields, for example, select a Change Analyst.

     Click **OK**.

Note	All the workflows that match the routable object are shown in the drop-down list. The drop-down list may vary depending on whether the Agile administrator has created any custom workflows.

The status of the routable object switches to the first status in the selected workflow, which is always a Pending status type.

Note	As long as the routable object is in the Pending status type, you can select a different workflow. To select a different workflow for a routable object that is not in either the Unassigned status or the Pending status type, you must switch the status to the Pending status type first. (See Returning a Routable Object to the Originator on page 240.)

To select a workflow for an unassigned routable object in Web Client:

1. Open the routable object to which you want to assign a workflow.
2. When working with an unassigned routable object, you can use either of these methods to select a workflow:
   - On the **Cover Page** tab, click the **Edit** button.

Select a workflow from **Workflow** drop-down list.

Click **Save**.

- Or, click the **Next Status** button above the tabs.

  If there is no workflow assigned, you are prompted to select one in the Select Required Fields wizard drop-down list.

  Complete any required fields, for example, select a Change Analyst.

  Click **OK**.

Note	All the workflows that match the routable object are shown in the drop-down list. The drop-down list may vary depending on whether the Agile administrator has created any custom workflows.

The status of the routable object switches to the first status in the selected workflow, which is always a Pending status type.

Note	As long as the routable object is in the Pending status type, you can select a different workflow. You can also select the blank field in the **Workflow** drop-down list, which switches the routable object to the Unassigned status and cancels the previous workflow selection.

To select a different workflow for a routable object that is not in either the Unassigned status or the Pending status type, you must switch the status to the Pending status type first. (See Returning a Routable Object to the Originator on page 240).

Working with Workflows

This section includes the following topics:

- Auditing Routable Objects on page 220
- Switching a Routable Object from One Status to Another Status on page 218
- Demoting a Routable Object on page 223
- Completing the Status Change on page 224
- Handling Routed Changes on page 227
- Approving Routable Objects on page 230
- Rejecting Routable Objects on page 233
- Reminder Period and Review Escalation Period on page 235
- Designated Escalation Person on page 236
- Transferring Signoff Authority on page 236
- Defining Personal Criteria for Authority Transfers on page 239
- Returning a Routable Object to the Originator on page 240
- Canceling a Routable Object on page 241

- Uncanceling a Routable Object on page 242
- Putting a Routable Object on Hold on page 243
- Releasing Routable Objects on page 243
- Unreleasing Routable Objects on page 245
- Multiple Released Status Types on page 246
- Adding Comments to the History Tab on page 247
- Changing a Routable Object's Subclass on page 247

Switching a Routable Object from One Status to Another Status

Routable objects move through the change control process by moving through the statuses in the workflow status list. Routable objects make the transition from one status to another status in two ways:

- The routable object is autopromoted from its current status to the next status in the workflow status list.
- An Agile user switches the routable object from one status to another status manually.

For details about switching a routable object from the Unassigned status, see Selecting a Workflow on page 216.

A routable object is manually switched from one status to another in one of the following ways:

- The **Next Status** button switches the routable object from the current status to the next sequential status in the workflow status list. Click this button, and the appropriate change status dialog box (Java Client) or page (Web Client) is displayed.
- The **Workflow** tab allows you to switch the routable object from the current status to any status allowed by the settings in the workflow (*manual valid next status*). The status need not be the next status in the workflow status list. For example, you might switch a routable object from a Submit status type to a Hold status type.

Whether you use the **Next Status** button or the **Workflow** tab, you must have the appropriate privileges to switch a routable object from one status to another status. See your Agile administrator if you have questions about your privileges.

Switching the Status of a Routable Object

You can use the **Workflow** tab or the **Next Status** button to switch the status of a routable object to any valid next status.

To switch a routable object to any valid next status in Java Client:

1. Open the routable object.
2. Audit the routable object to ensure that there are no errors that prevent switching to another status. If any errors are found, fix them. See Auditing Routable Objects on page 220.
3. Click the **Workflow** tab.

Note The valid next statuses (underlined statuses) that appear on the **Workflow** tab are determined by workflow property settings and your privileges. To review the entire status list, click the **View Workflows** button in the toolbar. Click **Close** to close the View Workflows dialog box.

4. Click one of the valid next statuses from the chart on the **Workflow** tab, or click the default next status (underlined). Or click the **Next Status** button above the tabs to accept the default next status in the sequence.
5. When the Change Status dialog box appears, add the appropriate approvers, observers, users to notify, and comments. See Adding and Removing Approvers and Observers on page 228.
6. Click the dialog button that completes the status change, for example, **Submit**, **Route**, or **Release**.

   The routable object moves to the selected status, which is the yellow status on the **Workflow** tab.

To switch a routable object to any valid next status in Web Client:

1. Open the routable object.
2. Audit the routable object to ensure that there are no errors that prevent switching to another status. If any errors are found, fix them. See Auditing Routable Objects on page 220.
3. Click the **Workflow** tab.

Note The valid next statuses that appear on the Change Status page are determined by workflow property settings and your privileges. To review the entire status list, choose **Actions** > **View Workflows**. Click **Cancel** to close the View Workflow page.

4. Select one of the valid next statuses from the chart on the **Workflow** tab, or click the **Next Status** button to accept the default next status in the sequence.
5. When the Change Status page appears, add the appropriate approvers, observers, users to notify, and comments. See Auditing Routable Objects on page 220.
6. Click **OK**.

   The routable object moves to the selected status, as which is the orange status on the **Workflow** tab.

You can use the **Next Status** button to switch the status of a routable object.

Save Routing Slip Content when Advancing Change

When you manually advance a workflow to the next status, the routing slip appears to be filled in. This contains approvers, observers, “notify” users, and comments, and you may spend several minutes completing the slip. When you click **Route**, Agile performs an automatic workflow status audit and presents you with a dialog if a problem is found. You are asked if you want to continue: previously, if No was selected, you were returned to the routable object and lost all the work. As of Agile 9.2.1, if you select No, you are returned to the routing slip, allowing you to copy the routing slip data and paste it to a temporary location, such as a word processor file.

Auditing Routable Objects

You can audit a routable object at any status in the workflow. Before switching the routable object to a different status, always audit the object to detect any errors that may prevent switching to a different status.

With appropriate privileges, you can perform two types of audits—a status audit and a release audit.

The **status audit** is performed automatically when you use the Change Status function or the workflow attempts to autopromote to the next status. You can perform a status audit at any time by using the **Audit Status** button or menu selections. It performs the following checks:

- Makes sure the Exit Required Fields for the current status are filled in.
- If the current status is a Review status type or a Released status type, makes sure that all approvers have approved.
- Checks the workflow settings of the Pass Release Audit property for the current status. If Pass Release Audit is set to either Yes or Warning, Agile PLM also performs a release audit.

Agile PLM performs a release audit automatically when the routable object is promoted to the first Released type status in the workflow. You can perform a release audit at any time by using the **Audit Release** button or menu selections.

The release audit performs the status audit for both the current status and the release status.

It performs the following additional checks:

- For ECOs, checks if the proposed new revision number on the **Affected Items** tab already exists.
- For ECOs, SCOs, PCOs and MCOs, checks if there are manufacturer redlines that will be lost after the routable object is released.
- For ECOs and SCOs, checks if there are BOM redlines that will be lost after the routable object is released.
- For ECOs, SCOs, PCOs and MCOs, checks if there are conflicts due to another ECO, SCO, or MCO being released first.
- For ECOs, SCOs, and MCOs, if the BOM Multi-level Recursive SmartRule is set to Disallow, checks for recursive BOM structures, that is, when a subassembly includes one of its parent items from an upper level of the BOM tree structure on its own BOM. (A recursive BOM structure, if carried to its logical conclusion, would repeat indefinitely).

  The BOM tree is evaluated from top to bottom. The Audit Release error message indicates, for each affected item with a recursive BOM, the first item found in the BOM tree whose first-level BOM table includes an item that appears at a higher level in the BOM tree, thus causing a recursive BOM structure. Although there may be multiple instances of recursive BOM structure in an affected item BOM tree, only the first found instance is displayed in the audit results.
- For ECOs, SCOs, and PCOs, depending on SmartRule settings, checks for duplicate items, duplicate find numbers and duplicate reference designators caused by a change rebase. (When there are multiple pending changes for the same item, when one change is released, the remaining pending changes are rebased on the latest released change.)
- For ECOs, SCOs, and MCOs, checks for duplication of the same manufacturer part on an item.

(MultipleItemsPerManufPart is set to Warning or Disallow.)

(Duplication of the same manufacturer part on an item occurs when an item has multiple pending changes which associate the same manufacturer part to that item and one change is released. The remaining pending changes are rebased on the latest released change. The remaining pending changes now include manufacturer part redline modifications to add a manufacturer part that already exists on the released item's Manufacturers table.)

- For ECOs, SCOs, and MCOs, checks for the use of the same manufacturer part on multiple items. (MultipleItemsPerManufPart is set to Warning or Disallow.)

  (Duplication of the same manufacturer part on multiple items occurs when multiple changes add the same manufacturer part to two or more items' Manufacturers tables, either by redline addition or redline replacement. When one of the changes is released, the manufacturer part's Where Used table is rebased to refer to the newly released item. The remaining pending changes now include manufacturer part redline modifications that would allow a single manufacturer part to be used by multiple items.)
- For ECOs, SCOs, and PCOs, if the Item Release First SmartRule is set to Disallow or Warning, then the routable object is checked to see if the child components have been released.
- Checks if any of the attachments of the routable object remain checked out.
- For every affected item, checks if any of the attachments remain checked out.
- Checks the Effectivity Date Order and Effectivity Gap SmartRule settings.
- Checks if items on the **Affected Items** tab have any other pending routable objects.
- For ECOs, validates the affected item's **Sites** tab **Make/Buy** setting with the site's **Site AML Allowed** and **AML Required on Buy** settings. For more information, see *Product Collaboration User Guide*.

Modifying the Make/Buy Field on the Item Sites Tab

If you have the appropriate modify privileges, you can modify the **Make/Buy** field in an item's Sites table, even if the item has been released. However, the Make/Buy setting is not revision-specific. When you modify the Make/Buy setting on any item revision, it is also modified for all revisions. The following restrictions apply when modifying the **Make/Buy** setting:

- When the item is included on the affected items table of a change order, the release audit validates the site's **Site AML Allowed** and **AML Required on Buy** settings with the item **Sites** tab **Make/Buy** setting for that revision. Past revisions are not audited. (A release audit is performed automatically when the change order is released.)
- Because the **Make/Buy** setting is not revision-specific and can be changed without using a change order, any validation violations caused by a modification to **Make/Buy** remain on the latest released revision of the item and may not be detected until the next time the item is added to a change order and the change order is release audited.

Note	When a routable object moves from the current status (including the Pending status type, the first status in the workflow) to the next status in the workflow, the system automatically performs a release audit depending on the workflow Pass Release Audit property settings for the current status.

In Java Client, the audit results box remains open until you close it. This allows you to refer to the audit results as you modify the routable object.

Note Your Discovery and Read privileges determine which objects and which fields you can see in the audit results box. If you do not have the appropriate privileges, you may see the words “No Privilege” displayed.

See also Switching a Routable Object from One Status to Another Status on page 218.

To audit the current status of a routable object in Java Client:

1. Open the routable object you want to audit.

   You may audit a routable object from any tab.

2. Click the **Audit Status** button above the tabs. Or right-click in the Agile Java Client window; in the menu that appears, choose **Audit Status**.

   The Audit Results for Audit Status dialog box appears.

   If there are errors, correct them and audit again.

3. To close the Audit Results dialog box, click **OK**.

To audit the current status of a routable object in Web Client:

1. Open the routable object you want to audit.

   You may audit a routable object from any tab.

2. Choose **Actions** > **Audit Status**.

   A note appears on the tab.

   If there are errors, correct them and audit again.

To audit the routable object for release in Java Client:

1. Open the routable object you want to audit for release.

   You may audit a change from any tab.

2. Click the **Audit Release** button above the tabs. Or right-click in the Agile Java Client window; in the menu that appears, choose **Audit Release**.

   The Audit Results for Audit Release dialog box appears.

   If there are errors, correct them and audit again.

3. To close the Audit Results dialog box, click **OK**.

To audit the routable object for release in Web Client:

1. Open the routable object you want to audit for release.

   You may audit a change from any tab.

2. Choose **Actions** > **Audit Release**.

   A note appears on the tab.

   If there are errors, correct them and audit again.

Autopromotion Failure

When all the approvers have signed off for a Review or Released status type, and all the required fields have been completed, the routable object can be automatically promoted to the next status with the AutoPromote feature.

If autopromotion fails, the routing manager receives a notification. The routing manager should investigate why autopromotion failed and take the necessary action to move the routable object forward in the workflow.

Autopromotion may fail for one or more of the following reasons:

- An attachment on the routable object, for example, a change order, remains checked out.
  - Either checkin the attachment or cancel the checkout, then use **Next Status** to move the routable object to the next status in the workflow. See Switching a Routable Object from One Status to Another Status on page 218.
- For one or more affected items of the routable object, an attachment remains checked out.
  - Either checkin the attachment or cancel the checkout, then use **Next Status** to move the routable object to the next status in the workflow. See Switching a Routable Object from One Status to Another Status on page 218.

Redline Conflicts

If an affected item has two or more unreleased changes and each of those changes includes redlines to the item. The redlines are in conflict, for example, both ECOs include redlines to the quantity of the same BOM item.

Or an affected item has two or more unreleased changes with redlines and there are no redline conflicts while both changes are unreleased. However, if the current change is released, it will cause the other change to have redline conflicts with the most recently released revision of the item.

The change analyst can determine how to resolve the conflict:

- Examine the pending changes and decide which redlines you want to keep. You can remove redlines or you may decide to remove the item from the Affected Items table of one of the changes. Advance the status manually.
- Or, manually advance the status of one of the changes. A warning appears that tells you that releasing the change will cause another change to lose redlines. Ignore the warning and release the change; the redlines are removed from the remaining change.

Ability to Fail Autopromote More than Once within same Change Status

This feature notifies whomever is specified in the status's If Autopromote Fails, Notify setting each time a change order fails to autopromote if new approvers were added since the last autopromote failure. Additionally, History is updated if Autopromote fails when a new approver is added but doesn't complete all workflow-required fields.

Demoting a Routable Object

You promote a routable object by moving it through the sequential list of statuses in the workflow,

as described in the previous section. If the workflow allows it, and if you have the appropriate privileges, you can also use the **Workflow** tab to demote a routable object by moving the routable object to a previous status in the workflow status list. From that previous status, the routable object then moves through the workflow again. For an example, see Returning a Routable Object to the Originator on page 240.

Note If the routable object has entered the first Released status type, moving the routable object to a previous status in the workflow status list unreleases the routable object, and may have undesirable consequences. For more information, see Unreleasing Routable Objects on page 245.

Agile administrative settings determine what happens when a routable object again moves through a status with approvers and observers (Review status type or Released status type) after status demotion. Depending on the settings, the following rules apply:

- Demotion Approvers Removal SmartRule:
  - **Remove**: any ad hoc approvers and observers added during the first time through the Review status type or Released status type are removed for the second Review status type or Released status cycle.
  - **Retain**: ad hoc approvers and observers added during the first time through the Review status type or Released status type are kept on the approvers and observers lists for the second Review status type or Released status type cycle.
- Demotion Signoff Removal SmartRule:
  - **Remove**: When a routable object enters the Review status type or Released status type the second time, all approvals and rejections from the first routing cycle are removed, and the approvers and observers must sign off again. (The approvals and rejections from the first routing cycle are still shown on the **Workflow** tab.)
  - **Retain**: When a routable object enters the Review status type or Released status type the second time, all the approvals and rejections from the first routing cycle are retained in the second routing status cycle and displayed in the signoff summary table. The approvers and observers who have already signed off do not need to sign off again.

Completing the Status Change

Whenever you switch a routable object from one status to another, you must complete the Change Status dialog box (Java Client) or page (Web Client). The Change Status dialog box or page for all status types includes a **Notify** field and a **Comments** field. For the Review status type and Released status type, additional fields for approvers and observers are included.

By default, you can switch a routable object to a Submit status type only if you are the originator, or if you have the appropriate privileges. Typically, the routing manager has the appropriate privileges to submit routable objects.

Note If the routing manager field (for example, the **Change Analyst** field) on the Cover Page of the routable object is left blank, and if the workflow is defined to notify the default routing manager, then when you switch to a Submit status type, the routable object is submitted to every user on the routing manager drop-down list.

You must include at least one change analyst in the **Notify** field of the Change Status dialog box or

page.

Only the originator and users with the appropriate privileges can submit a routable object.

You cannot submit a routable object to a routing manager who does not have Discovery and Read privileges for that routable object. (See the *Agile PLM Administrator Guide* for details.)

By default, you can switch a routable object to a Submit status type only if you are the originator, or if you have the appropriate privileges. Typically, the change analyst or component engineer has the appropriate privileges to submit routable object.

To complete the Change Status dialog box in Java Client:

1. Select a new status by using either the **Next Status** button or the **Workflow** tab. See Switching the Status of a Routable Object on page 218.

   The Change Status dialog box appears.

   The **Notify** field may already contain a list of names, as specified in the workflow, or the **Notify** field may be blank. In either case, you can add names to the **Notify** field if you choose to do so.

2. To add names to the **Notify** list, type the names of the users to be notified (with semicolons separating the names).

   Or click the **Notify** button to open the address book.

   You may select individual usernames or user groups. See Adding and Removing Approvers and Observers on page 228.

3. Add any comments in the **Comments** field.

4. Click the dialog button that completes the status change, for example, **Submit**, **Route**, or **Release**.

To complete the Change Status page in Web Client:

1. Select a new status by using either the **Next Status** button or the **Workflow** tab. See Switching the Status of a Routable Object on page 218.

   The Change Status page appears.

   The **Notify** field may already contain a list of names, as specified in the workflow, or the **Notify** field may be blank. In either case, you can add names to the **Notify** field if you choose to do so.

2. To add names to the **Notify** list, type the names of the users to be notified (with semicolons separating the names).

   Or click to open the address book.

   You may select individual usernames or user groups. See Adding and Removing Approvers and Observers on page 228.

3. Add any comments in the **Comments** field.

4. Click **OK**.

Completing the Status Change for a Review or Released Status

When you switch a routable object to a Review status type or a Released status type, you are routing it for signoff review to a list of approvers and observers. This list of approvers may also be called the CCB, or change control board.

When the Change Status dialog box (Java Client) or page (Web Client) appears, workflow property settings may have already assigned a list of users as approvers, observers, and users to notify. If you choose, you may add to this list. If these fields are blank, complete them. When the routable object is routed, it is attached to an email message and sent to all the approvers, observers, and users to notify. The email message contains an icon representing the change; double-clicking the icon opens the routable object. Approvers are required to either accept or reject the routable object. Observers may also accept or reject the routable object, but their response is not required. Users who are notified are not required to take any action.

To complete the Change Status to Review or Released dialog box in Java Client:

1. Select the Review status type or the Released status type by using either the **Next Status** button or the **Workflow** tab. See Switching the Status of a Routable Object on page 218.

   The Change Status dialog box appears.

2. Complete the **Approvers**, **Observers**, and **Notify** fields. These fields may already contain names as defined by the workflow; with appropriate privileges, you may add names. Type the names, separated by semicolons.

   Or click the **Approvers**, **Observers**, or **Notify** buttons to open the address book for each field.

   From the **Users** or **Groups** tab, you may select individual usernames or user groups. See Adding and Removing Approvers and Observers on page 228.

3. Add any comments in the **Comments** field.

4. If appropriate, select the **Urgent** checkbox. This adds “URGENT” to the subject of the email (if users are using Microsoft Outlook).

5. Click the dialog button that completes the status change, for example, **Route** or **Release**.

   The routable object is routed to all the approvers and observers, and their names are placed on the **Workflow** tab. All users in the **Notify** field receive email informing them of the new status of the routable object.

To complete the Change Status to Review or Released page in Web Client:

1. Select the Review status type or the Released status type by using either the **Next Status** button or the **Workflow** tab. See Switching the Status of a Routable Object on page 218.

   The Change Status page appears.

2. Complete the **Approvers**, **Observers**, and **Notify** fields. These fields may already contain names as defined by the workflow; with appropriate privileges, you may add names. Type the names, separated by semicolons.

   Or click to open the address book.

   You may select individual users, usernames or user groups. See Adding and Removing Approvers and Observers on page 228.

3. Add any comments in the **Comments** field.

4. If appropriate, select the **Urgent** checkbox. This adds “URGENT” to the subject of the email (if users are using Microsoft Outlook).

5. Click **OK**.

   The routable object is routed to all the approvers and observers, and their names are placed on

the **Workflow** tab. All users in the **Notify** field receive email informing them of the new status of the routable object.

Discovery Privileges of Approvers, Observers, and Users to Notify

If any of the users you select as approvers, observers, or users to notify do not have the appropriate Discovery or Read privileges for the routable object, an error message appears when you attempt to route or release the routable object. The error message lists the users that do not have the appropriate privileges and informs you that their names have been automatically removed from the distribution list.

For more information about Discovery and Read privileges, see the *Agile PLM Administrator Guide*.

Handling Routed Changes

The following sections describe procedures you perform when routing changes:

- When to Add Approvers and Observers on page 227
- Adding and Removing Approvers and Observers on page 228

When to Add Approvers and Observers

Routing managers may want to monitor routable objects assigned to them to make sure that the list of approvers and observers is complete. Workflows may assign approvers and observers according to the attributes of the affected items of a routable object; you can add approvers that were not automatically assigned by the workflow.

For example, at Acme Incorporated, each product line has several projects in development at one time. Acme uses a field to identify which project or projects each item (part or document) belongs to. The Libra Product Line workflow looks at the project assigned to the affected items on an ECO to determine which default approvers and observers to assign.

Mary Green creates ECO 333. She adds six Orion project objects to the **Affected Items** tab: three parts and three documents. Mary finishes preparing ECO 333 and switches it to the next status, where the routable object (ECO 333) is submitted to Bob Smith, the default change analyst.

To select approvers for the Orion project, the Libra Product Line workflow examines each item on the affected items table to determine if the field contains Orion. If *all* the items on the affected items table belong to the Orion project, then the list of Orion approvers, as defined in the workflow, is automatically added to the **Workflow** tab when ECO 333 is submitted to Bob.

However, in the case where some of the objects on the affected items table are documents, Acme requires that Orion team members in the Publications department (a user group) must also sign off the routable object. Since not all ECOs include documents to sign off, the Libra Product Line workflow does not automatically add to every ECO approvers from the Publications department.

Bob Smith, the change analyst, examines the ECO 333 and notices that some of the affected items are documents. Bob clicks **Add Approvers/Observers** on the ECO 333 page and adds all the members of the Orion Publications group as approvers. Bob can add approvers to any future Review or Released status type; the ECO does not need to be in the Review or Released status type to add approvers or observers.

See Adding and Removing Approvers and Observers on page 228 for detailed instructions for adding approvers and observers.

Adding and Removing Approvers and Observers

After a routable object has been routed for approval and enters a Review or Released status type, it may be necessary to either add or remove approvers or observers. This requires both of the following:

- The Ad Hoc Approvers/Observers property in the workflow is set to Yes.
- You have the appropriate privilege granted to you by your Agile administrator.

Note You cannot add a user as an approver or observer if that user does not have Discovery and Read privileges for that routable object.

Ad hoc approvers or observers can be added to or removed from the routable object only when it is in a Submitted, Review, or Released type status. Ad hoc approvers or observers cannot be added to or removed from the routable object when it is in the Pending type status.

You cannot add the same user to both the Approvers and the Observers list. If you attempt to add the same names to both lists, Agile PLM warns you and prompts you to delete the duplicate names from the list you select (approvers or observers).

To add an approver or observer in Java Client:

1. Select and open the routable object.
2. On the **Workflow** tab, select the status you want the additional people to approve.
3. Click the **Add Approver/Observer** button .
4. The Add Approvers and Observers dialog box appears.
5. Complete the **Approvers** and **Observers** fields. Type the names of the approvers or observers to add to the list (with semicolons separating the names).

   Or click the **Approvers** or **Observers** button to open the address book for each field.

   From the **Users** or **Groups** tab, you may select individual usernames or user groups
6. If you want to add an entire user group as an approver, you can either add the group itself or the members of the group. This determines whether only one member or all members of the group must sign off.
   a. Click the **Group** tab in the address book.
   b. Select one or more group names.

      (To select user names, expand a group by clicking the plus sign **+**.)

   c. To add the group name to the recipient list, click the button. The group name is added to the recipients list. Only one user in the group needs to sign off.
   d. To add the members of the group to the recipient list, click the button. The usernames of the members of the group are added to the recipient list. Each user in the group must sign off.

7. Add any comments.
8. Click **OK**.

To add an approver or observer in Web Client:

1. Select and open the routable object. Click the **Workflow** tab.
2. Click the **Add Approvers/Observers** button.

   The Add Approvers or Observers page appears.
3. Select the status you want the additional people to approve.
4. Complete the **Approvers** and **Observers** fields. Type the names of the approvers or observers to add to the list (with semicolons separating the names).

   Or click to open the address book.

   You may select individual usernames or user groups.

   To add an entire user group as an approver:

   a. In the **Select Group** drop-down list, select All Groups, and click **Find**. All the groups in the address book appear in the **Available Values** list.
   b. In the **Available Values** list, select either UserGroupName - All or *UserGroupName* - Any, where *UserGroupName* is the name of the user group you want to select. This determines whether all users in the group need to sign off (All) or only one member of a group needs to sign off (Any). Click the right arrow to move the group to the **Selected Values** list, and click **OK**.
5. Add any comments.
6. Click **OK**.

Note When you add a user group as an approver such that only one member of the group needs to signoff (*UserGroupName* - Any), escalation behavior is determined by the user group's profile settings for **Allow Escalation Designation Approval** (After Escalation or Always) and the user group's assigned escalation persons. However, when you add a user group as an approver such that all members of the group must signoff (*UserGroupName* - All), Agile PLM automatically adds each member of the group as an individual approver and, therefore, escalation behavior depends on the user profile settings and assigned escalation persons of each individual user.

To remove an approver or observer in Java Client:

1. Select and open the routable object.
2. On the **Workflow** tab, under the appropriate status, select the approvers or observers you want to remove from the list.
3. Click the **Remove Approver/Observer** button.
4. When prompted to confirm the removal action, click **Yes**.

Note You can remove an approver only if that approver has not yet approved or rejected the routable object.

To remove an approver or observer in Web Client:

1. Select and open the routable object.
2. Click the **Remove Approvers/Observers** button.

   The Remove Approvers or Observers page appears.
3. Select the status for which you want to remove approvers or observers.
4. Enter the names of approvers or observers to be removed from the list. Type the names (with semicolons separating the names).

   Or click to open the address book. The approvers or observers appear in the **Available Values** list. Select the usernames or groups you want to move, and click the right arrow to move them to the **Selected Values** list, and click **OK**.
5. Enter any comments.
6. Click **OK**.

Note	You can remove an approver only if that approver has not yet approved or rejected the routable object.

Approving Routable Objects

When you approve a routable object, the approval and any comments are shown on the **Workflow** tab.

To approve a routable object in Java Client:

1. Open the routable object.
2. Click the **Approve** button to open the Approve dialog box.
3. Enter any comments in the **Comments** field.

   Completing the **Comments** field may be either required or optional, depending on workflow settings.
4. Click any of these checkboxes if you want to notify these people: **Notify Change Analyst**, **Notify Originator**, **Notify Reviewers**. If you select **Notify Reviewers**, you can use the drop-down list to choose a different workflow status.
5. Depending on the Agile PLM system settings and workflow definitions, and the conditions under which you are signing off, the Approval dialog may include the following fields or lists that you must fill in:
   a. **Escalated From:** A list of escalations for approver users or groups for which you are the Designated Escalation Person.
      - Click the down arrow next to the **Escalated From** field.
      - To select the users or groups for which you wish to approve, in the dialog box that appears, select a user or group in the Choices list or the Selected list and click the right or left arrows to move the your selections from one list to the other. If you if you do not wish to approve for any escalations, leave the Selected list blank.
      - Click **OK**.

b. **Transferred From:** A list of transfer authorities for approver users or groups for which you are the Transfer To person.
   - Click the down arrow next to the **Transfer From** field.
   - To select the users or groups for which you wish to approve, in the dialog box that appears, select a user or group in the Choices list or the Selected list and click the right or left arrows to move the your selections from one list to the other. If you do not wish to approve for any transfers, leave the Selected list blank.
   - Click **OK**.

c. **Approval Group(s):** A list of the approver groups of which you are a member.
   - Click the down arrow next to the **Approving for Group(s)** field.
   - To select the users or groups for which you wish to approve, in the dialog box that appears, select a user or group in the Choices list or the Selected list and click the right or left arrows to move the your selections from one list to the other. If you do not wish to approve for any groups, leave the Selected list blank.
   - Click **OK**

d. Signoff for Self: When you are also an individual approver, a checkbox is displayed next to your name.
   - Check the checkbox to indicate that you are approving for yourself, in addition to any group, escalation, or transfer approvals. If you do not wish to approve for yourself, uncheck the checkbox.

e. Dual Identification: Depending on system settings, you may be required to enter dual types of identification.
   - The first identification type is your approval password. Enter your approval password in the **Password** field.
   - The second identification type depends on Agile PLM settings and may be either your userID (username) or your login password.

Note When presented with multiple signoff possibilities (escalations, transfers, groups, or self) you must select at least one group or person for whom you are approving.

6. Click **Approve**.

To approve a routable object in Web Client:

1. Open the routable object.
2. Click the **Approve** button to open the Approve page. The **Approve** and **Reject** buttons appear after the routable object is moved to a certain status, for example, a problem report moves from the Submitted to the Review status.
3. Enter any comments in the **Comments** field.

   Completing the **Comments** field may be either required or optional, depending on workflow settings.
4. Click any of these checkboxes if you want to notify these people: **Notify Change Analyst**, **Notify Originator**, **Notify Reviewers**.
5. Depending on the Agile PLM system settings and workflow definitions, and the conditions under which you are signing off, the Approval page may include the following fields or lists that you must fill in:
   a. **Escalated From:** A list of escalations for approver users or groups for which you are the Designated Escalation Person.

- Click the button next to the **Escalated From** field.
- To select the users or groups for which you wish to approve, in the dialog box that appears, select a user or group in the Available Values list or the Selected Values list and click the right or left arrows to move the your selections from one list to the other. If you if you do not wish to approve for any escalations, leave the Selected Values list blank.
- Click **OK**.

b. **Transferred From:** A list of transfer authorities for approver users or groups for which you are the Transfer To person.

- Click the button next to the **Transfer From** field.
- To select the users or groups for which you wish to approve, in the dialog box that appears, select a user or group in the Available Values list or the Selected Values list and click the right or left arrows to move the your selections from one list to the other. If you if you do not wish to approve for any transfers, leave the Selected Values list blank.
- Click **OK**.

c. **Approving for Group(s):** A list of the approver groups of which you are a member.

- Click the button next to the **Approving for Group(s)** field.
- To select the users or groups for which you wish to approve, in the dialog box that appears, select a user or group in the in the Available Values list or the Selected Values list and click the right or left arrows to move the your selections from one list to the other. If you if you do not wish to approve for any groups, leave the Selected Values list blank.
- Click **OK**

d. Signoff for Self: When you are also an individual approver, a checkbox is displayed next to your name.

- Check the checkbox to indicate that your are approving for yourself, in addition to any group, escalation, or transfer approvals. If you do not wish to approve for yourself, uncheck the checkbox.

e. Dual Identification: Depending on system settings, you may be required to enter dual types of identification.

- The first identification type is your approval password. Enter your approval password in the **Password** field.
- The second identification type depends on Agile PLM settings and may be either your userID (username) or your login password.

Note	When presented with multiple signoff possibilities (escalations, transfers, groups, or self) you must select at least one group or person for whom you are approving.

6. Click **Approve**.

When all the approvers have approved, the routable object is ready to move to the next status in the status list.

- If the AutoPromote property for the status is set to Yes, and the required fields are filled in, then the routable object is automatically promoted to the next status in the status list.
- If the AutoPromote property for the status is set to No, then an email message notifies the change analyst, component engineer, or other routing manager that all the approvers have

approved the routable object.

Rejecting Routable Objects

When you reject a routable object, the rejection and any comments appear on the **Workflow** tab, and the specified users receive an email message. Usually, this is the change analyst or component engineer. The email message states that you have rejected the routable object.

If a routable object is first rejected but then later approved, the **Workflow** tab shows only the approval and not the rejection. However, the **History** tab shows both actions.

To reject a routable object in Java Client:

1. Open the routable object.
2. Click the **Reject** button to open the Reject dialog box.
3. Enter any comments in the **Comments** field.

   Completing the **Comments** field may be either required or optional, depending on workflow settings.
4. Depending on the Agile PLM system settings and workflow definitions, and the conditions under which you are signing off, the Reject dialog may include the following fields or lists that you must fill in:
   a. **Escalated From:** A list of escalations for approver users or groups for which you are the Designated Escalation Person.
      - Click the down arrow next to the **Escalated From** field.
      - To select the users or groups for which you wish to reject, in the dialog box that appears, select a user or group in the Choices list or the Selected list and click the right or left arrows to move the your selections from one list to the other. If you if you do not wish to reject for any escalations, leave the Selected list blank.
      - Click **OK**.
   b. **Transferred From:** A list of transfer authorities for approver users or groups for which you are the Transfer To person.
      - Click the down arrow next to the **Transfer From** field.
      - To select the users or groups for which you wish to reject, in the dialog box that appears, select a user or group in the Choices list or the Selected list and click the right or left arrows to move the your selections from one list to the other. If you if you do not wish to reject for any transfers, leave the Selected list blank.
      - Click **OK**.
   c. **Approval Group(s):** A list of the approver groups of which you are a member.
      - Click the down arrow next to the **Approving for Group(s)** field.
      - To select the users or groups for which you wish to reject, in the dialog box that appears, select a user or group in the Choices list or the Selected list and click the right or left arrows to move the your selections from one list to the other. If you if you do not wish to reject for any groups, leave the Selected list blank.
      - Click **OK**
   d. Signoff for Self: When you are also an individual approver, a checkbox is displayed next to your name.
      - Check the checkbox to indicate that you are rejecting for yourself, in addition to any

group, escalation, or transfer rejections. If you do not wish to reject for yourself, uncheck the checkbox.

e. Dual Identification: Depending on system settings, you may be required to enter dual types of identification.
   - The first identification type is your approval password. Enter your approval password in the **Password** field.
   - The second identification type depends on Agile PLM settings and may be either your userID (username) or your login password.

Note When presented with multiple signoff possibilities (escalations, transfers, groups, or self) you must select at least one group or person for whom you are rejecting.

5. Click the **Notify** button to add any users to be notified.
6. Click **Reject**.

To reject a routable object in Web Client:

1. Open the routable object.
2. Click the **Reject** button to open the Reject page.
3. Enter any comments in the **Comments** field.

   Completing the **Comments** field may be either required or optional, depending on workflow settings.
4. Depending on the Agile PLM system settings and workflow definitions, and the conditions under which you are signing off, the Reject page may include the following fields or lists that you must fill in:
   a. **Escalated From:** A list of escalations for approver users or groups for which you are the Designated Escalation Person.
      - Click the button next to the **Escalated From** field.
      - To select the users or groups for which you wish to reject, in the dialog box that appears, select a user or group in the Available Values list or the Selected Values list and click the right or left arrows to move the your selections from one list to the other. If you if you do not wish to reject for any escalations, leave the Selected Values list blank.
      - Click **OK**.
   b. **Transferred From:** A list of transfer authorities for approver users or groups for which you are the Transfer To person.
      - Click the button next to the **Transfer From** field.
      - To select the users or groups for which you wish to reject, in the dialog box that appears, select a user or group in the Available Values list or the Selected Values list and click the right or left arrows to move the your selections from one list to the other. If you if you do not wish to reject for any transfers, leave the Selected Values list blank.
      - Click **OK**.
   c. **Reject for Group(s):** A list of the approver groups of which you are a member.
      - Click the button next to the **Rejecting for Group(s)** field.
      - To select the users or groups for which you wish to reject, in the dialog box that

appears, select a user or group in the Available Values list or the Selected Values list and click the right or left arrows to move the your selections from one list to the other. If you if you do not wish to reject for any groups, leave the Selected Values list blank.

- Click **OK**

d. Signoff for Self: When you are also an individual approver, a checkbox is displayed next to your name.
   - Check the checkbox to indicate that you are rejecting for yourself, in addition to any group, escalation, or transfer rejections. If you do not wish to reject for yourself, uncheck the checkbox.

e. Dual Identification: Depending on system settings, you may be required to enter dual types of identification.
   - The first identification type is your approval password. Enter your approval password in the **Password** field.
   - The second identification type depends on Agile PLM settings and may be either your userID (username) or your login password.

Note	When presented with multiple signoff possibilities (escalations, transfers, groups, or self) you must select at least one group or person for whom you are rejecting.

5. Click the button next to the **Notify** field to add any users to be notified.
6. Click **Reject**.

When at least one approver has rejected a routable object, the following actions occur, as specified in the workflow property settings:

- The users specified in the workflow properties are notified that the routable object has been rejected.
- If the AutoPromote property is set to Yes, then the routable object is not promoted to the next status in the status list.
- Depending on the workflow property settings, the object may switch to a specified status when it has been rejected.

Reminder Period and Review Escalation Period

The reminder period and the review escalation period are periods of time defined for each Review or Released status type in each workflow. For example, the reminder period for the CCB status in the Default Change Orders workflow is 48 hours, and the review escalation period is 96 hours. The reminder period and the review escalation period begin when the routable object enters a Review or Released status type. The reminder period is shorter than the escalation period so the approvers have time to respond before the escalation period elapses.

Each Review or Released status type has its own reminder period and review escalation period. If a workflow has several Review or Released status types, each one may have a different length of time for both its reminder period and review escalation period.

When the reminder period elapses, if an approver has not approved or rejected the routable object, a reminder email is sent to the approver. The change analyst or component engineer receives a similar email.

When the escalation period elapses, if an approver has not approved or rejected the routable

object, an email is sent to the appropriate designated escalation person. A similar email notifies the change analyst or component engineer that the routable object has been escalated to the specified designated escalation person. The designated escalation person may approve or reject the routable object in the place of the original approver.

When reminder and escalation notifications are sent, the actions are recorded on the **History** tab.

Designated Escalation Person

Each user or user group may have multiple designated escalation persons. A designated escalation person can be an individual user or user group.

Your Agile administrator determines whether your designated escalation persons are able to sign off a routable object for you at any time, or only after the escalation period has elapsed. See your Agile administrator if you have questions about your designated escalation persons.

For information about defining escalations, see Navigating in Agile Java Client on page 7.

If the review escalation period elapses, the approver's designated escalation persons are notified by email that the approver has not responded. Now the designated escalation persons may approve or reject the routable object in the place of the original approver. If the designated escalation person approves or rejects the routable object, then the name is recorded on the **Workflow** tab and the **History** tab as the Signoff user.

Note	If the designated escalation person is a user group, only one member of the group needs to sign off the routable object. When the routable object has been signed off, the routable object no longer appears in the Inbox of the other members of the group.

Transferring Signoff Authority

If you have the appropriate privileges, you can temporarily transfer your signoff authority for the routable object to one or more Agile users. For example, if you know you will be on vacation for a week, you can give other users the authority to sign off routable objects for you while you are gone. You can specify which routable objects to transfer to which user.

In addition, if you have the appropriate privileges, you can also transfer signoff authority for other users. For example, if Mary will be on vacation, you can give Bob the authority to sign off routable objects for Mary while she is gone.

Note	Signoff authority is transferred for users who are assigned approvers on a routable object. Signoff authority is not transferred for observers.

To transfer signoff authority for yourself or others in Java Client:

1. Choose **Settings** > **Transfer Authority** in the main menu bar. The Transfer Authority dialog box appears, which lists the transfer authority definitions you have the ability to modify or delete.
2. Click the **New** button. The New Transfer Authority dialog box appears.
3. Select yourself or another user to transfer authority from, then select the user who is receiving signoff authority.

Note Users who are receiving the authority must have the appropriate privileges to sign off the routable objects transferred to them. If you have questions about privileges, see your Agile administrator.

4. In the **Select Criteria** list, click to select the type of information to transfer.

   To view the filter conditions for the selected criteria, click the **View** button in the Criteria pane. The criteria is displayed, much like a search definition, in a read-only dialog box. You can verify whether the selected transfer criteria will find the routable objects you want to transfer. Click **Cancel** to close the dialog box.

   Note The list of criteria is quite extensive. If you have questions about which criteria would best suit your needs, contact your Agile administrator, who manages all global criteria. Alternatively, consider defining a *personal* criteria that you can then use for transferring authority. See Defining Personal Criteria for Authority Transfers on page 239 for information about creating personal criteria.

5. Specify a start date and an end date.
6. Under **Affected Changes**, specify whether you want all routable objects in your Inbox to be transferred, or only routable objects that arrive in your Inbox within the date range you specified.
7. Click **OK** to complete the transfer.

   The new transfer authority definition appears in the Transfer Authority dialog box.

8. Click **Close**.

To transfer signoff authority for yourself or others in Web Client:

1. Click **Tools** > **My Settings** > **Transfer Authority**. The Transfer Authority page appears.
2. Click the **Create** button. The Create Transfer Authority page appears.
3. Select yourself or another user to transfer authority from, then select the user who is receiving signoff authority.

   Note Users who are receiving the authority must have the appropriate privileges to sign off the routable objects transferred to them. If you have questions about privileges, see your Agile administrator.

4. In the **Criteria** list, click to select the type of information to transfer.

   Note The list of criteria is quite extensive. If you have questions about which criteria would best suit your needs, contact your Agile administrator, who manages all global criteria. Alternatively, consider defining a *personal* criteria that you can then use for transferring authority—click **Tools** > **My Settings** > **Personal Criteria**. See Defining Personal Criteria for Authority Transfers on page 239 for information about creating personal criteria.

5. Specify a start date and an end date.
6. In the **Affected Changes** list, specify whether you want all routable objects in your Inbox to be transferred, or only routable objects that arrive in your Inbox within the date range you specified.
7. Click **Finish** to complete the transfer.

Routable Objects Affected During the Transfer Period

If the Transfer Authority **Affected Changes** property is set to **All Changes During Time Period**, the following conditions define the routable objects are transferred:

- The routable object meets the criteria defined in the transfer authority.
- The routable object enters a workflow status that has a list of approvers (a Review-type status or a Released-type status) during the time period defined in the Transfer Authority.
- The From user is an approver for that workflow status.

- If the Transfer Authority **Affected Changes** property is set to **All Changes**, the following conditions define the routable objects are transferred:
  - The conditions listed above for **All Changes During Time Period**.
  - In addition, all criteria-defined routable objects that were awaiting signoff by the From user at the time the Transfer Authority was created (in a Review-type status or a Released-type status).
- Routable objects that are created during the Transfer Authority time period that do not also enter a Review-type or Released-type status during the time period are not transferred to the To user.

The Start and End dates are time specific. If you enter today's date as the start date, and the time component of the date is in the past, Agile PLM creates the Transfer Authority with the current date and time.

Modifying Signoff Authority Transfers

With the appropriate privileges, you can modify or delete signoff authority transfers at any time. For each authority transfer, you can modify the person who receives signoff authority, the start and end dates, and whether or not to transfer routable objects already in the Transfer To user's Inbox.

You can also modify and reuse any expired authority transfer at a future date.

Your Transfer Authority privileges determine which authority transfers you can modify:

- If you have privileges to create only your own authority transfers, you can modify only your own authority transfers.
- If you have privileges to create authority transfers for other users, you can modify any authority transfers created by any user.

To modify signoff authority in Java Client:

1. Choose **Settings** > **Transfer Authority** in the main menu bar. The Transfer Authority dialog box appears, which lists the transfer authority definitions you have the ability to modify or delete.
2. Click to select the transfer authority definition you want to change, then click the **Modify** button. The Modify Transfer Authority dialog box appears.
3. Change the settings as needed.

Note	Users who are receiving the authority must have the appropriate privileges to sign off the routable objects transferred to them. If you have questions about privileges, see your Agile administrator.

4. Click **OK** to complete the transfer.

   The modified transfer authority definition appears in the Transfer Authority dialog box.

5. Click **Close**.

To modify signoff authority in Web Client:

1. Click **Tools** > **My Settings** > **Transfer Authority**. The Transfer Authority page appears.
2. Select the rows you want to modify, then click the **Edit** button.
3. Change the settings as needed.

   Note Users who are receiving the authority must have the appropriate privileges to sign off the routable objects transferred to them. If you have questions about privileges, see your Agile administrator.

4. Click **Save**.

Deleting Signoff Authority Transfers

To delete one or more transfers of signoff authority in Java Client:

1. Choose **Settings** > **Transfer Authority** in the main menu bar. The Transfer Authority dialog box appears, which lists the transfer authority definitions you have the ability to modify or delete.
2. Click to select the transfer authority definition you want to change, then click the **Delete** button.
3. When prompted, click **Yes**.
4. Click **Close** to close the Transfer Authority dialog box.

To delete one or more transfers of signoff authority in Web Client:

1. Click **Tools** > **My Settings** > **Transfer Authority**. The Transfer Authority page appears.
2. Select the rows you want to delete, then click the **Delete** button.

Defining Personal Criteria for Authority Transfers

A criteria is similar to an advanced search. The attributes used to create criteria are similar to the fields used to create advanced searches. Criteria can also be thought of as “filters” or “qualifying descriptions” of, in the case of escalations or authority transfers, the changes that will be escalated or transferred.

For example, you could create a personal criteria for all ECOs that affect a specified product line.

To create a personal criteria in Java Client:

1. Choose **Settings** > **Transfer Authority** in the main menu bar. The Transfer Authority dialog box appears, which lists the transfer authority definitions you have the ability to modify or delete.
2. Either click the **New** button or select a row and click the **Modify** button. The New or Modify Transfer Authority dialog box appears.
3. In the Criteria pane, click the **New** button to display the New Personal Criteria dialog box.
4. Enter a name for the criteria.

Note The personal criteria that you create appear in the Transfer Authority criteria list preceded by your name, making them easier to locate. For example, if Bob Jones enters "All Leo Projects," the criteria appears in the Transfer Authority criteria list as "Bob Jones.All Leo Projects."

5. Enter a description for the criteria.

   Using the sample name above, the description might be "All changes in the Leo product line."

6. You define criteria in the New Personal Criteria dialog box the same way that you define search conditions in the Advanced Search wizard. Fill in the fields. For more information about searching, see Finding Agile Data with Searches on page 145.

7. Click **OK**.

   The new criteria appears in the Criteria pane in the Transfer Authority dialog box. You can now select this criteria when defining or modifying a transfer authority.

To create a personal criteria in Web Client:

1. Click **Tools** > **My Settings** > **Personal Criteria**.
2. Click the **Create** button.
3. Enter a name for the criteria. The Create Personal Criteria window appears.

   Note The personal criteria that you create appears in the Transfer Authority criteria list preceded by your name, making it easier to locate. For example, if Bob Jones enters "All Leo Projects," the criteria appears in the transfer authority **Criteria** list as "Bob Jones.All Leo Projects."

4. Enter a description for the criteria.

   Using the sample name above, the description might be "All changes in the Leo product line."

5. You define criteria in the Create Personal Criteria wizard the same way that you define search conditions in the Advanced Search wizard. Fill in the fields. For more information about searching, see Finding Agile Data with Searches on page 145.

6. Click **Finish**.

   The new criteria appears in the **Criteria** drop-down list. You can now select this criteria when defining a transfer authority (**Tools** > **My Settings** > **Transfer Authority**).

Returning a Routable Object to the Originator

You return a routable object to the originator by switching the status to the Pending status type. Before you can switch a routable object back to the Pending status type, you need the appropriate privileges. Usually, the change analyst and component engineer have these privileges. If you need them and do not have them, see your Agile administrator.

When a change analyst or component engineer switches a routable object from a workflow status (not from the Unassigned status) to the Pending status type (the first status in the workflow status list), the originator is notified. The originator is now able to edit the routable object, including editing items on the **Affected Items** tab and selecting a different workflow.

When the originator completes edits to the returned routable object and then switches it to the next

status in the workflow status list, the routable object moves through the workflow status list and enters the Review status type or Released status type cycle a second time. For details about what happens when the routable object enters the Review status type or Released status type cycle again, see Demoting a Routable Object on page 223.

To return a routable object to the originator in Java Client:

1. Open the routable object.
2. On the **Workflow** tab, click Pending (or a status of type Pending) in the chart on the **Workflow** tab.

   See Switching a Routable Object from One Status to Another Status on page 218.

   When the Change Status dialog box appears, complete the **Notify** field and add comments.
3. Click **OK**.

   The status of the routable object switches to the Pending status type.

Note	Approvals and rejections from previous routing cycles appear on the **Workflow** tab, but they are not active. Only approvals and rejections for the latest routing cycle on the **Workflow** tab are allowed. The **History** tab also shows the actions of the earlier routing cycles.

   You cannot return a routable object to an originator who does not have Discovery and Read privileges for that object. (See the *Agile PLM Administrator Guide* for details.)

To return a routable object to the originator in Web Client:

1. Open the routable object.
2. On the **Workflow** tab, click Pending (or a status of type Pending) in the chart on the **Workflow** tab.

   When the Change Status page appears, complete the **Notify** field and add comments.
3. Click **OK**.

   The status of the routable object switches to the Pending status type.

Note	Approvals and rejections from previous routing cycles appear on the **Workflow** tab, but they are not active. Only approvals and rejections for the latest routing cycle on the **Workflow** tab are allowed. The **History** tab also shows the actions of the earlier routing cycles.

   You cannot return a routable object to an originator who does not have Discovery and Read privileges for that object. (See the *Agile PLM Administrator Guide* for details.)

Canceling a Routable Object

You can use the **Workflow** tab to cancel a routable object by switching the status to the Cancel status type if both of the following are true:

- The Cancel status type has been defined in the workflow as one of the valid next statuses.
- You have the appropriate privileges. (See your Agile administrator if you have questions about your privileges.)

For example, you create an ECO to modify an assembly and route it through workflow, but later decided not to modify it. So you can cancel the routable object itself. The reasons the ECO is

canceled would be recorded in the comments of the canceled ECO. But still you can keep the canceled ECO in Agile database.

Note	If you cancel a released routable object, the revision is removed from the item revision list of the affected items. A routable object with affected items that has been canceled cannot be uncanceled (moved to a different status in the workflow). The canceled routable object appears on the Change History table of the item's **Changes** tab. If there are redline edits associated with the routable object, redlines are dropped (discarded) and you cannot access the redline table of a canceled routable object. This differs from a routable object on hold; see Putting a Routable Object on Hold on page 243.

Canceling a routable object is not the same as deleting it. A routable object can be canceled due to a fundamental flaw or rejection by several approvers, but it remains in the database. See also Deleting Routable Objects on page 251.

When a routable object is canceled, it no longer has the current status, and the remaining statuses on the status list are skipped. All the remaining statuses on the status list show the name of the person who moved the routable object to Canceled under the Status Changed By column on the **Workflow** tab.

To cancel a routable object in Java Client:

1. Open the routable object.
2. On the **Workflow** tab, click Cancel in the chart.

When the Change Status dialog box appears, complete the Notify **field, and add comments.**

1. Click **OK**.

   The status of the routable object switches to the Cancel status type.

To cancel a routable object in Web Client:

1. Open the routable object.
2. On the **Workflow** tab, click Cancel in the chart.

   When the Change Status page appears, complete the **Notify** field, and add comments.
3. Click **OK**.

   The status of the routable object switches to the Cancel status type.

Uncanceling a Routable Object

You uncancel a routable object by using the **Workflow** tab to switch the status. You can switch to any status provided that:

- The status has been defined in the workflow as one of the valid next statuses.
- You have the appropriate privileges. (See your Agile administrator if you have questions about your privileges.)
- There are no items on the **Affected Items** tab of the routable object.

Note If you cancel a released routable object, the revision is removed from the item revision list of the affected items. A routable object with affected items that has been canceled cannot be uncanceled (moved to a different status in the workflow). This differs from a routable object on hold; see also Putting a Routable Object on Hold on page 243.

To uncancel a routable object in Java Client:

1. Open the routable object.
2. On the **Workflow** tab, select a status in the chart.

   When the Change Status dialog box appears, complete the **Notify** field, add approvers and observers if appropriate, and add comments.
3. Click **OK**.

   The status of the routable object switches to the selected status.

To uncancel a routable object status change in Web Client:

1. Open the routable object.
2. On the **Workflow** tab, select a status in the chart.

   When the Change Status page appears, complete the **Notify** field, add approvers and observers if appropriate, and add comments.
3. Click **OK**.

   The status of the routable object switches to the selected status.

Putting a Routable Object on Hold

The process of switching a routable object to the Hold status type is similar to the process of canceling an object. See Canceling a Routable Object on page 241 for detailed instructions.

When you put a routable object on hold, select the Hold status type instead of the Cancel status type.

For information about taking a routable object off hold, follow the directions described in Uncanceling a Routable Object on page 242.

Note A routable object with affected items that has been put on hold can be switched from a Hold status type to another status in the workflow. If you put a released routable object on hold, the revision remains on the item revision list of the affected items. This is a substantial difference between Cancel and Hold.

The routable object on hold appears in the Pending Changes table on the item's **Changes** tab.

Releasing Routable Objects

You can release routable objects by using the **Next Status** button on the **Workflow** tab. See Switching a Routable Object from One Status to Another Status on page 218.

If the AutoPromote property of the preceding Review status type is set to Yes, the routable object is

automatically released when all required fields are filled in and all approvers have approved the change.

Before a routable object can be released, the system checks for the following:

- The Category field and all other required fields are filled in. (Your Agile administrator determines which fields are required in the workflow property settings.)
- The routable object passes the release audit.

In addition, when a routable object releases an item, the system checks to see which sites the item is being released for, as indicated on the **Affected Items** tab of the routable object. The system then checks the following:

- The value in the **Make/Buy** field on the items' **Sites** tabs, to determine if any of the sites are specified as Buy. A warning is displayed when an AML is required for a Buy item.
- The **Site-Specific AML** field of the sites, to determine if any of the sites are required or allowed to have a site-specific AML.

You can use the **Audit Release** button (Java Client) or the **Audit Release** command on the **Actions** menu (Web Client) to verify that the routable object passes the release audit and that all required fields have been completed. For details, including the conditions a release audit checks, see Auditing Routable Objects on page 220.

Note	If you do not have Discovery and Read privileges for an item on the **Affected Items** tab of the routable object, you cannot release that routable object.

To release a routable object in Java Client:

1. Open the routable object.
2. If you want, audit the routable object (click the **Audit Release** button, or right-click and choose **Audit Release**).
3. On the **Workflow** tab, select the Released status type from the workflow status chart.

   Or click the **Next Status** button .
4. Complete the **Notify** field, and enter any comments in the **Comments** field.

   Complete the **Approvers** and **Observers** fields if you want an additional signoff cycle after the routable object has been released. Otherwise, leave these fields blank.

   See Completing the Status Change on page 224.
5. Click **Release**.

To release a routable object in Web Client:

1. Open the routable object.
2. If you want, audit the routable object (choose **Actions** > **Audit Release**).
3. On the **Workflow** tab, select the Released status type from the workflow status chart.
4. Complete the **Notify** field and enter any comments in the **Comments** field.

   Complete the **Approvers** and **Observers** fields if you want an additional signoff cycle after the routable object has been released. Otherwise, leave these fields blank.

See Completing the Status Change on page 224.

5. Click **OK**.

   If not all the required fields have been completed, you are prompted to complete them. Otherwise, the status of the routable object switches to Released.

For information about multiple Released status types, see Multiple Released Status Types on page 246.

Unreleasing Routable Objects

You can use the **Workflow** tab to unrelease a routable object by switching the routable object from a Released or Complete status type to a Pending, Submit, Review, Cancel, or Hold status type.

Routable objects can be interrelated in complex ways, for example, by their release order or by being listed on the **Relationships** tab one or more additional routable objects. Unreleasing any routable object can have unforeseen consequences.

Caution	Unreleasing a routable object is **not** a recommended practice. **Use extreme caution** when unreleasing routable objects if you are using Agile Content Service (ACS) or ChangeCAST. After you have released a routable object and it's been passed to your ERP system, unreleasing the routable object has no effect on the information in the ERP system. ACS and ChangeCAST do not pass the updated information about unreleasing a routable object to the ERP system, and any audit trails, records of tasks, or dependencies between objects are **not** restored.

You can unrelease a routable object, provided that:

- The workflow assigned to the routable object has been configured by the Agile administrator to allow you to switch a Released or Complete routable object to another status type. (The default workflows do not allow this procedure.)
- You have the appropriate privileges.
- No other changes have been made and released against the same items.

For example, when you are working with items and changes, if other changes have been created and released against the same items, you must first unrelease those later changes. Unrelease those changes in the reverse order in which they were created.

If you do not have Discovery and Read privileges for an item on the **Affected Items** tab of the routable object, you cannot unrelease that routable object.

To unrelease a routable object in Java Client:

1. Open the routable object.
2. On the **Workflow** tab, select a status from the chart. Do *not* select a Released or Complete status type.

Note	Selecting the Pending status type allows you to edit the unreleased routable object, including selecting a different workflow.

3. Complete the **Notify** field, and enter any comments in the **Comments** field. If appropriate, add

approvers and observers.

See Completing the Status Change on page 224.

4. Click **OK**.

To unrelease a routable object in Web Client:

1. Open the routable object.
2. On the **Workflow** tab, select a status from the chart. Do *not* select a Released or Complete status type.

Note	Selecting the Pending status type allows you to edit the unreleased routable object, including selecting a different workflow.

3. Complete the **Notify** field, and enter any comments in the **Comments** field. If appropriate, add approvers and observers.
4. Click **OK**.

Multiple Released Status Types

A workflow can have multiple Released status types. When the routable object enters the first Released status type, all the release checks are performed (described in Auditing Routable Objects on page 220), and any BOM or manufacturer data redlines data goes into effect in the affected items. The routable object is now released.

For subsequent Released status types, no additional checks or release actions are performed; the routable object remains released. However, the released routable object may be routed for additional approval cycles. This allows for individual approval cycles after release but before the routable object moves to the Complete status type. The routable object remains released as long as it moves from a Released status type to either another Released status type or to a Complete status type.

Note	Moving a routable object from a Released status type to a Pending, Submit, Review, Hold, or Cancel status type unreleases the routable object.

Use Case of First Released Status

This use case explains how the system refers to multiple Released statuses. The “first Released status” does release the workflow. The other Released statuses provide for additional review signoffs; they can also have Entry Required fields.

Let there be a workflow with multiple Released statuses – call them R1, R2, and R3 – and there are Entry Required fields set for each Release status. Also, a “non-first Released status” – in this case, R2 or R3 – has been permitted to be a Valid Manual Next Status from one of the pre-Released statuses (that is, you can skip the first Released status, the one that actually releases the workflow). Then, when you select that workflow and it moves from Pending status to R3 status, the system checks the Entry Required fields of the first Released status, R1.

It works this way because the workflow should not be released without checking the first Released status’s Entry Required fields, because that’s where objects are changed in the database because of the released Change. For example, when an item’s lifecycle is changed, its revision (rev) should

be incremented, and even if you are attempting to leapfrog over R1, R1's requirements are still important; if R1's Entry Required fields were ignored, you could end up with an improperly released item.

Adding Comments to the History Tab

If you have the appropriate privilege and the routable object has a **Comment** button, you can add a comment to the routable object's **History** tab and send that comment to the users you select.

To add a History tab comment in either Java Client or Web Client:

1. Open the routable object and click its **Comment** button.
2. In the displayed dialog or wizard, enter your comments in the **Comment** field.
3. Use the checkboxes to select default users to notify, such as the change analyst or the list of reviewers. Each type of routable object includes a selection of default users appropriate for that type of object.
4. Use the **Notify** field to specify additional users to notify.
5. When you are finished, click **Comment**.

Sending Comments to all Previous and Current CCB Members

When sending comments (by using the **Comment** button) from a Review or Released type status in a change, you can specify whether the comments are to be sent to only the *current* review or released status reviewers – that is, for the workflow's current status – or if comments are to be sent to all reviewers in both current and previous Review and Released statuses. In the Comment dialog (Java Client) and the Comment wizard (Web Client), a drop-down box (after the "Notify Reviewers for" checkbox) contains **Current Status** and **Current and Previous Statuses** for selection.

Changing a Routable Object's Subclass

Your Agile administrator can create new subclasses of routable objects. If you have the appropriate privileges, and the routable object is still in the Pending status type, you can change the subclass of a routable object to another subclass in the same class. For example, if your administrator has created the ECN (engineering change notice) subclass, you can change the subclass of a routable object in the Change Orders class from ECO to ECN.

Note	When you change the subclass of a routable object, some of its data fields may change, and all previous information about the Page Three section is cleared.

To change the subclass of a routable object in Java Client:

1. On the **Cover Page** tab of the routable object, select a new subclass *from t*he Object **Type** drop-down list. For example, for **Change Type**, you can select ECO or ECN.
   - If the **Page Three** tab is visible, a warning message appears, alerting you that all Page Three data is cleared.
   - Click **Yes** to continue changing the subclass and to allow Page Three data to be cleared.
   - Click **No** to cancel the change subclass process. No changes are made to the object.
2. If the new subclass has an autonumbering scheme assigned by your Agile administrator, Agile

asks if you want to continue using the same object number.

- Click **Yes** to change the subclass but retain the existing number.
- Click **No** to change the subclass and assign a new autonumber. If more than one autonumbering scheme applies, you are prompted to select the autonumbering scheme you want.

If the new subclass does not have an autonumbering scheme assigned by your Agile administrator, the process is completed with the subclass being changed but the number not being changed.

Note When you click the **AutoNumber** button , the number changes automatically. The autonumbering scheme assigned to the subclass you selected is used, or you are prompted to select one (if multiple schemes have been designated).

3. Agile PLM automatically numbers the routable object and displays the new number in the **Number** field, and the event is entered on the **History** tab of the routable object.

To change the subclass of a routable object in Web Client:

1. On the **Cover Page** tab of the change, click **Edit,** and select a new subclass from the *Object* **Type** drop-down list. For example, for **Change Type**, you can select ECO or ECN (engineering change notice).
2. If the Page Three section (on the **Cover Page** tab) is visible and has data, a warning message appears, alerting you that all Page Three data is cleared.
   - Click **OK** to continue changing the subclass and to allow Page Three data to be cleared.
   - Click **Cancel** to cancel the change subclass process. No changes are made to the object.
3. If the new subclass has an autonumbering scheme assigned by your Agile administrator, Agile Web Client asks if you want to select a new autonumber for the new subclass (unless autonumbering is required by your system, in which case you see a different warning message).
   - Click **OK** to continue the process of changing the number.
   - Click **Cancel** to change the subclass and use the **AutoNumber** button to change the number.

   If the new subclass does not have an autonumbering scheme assigned by your Agile administrator, the process is completed with the subclass being changed but the number not being changed.

   If autonumbering is required in your system, and more than one autonumber source is designated for the new subclass, a different warning is displayed.
   - Click **Yes** to select a different autonumber source.
   - Click **No** to use the same autonumber source.

   Note When you click the **AutoNumber** button , the number changes automatically. The autonumber scheme assigned to the subclass you selected is used, or you are prompted to select one (if multiple schemes have been designated).
4. Agile PLM automatically numbers the change and displays the new number in the **Number** field, and the event is entered on the **History** tab of the routable object.

After a Routable Object is Released

Releasing a routable object affects the appearance and behavior of the routable object's tabs, as well as the BOM of any items affected by the routable object that were included on the affected items list of that routable object.

On the **Cover Page** tab of the routable object:

- The stamp reflects the new status.
- The **Status** field reads Released.

On the **Affected Items** tab, the **Add** and **Remove** buttons (Java Client) or the **Add** and **Delete** buttons (Web Client) are disabled.

Note	If the workflow has more than one Released status type, the appearance and behavior of the routable object are altered only when the routable object enters the first Released status type. For more information, see Multiple Released Status Types on page 246.

Switching Routable Objects to Their Final Status

A routable object's workflow defines its final status. If the workflow has a status of type Complete, it is always the last status in the status list, before any Hold or Cancel status types.

Note	Depending on the assigned workflow, a routable object may not have a Complete status type. A Complete status type is not required in a workflow.

To examine the status lists of the workflows in use at your company, in Java Client, click the **View Workflows** button in the toolbar. In Web Client, choose **Actions** > **View Workflows**.

If the Released status type is set to autopromote and it immediately precedes the Complete status type, the routable object automatically switches to the Complete status type when all the required fields for the Released status type are filled in and any approvers have approved the routable object.

You must have the appropriate privileges to switch a routable object to its Complete status type. See your Agile administrator if you have questions about your privileges.

After a routable object has been switched to its final status, you cannot delete it unless you unrelease it first. See Deleting Routable Objects on page 251.

To switch a routable object to its final status in Java Client:

1. Open the routable object.
2. If you want, audit the routable object.
3. Select the Complete status type by using either the **Next Status** button or the **Workflow** tab.

   The Change Status dialog box appears.

4. Complete the **Notify** field.
5. Enter any comments in the **Comments** field.
6. Click **OK**.

   The routable object is switched to its final status.

To switch a routable object to its final status in Web Client:

1. Open the routable object.
2. If you want, audit the routable object.
3. Select the Complete status type by using either the **Next Status** button or the **Workflow** tab.

   The Change Status to *Complete status type name* page appears.
4. Complete the **Notify** field.
5. Enter any comments in the **Comments** field.
6. Click **OK**.

   The routable object is switched to its final status.

Redlining through ECOs, MCOs, PCOs and SCOs

Redlining highlights, in red, changes made to an object. Only ECOs, MCOs, PCOs, and SCOs have redlining functions. Use these changes when you need to modify a released item. For information about the functions of these types of changes, see the *Product Collaboration User Guide*.

Depending on your company policy, when you redline manufacturing data, use an ECO when you want to advance the revision of an item, or use an MCO when you *do not* want to advance the revision of an item.

For information about redlining a BOM, AML, and attachments, see Concepts and Terms in Agile PLM Solutions on page 65.

Redlining through ECOs

You can redline BOM and AML data and attachments using an ECO.

ECO changes let you release new items and modify previously released items. When you create an ECO, a preliminary revision is created for any items modified by the change (the ones listed on the **Affected Items** tab). When the ECO is released, the preliminary revision is converted to a released revision for each modified item.

Redlining through MCOs

You can redline AML data using an MCO.

MCOs are similar in appearance and function to an ECO. However, MCOs do not change the revision of an item, unlike an ECO. Instead, the MCO number is displayed alongside the corresponding revision number in the **Rev** drop-down list. For example, if there is a pending MCO #M12345 against Rev B of an item, then, on the **Rev** drop-down list, that revision is listed as (B)

M12345.

Redlining Prices through PCOs

You can redline prices using a PCO. Using the redlining feature, you can publish the price to your customers. For example, if you have renegotiated the price of a particular item with your supplier and you want to publish the new price, you can redline the price and route it through a PCO.

To redline the price through a PCO:

1. Open the PCO that contains the prices you want to redline.
2. Click the **Affected Prices** tab. Click the **Do Redlining** icon. The Price List Redline appears.
3. Click the **Add** button to add one or more prices. The Add Affected Prices Wizard appears.
4. Search for the prices you want to redline, or create a new price.
5. Enter the required information, and click **Finish**. The following fields are required:
   - Ship To
   - Price Effective From Date
6. The price is added to the **Price List Redline** tab. The added price is displayed in red.
7. Click the **Back to** *PCOnumber* button. The PCO page appears, with the **Has been redlined** icon in the rows for the prices you have redlined.

Redlining through SCOs

You can redline site-specific BOM and AML data using an SCO.

SCOs are similar in appearance and function to ECOs. However, SCOs do not change the revision of an item, unlike ECOs. Instead, the SCO number is displayed next to the corresponding revision number in the **Rev** drop-down list. For example, if there is a pending SCO S12345 against revision B of an item, then, on the **Rev** drop-down list, that revision is listed as (B) S12345.

Deleting Routable Objects

Agile Java Client and Web Client support “soft” and “hard” deletes. For general information about soft and hard deletes, see Working with Business Objects on page 85.

Note	You *can* undelete a soft-deleted object. You *cannot* undelete a hard-deleted object.

You can delete routable objects that meet the following criteria:

- You are the change analyst or component engineer, and your Agile administrator has given change analysts or component engineers the appropriate privileges to delete a routable object.
- The routable object is at the Pending status type or the Unassigned status.

If you do not have Discovery and Read privileges for any items on the Affected Items table, you cannot delete the routable object.

To delete a routable object that has already been released, you must first unrelease the routable object. You need the appropriate privileges to unrelease a routable object using the **Workflow** tab to switch it to a different status. See Unreleasing Routable Objects on page 245.

To soft-delete an unreleased routable object in Java Client:

1. Open the routable object that you want to delete.
2. Click the **Delete** button, and respond **Yes** to the confirmation prompt.

   The routable object is soft-deleted. It is no longer available for use. However, until it is hard-deleted, its number is reserved and cannot be reused.

To soft-delete an unreleased routable object in Web Client:

1. Open the routable object that you want to delete.
2. Choose **Actions** > **Delete**, and respond **OK** to the confirmation prompt.

   The routable object is soft-deleted. It is no longer available for use. However, until it is hard-deleted, its number is reserved and cannot be reused.

If you think you might want to undelete a soft-deleted routable object in the future, be sure to clear its **Affected Items** tab before you delete it. You can undelete only routable object with no entries on the **Affected Items** tab. If you want to keep the record of affected items but still want to delete the routable object, use the **Save As** command to copy it under another routable object number before deleting it.

To hard-delete a soft-deleted routable object (if you have the appropriate privileges) in Java Client:

1. From the **Recycle Bin Searches** folder, run the Deleted *Objects* search to locate the soft-deleted routable object you want to hard-delete.
2. Open the routable object.
3. Click the **Delete** button, and respond **Yes** to the confirmation prompt.

To hard-delete a soft-deleted routable object (if you have the appropriate privileges) in Web Client:

1. From the **Recycle Bin Searches** folder, run the Deleted *Objects* search to locate the soft-deleted routable object you want to hard-delete.
2. Open the routable object.
3. Choose **Actions** > **Delete**, and respond **OK** to the confirmation prompt.

Undeleting Routable Objects

Since soft-deleted routable objects still exist in the database, you can undelete them if you have the necessary privileges, and if the routable objects has no items on the **Affected Items** tab.

To undelete a routable object in Java Client:

1. Find the soft-deleted routable object by running the Deleted *Objects* search in the **Recycle Bin Searches** folder.
2. Open the deleted routable object you want to restore.
3. To undelete the routable object, choose the **Undelete** button.

To undelete a routable object in Web Client:

1. Find the soft-deleted routable object by running the Deleted *Objects* search in the **Recycle Bin Searches** folder.
2. Open the deleted routable object you want to restore.
3. To undelete the routable object, choose **Actions** > **Undelete**.

Printing Routable Object's Data

You can print routable objects and other data. With the routable object open, click the **Print** button (Java Client), or choose **Actions** > **Print** (Web Client)**.** You can print the current tab or all tabs.

Attachments are printed from their native applications or from the AutoVue for Agile viewer.

Chapter 9

Working with Attachments

This chapter includes the following:

- What are Attachments? 255
- Working with the Attachments Tab of Business Objects 259
- Basic Procedures on the Attachments Tab 267
- Adding and Removing Files via the Attachments Tab 273
- Revising Attachment Files 281
- About Item Revisions and File Folder Versions 285
- Viewing and Redlining Attachment Files in the AutoVue for Agile Viewer 290
- Generating Attachment Quick Access URLs 293
- Scan Utility 298

What are Attachments?

Attachments to Agile business objects contain pertinent information about the object in addition to the information recorded on the object tabs. Examples of attachment files are:

- Drawing files such as CAD drawings or scanned image files in viewable formats
- Web-based information in the form of URLs
- Specifications and other documents
- Non-viewable files, compressed files, and so on

Use the business object's **Attachments** tab to manage and access attachments. **Attachments** tab actions allow you to add, remove, open, view (in the AutoVue for Agile viewer), or get a copy of an attachment file. You can also check out and check in an attachment file in order to modify or update it. For more information about **Attachments** tab actions, see Working with the Attachments Tab of Business Objects on page 259.

Attachment file storage and retrieval is managed automatically by your Agile PLM system. Attachment files are stored in the Agile File Vault and each attachment file in the vault is associated with a numbered Agile file folder object. The concept is similar to the way in which you would file and store paper documents: sort the documents into file folders, label or number the file folders, and store them in a filing cabinet.

Attachment Files and Agile File Folders: an Analogy to Papers, Desks, and Vaults

Using numbered file folder objects and a locked Agile File Vault to store attachment files is similar in concept to the way you might manage paper documents that you must work with every day. The scenario that follows describes a typical office system, which will make the rules that govern Agile attachment files and file folders easier to follow.

Bob is an engineering manager, and managers at his company have to coordinate the designs of their products. Bob has a file cabinet, but he is afraid of losing track of his drawings so he keeps stacks of paper drawings on his desk and they never get filed. The drawings are associated with various projects that Bob manages. When Carl wants to see a particular drawing, he must ask Bob, and Bob searches through the piles on his desk. Bob often has several versions of a drawing, and it is difficult for him to locate the specific version that Carl remembers seeing. Of course, this sorting process is time-consuming and inefficient.

Bob decides to get organized, so he sorts the drawings and puts them into manila file folders, and he even puts a label on each folder with an identifying name or number. Bob puts all the versions of the same drawing in one file folder, newest version in front, oldest version in back. He then files the manila folders into his filing cabinet. He can lock the cabinet in order to keep the drawings secure. Now when Carl asks for a drawing by project name, folder number, and version—for example, the Acme project—Bob locates the Acme drawing that Carl needs.

However, six months later, Bob's archive of drawings has continued to grow. His naming of folders is somewhat inconsistent, and occasionally he cannot find what he wants. He spends too much time fielding requests from his staff, and he hands out various versions of drawings but then forgets who has what. When changes are made to a product, there is no control over what version of drawing plan should be used. Bob needs someone to help him manage the drawings, and other engineers in the company have the same problem.

Doris is tasked to create and manage the company's document control vault. Bob and his colleagues give all their drawings and file folders to Doris, who files them in a locked vault. Doris uses a document system that ensures she will always locate the correct file folder and correct version of a drawing. Now when Carl needs a drawing, he requests it from Doris, she locates it in the vault and makes a copy of it. She gives the copy to Carl, but the original drawing stays locked in the vault. Doris also marks the file folder as **Checked Out**. When a file folder is checked out, Doris does not allow any other person to update the drawings in that file folder.

When Carl brings Doris the updated drawing, she puts it in the file folder, records the new version number on the file folder and marks the file folder as **Checked In**. Now when Bob asks Doris for the Acme folder, he can see the progress of work done on the product by Carl and the other engineers.

If Bob happens to know the file folder number of the Acme drawing he wants to update, he can ask Doris to check out that file folder by its number. But he does not have to know the file folder number because Doris keeps track of the relationships between each project, the names and version numbers of the drawings for that project, and the file folder numbers where the drawings are stored.

Agile Document Management: Even More Efficient than Doris

The scenario above illustrates some problems that companies have as designs, data, and information accumulate on projects, as well as solutions that have been developed to manage and control the information. Agile PLM manages and controls the product record in electronic form, and Agile users have to become familiar with an arena in which design drawings or data are attachment files, manila folders are file folder objects, and the venerable file cabinet is accessed through the **Attachments** tab of any Agile business object, or from the **Files** tab of a file folder object. There is nobody named Doris controlling the file vault in Agile PLM, but you should recognize the same kind of business rules that have been incorporated into Agile's system of file security and management.

Files and URLs that are attached to—associated with—parts or other business objects have always been called *attachments* in Agile. A file folder is simply a numbered container or "wrapper" for attachment content. By referencing the same file folder number and version on their **Attachments**

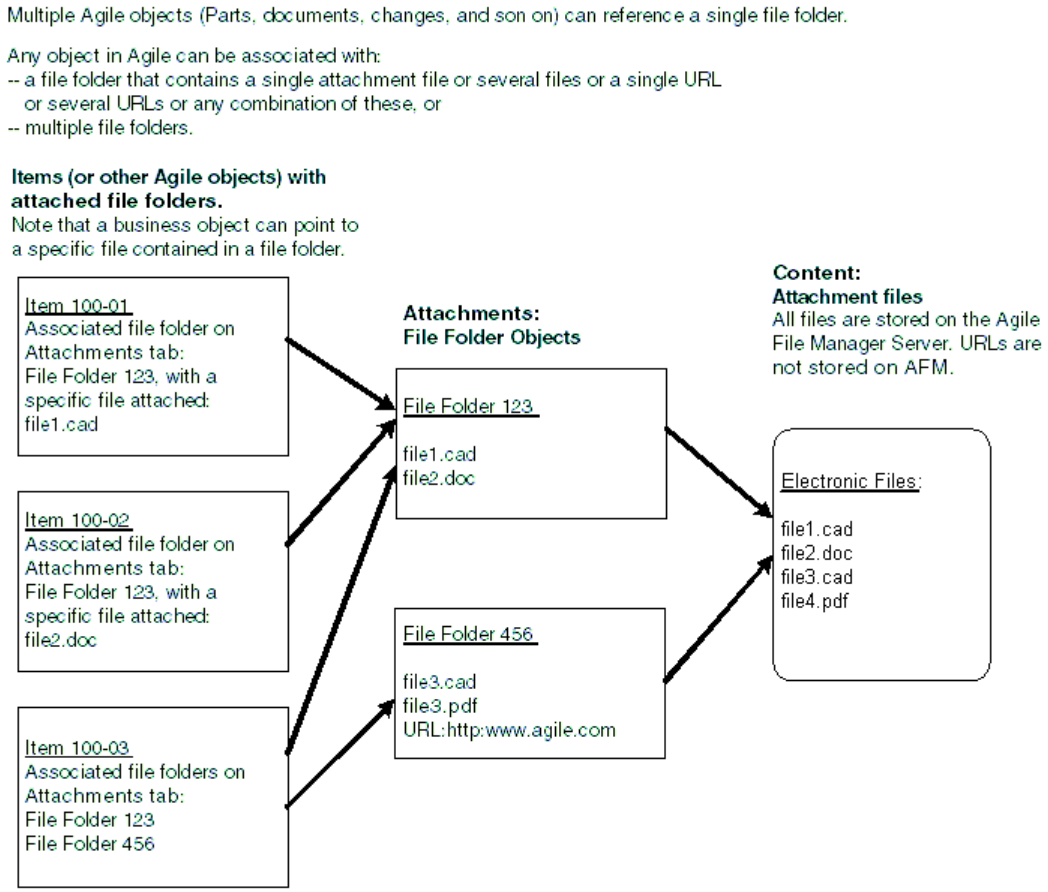
tabs, multiple business objects can use the same file attachment (for example, a single datasheet attached to multiple manufacturer parts). This ensures that the attachment content is always in sync with the business objects. Re-use of attachment files prevents the proliferation of multiple copies of the same file in the file vault.

The diagram below illustrates the relationships between business object **Attachments** tabs, file folders, and the file vault. Note that one file in a file folder can be attached to one business object, and another file in the *same* file folder can be attached to another business object.

Attachments to business objects are managed through the **Attachments** tab; use the **Attachments** tab features to add, remove, get, view, and update attachments. In addition, if your company's business processes require it, file folders can be managed and updated independently of other objects in the database. All attachment files are stored in the file vault, part of Agile File Manager (AFM). For more information about file folders, see Working with File Folders on page 303.

It is generally a best practice to limit each file folder to a single, attachable file or URL; however, file folders can contain any number of files and URLs. For example, a file folder might contain the same file under different formats, such as a CAD drawing that is saved in its native CAD format as well as in PDF format. Also, items or other Agile objects can have any number of file folders attached. In this way, every file, drawing, or URL that contributes to describing any part, product, or process at the enterprise can be referenced by multiple objects in Agile PLM.

The following diagram illustrates the relationship between business objects with file folders attached, file folder objects, and attachment file content. Once files are added to a file folder, other Agile objects can have any combination of those files attached by referencing the file folder. The following diagram illustrates a few cases.



What are Attachment Versions?

The version of a file folder is important to understand when you work with attachments. This is a brief introduction to versions. For more information about versions (of attachments) as well as revisions (of items), see About Item Revisions and File Folder Versions on page 285.

- On the **Attachments** tab of business objects, the Folder Version field in each row reports the version of the file folder that is attached to the object. The file folder version represents the version of the attached file.
- When you use the **Add** > **Files** feature of the **Attachments** tab to add business object attachment files from your local disk or network, Agile automatically creates a new file folder container for each of the added files and sets the version of each file folder to 1.
- Each time you modify the attachment file (by checking out the file, editing the file, and then

checking in the file), the file folder version number is incremented by one.

- A business object can attach (that is, point to) only one version of a file folder; you select this version when you add the attachment.
- By editing the attachment row, you can select a different version of the file you want to attach or reference from the **Attachments** tab. For example, if an attachment has file folder versions 1, 2, and 3, you can select any one of those versions in the attachment row, or you can select LATEST.
- "Latest-x" represents the dynamic "latest version of a file folder," where x is the highest numbered version up to this point. For example, Latest-x is seen as **Latest-3** on the business object's **Attachments** tab. When you select LATEST as the version number, the attachment row always refers to the latest version of the file, no matter how many times it has been updated (checked out and checked in).
- When you point to the latest version (that is, either Latest-x or x), you can check out and check in attachment files from the object's **Attachments** tab. You can checkout only the most recent version of the attachment. In this example, the version number must be either Folder Version Latest-3 or Folder Version 3. If the attachment row refers to a non-latest version (in this example, 1 or 2), the checkout button is disabled.
- If you have the appropriate privileges, you can open the file folder object by clicking its number on the **Attachments** tab. For more information about file management activities you can perform from the file folder object, see Working with File Folders on page 303.

If you want to access earlier versions of the attachment files, use the Show Versions feature **Attachments** tab to display and select a previous version of the file, as described below.

Working with the Attachments Tab of Business Objects

All business objects in Agile have an **Attachments** tab. Items—parts or documents—and manufacturer parts may reference attachment files more often than the other classes in Agile because those classes represent physical entities that often require supportive information; however, users will likely encounter objects from classes across Agile PLM solutions that have attachments. This section describes operations performed from the **Attachments** tab of any business object.

For more information about items and manufacturer parts, see the *Product Collaboration User Guide*.

You can use the **Attachments** tab to:

- Get a copy of an attachment file and place it in a location of your choice
- View an attachment file in the AutoVue for Agile viewer
- Open an attachment file in its native application
- Show previous versions of an attachment file
- Print attached files
- Add and remove attachments
- Check file folders out, modify them, and check file folders in

Buttons on the Attachments Tab

You need the appropriate privileges to perform any attachment file operation on the **Attachments** tab. The buttons on the **Attachments** tab are enabled or disabled, depending on your privileges and administrative settings. File Validation (Handle File Checksum) on page 328 addresses some of these dependencies.

The buttons in the following table are available to users with the required privileges. To view a file using AutoVue for Agile, double-click its File Name (Java Client) or click its File Name link (Web Client). If the file format is included on the list of valid viewer file types in Agile Administrator, the file opens in the AutoVue for Agile viewer. Otherwise, the file opens in its native application, provided the application is installed on your computer.

Note You cannot make changes to the **Attachments** tab of incorporated items. Once an item rev is incorporated, its attachments cannot be checked out from the item rev without a change. However, you can still check out or check in the associated file folder, and the folder version still increments upon checkin.

Attachment tab buttons, Java Client

Button	Name	Description
	Get Files	Select the rows you want, then click the **Get Files from Selected Attachments** button to place a copy of the selected files in the folder or location of your choice. These copies are in native application formats. Or Click the button and select **Batch Get All Files from this Object** to place a copy of all the object's attached files in the folder or location of your choice. These copies are in native application formats. If you selected a row with multiple files (indicated by a file folder icon in the row), the Select Files dialog appears, allowing you to select which files you want to get.
	Open Files	Click the **Open Files** button to open the files in file folders on the **Attachments** tab as a unit. In the case of multi-file file folders, you can choose an individual referenced file to open.
	Show Versions	Click the **Show Versions** button to open a table of all versions of selected attachment file. From this dialog you can view, get, open, and print a selected version.

Button	Name	Description
	View Files	Click the View Files button to view the selected files in the AutoVue for Agile viewer. Or, click the **View Files** button's drop-down arrow and select from the menu: **View** – view the files in AutoVue for Agile. **Cross Probe** – crossprobe between PCB and schematic files in two windows. **Compare** – compares the selected files and presents a comparison summary. **Overlay** – lets you lay the selected files over each other. **Digital Mockup** – loads multiple selected models into the same workspace, where they can be analyzed together. For example, you can check them for proper fit. **By Search** – find other files in the system, which you may want to (select from menu) cross probe, compare, overlay, or digital mockup (see above), without having to select two files from the same **Attachments** tab; that is, you could search and select one attached file from Part 234 and another attached file from Part 765. (For more information about Cross Probe, Compare, Overlay and Digital Mockup, see *Viewer Supplement.*)
	View Redline	For item objects, the **View Redline** button shows whether a file has been redlined by AutoVue for Agile. Click the button to view the file and its redlines in the AutoVue for Agile.
	Print Files	Click the **Print Files** button to print the corresponding attachment file. AutoVue for Agile is started in a separate browser window and begins the printing process.
	Edit	Click the **Edit** button to edit the Version, File Description, and Folder Description of the selected file that you want to attach, as well as any other editable, custom fields that your administrator has defined. The **Add** button is disabled if the item is incorporated

Button	Name	Description
	Add Files	Click the **Add** button to open the File Uploader. Or, click the **Add** button's drop-down arrow and select from the menu: **Files** – displays the File Uploader dialog, which allows you to drag and drop the files you want to attach. You can also click **Browse for Files** button to browse your computer or network for the files you want. To add multiple files as a single file folder, click the **Add all files to a single file folder** button. If you select the **UnZip all zipped files upon upload** checkbox, the ZIP file is unzipped and the contents are added as individual files. **Note** Selecting the **UnZip** checkbox is not recommended for very large files. **URLs** – brings up the Add URLs dialog **By Search** – brings up the Add Files by Search dialog **By Scan** – permit direct access to a file you want to scan. See Scan Utility on page 298. The **Add** button is disabled if the item is incorporated.
	Remove Files	The **Remove Files** button removes the selected attachment references from the **Attachments** tab. The file remains linked to the file folder object, and is not removed from the Agile File Management Server. The **Remove Files** button is disabled if the item is incorporated.
	Check Out	The **Check Out** button checks a single attachment file or multiple attachment files out of the file vault. From the business object, the checkout prompts you to get the file or files. You can download and edit the file. If you cancel the procedure, the attachment is checked out, but the file is not downloaded. When a folder is checked out, a ✔ appears in front of it on the **Attachments** tab. **Check Out** is disabled when the item is incorporated.
	Check In	Click the **Check In** button to return file(s) to the file vault. The file folder version number is advanced. Previous versions are accessible by using the **Show Versions** feature. **Check In** is disabled when the item is incorporated.
	Cancel Checkout	Click the **Cancel Checkout** button to cancel a checkout. It re-locks the selected file folder, so it is available to be checked out again. A user who has Cancel Checkout privilege can cancel the checkout. **Cancel Checkout** is disabled when the item is incorporated.
(no icon)	**Incorporate** or **Un-incorporated**	The information as to whether the part is Incorporated or Unincorporated is automatically filled.

Button	Name	Description
!	**Has Checksum Error**	The **Has Checksum Error** field is checked if the file has been modified directly in the file server vault. For more information, see Checksum File Validation.

Attachment tab buttons, Web Client

Button	Name	Description
	Edit	Click the **Edit** button to modify the Version, File Description, and Folder Description of the selected file that you want to attach, as well as any other editable, custom fields that your administrator has defined. The **Edit** button is disabled if the item is incorporated.
	Action: Open file in its native application	Click the File Name link. If the file format is included on the list of valid viewer file types in Agile Administrator, the file opens in the AutoVue for Agile viewer. Otherwise, the file opens in its native application, provided the application is installed on your computer.
	Remove	Removes all selected files from the **Attachments** tab. The **Remove** button is disabled if the item is incorporated.
   	Add	Click the **Add** button to open the File Uploader. Or, click the **Add** button's drop-down arrow and select from the menu: **Files** – if you are using File Productivity tools, displays the File Uploader dialog, which allows you to drag and drop the files you want to attach. You can also click **Browse for Files** button to browse your computer or network for the files you want. To add multiple files as a single file folder, click the **Add all files to a single file folder** button. If you select the **UnZip all zipped files upon upload** checkbox, the ZIP file is unzipped and the contents are added as individual files. **Files** – (no File Productivity tools) displays the Add File dialog, which allows you to browse for up to five files, add the files to a single file folder, and unzip zipped files. **Note** Selecting the **UnZip** checkbox is not recommended for very large files. For more information about File Productivity tools, see Using the Advanced File Uploader. **URLs** – brings up the Add URLs dialog **By Search** – brings up the Add Files by Search dialog

Button	Name	Description
		The **Add** button is disabled if the item is incorporated. **Note**: Either Advanced File Uploader or Standard File Uploader will be used depending on your user profile **File Productivity Preference** setting. For more information see Adding Attachment Files from your Local Disk or Network.
	Get Shortcut	Copies a URL to your clipboard, which you can paste into another software application, such as an email, document, or spreadsheet. The URL provides easy access to Agile attachments. For more information, see Accessing Files using URLs.
	View	Click the View Files button to view the selected files in AutoVue for Agile. Or, click the **View Files** button's drop-down arrow and select from the menu: **View** – view the files in the AutoVue for Agile. **Cross Probe** – crossprobe between PCB and schematic files in two windows. **Compare** – compares the selected files and presents a comparison summary. **Overlay** lets you lay the selected files over each other. **Digital Mockup** – loads multiple selected models into the same workspace, where they can be analyzed together. For example, you can check them for proper fit. **By Search** – find other files in the system, which you may want to (select from menu) cross probe, compare, overlay, or digital mockup (see above), without having to select two files from the same **Attachments** tab; that is, you could search and select one attached file from Part 234 and another attached file from Part 765. (For more information about Cross Probe, Compare, Overlay and Digital Mockup, see *Viewer Supplement.*)

Button	Name	Description
	Get File	Click the **Get Files** button to place a copy of the selected files in the folder or location of your choice. These copies are in native application formats. If you selected a row with multiple files (indicated by a file folder icon in the row), the Select Files dialog appears, allowing you to select which files you want to get.
	Check Out	The **Check Out** button checks a single attachment file or multiple attachment files out of the file vault. From the business object, the checkout prompts you to get the file or files. You can download and edit the file. If you cancel the procedure, the attachment is checked out, but the file is not downloaded. When a folder is checked out, a appears in front of it on the **Attachments** tab. **Check Out** is disabled when the item is incorporated.
	Check In	Click the **Check In** button to return file(s) to the file vault. The file folder version number is advanced. Previous versions are accessible by using the **Show Versions** feature. **Check In** is disabled when the item is incorporate
	Cancel Checkout	Click the **Cancel Checkout** button to cancel a checkout. It re-locks the selected file folder, so it is available to be checked out again. A user who has Cancel Checkout privilege can cancel the checkout. **Cancel Checkout** is disabled when the item is incorporated
	Print Files	Click the **Print Files** button to print the corresponding attachment file. AutoVue for Agile is started in a separate browser window and begins the printing process.
	Show Versions	Click the **Show Versions** button to open a table of all versions of selected attachment file. From this dialog you can view, get, open, and print a selected version.

Fields on the Attachments Tab

The following table lists fields on the **Attachments** tab. These apply to both Java and Web Clients, although the order of the fields may vary in each client.

Field	Description
	If a file has been modified directly in the file server vault, this icon appears in the field to indicate that the file **Has checksum error**. Click the icon to get information about the checksum error. See Checksum File Validation on page 284.
 	This icon appears in the field if the file **Has been redlined**. The **Do Redlining** icon will appear here from the file folder level for any file type that is listed in the Supported File Types and Valid Model File Type settings in Administrator. Both of these cases allow ad-hoc viewing and redlining.

Field	Description
✔	This icon appears in the field if the file **Has been checked out**.
Filename Java Client Web Client	The name of the file. This field begins with an icon just before naming the file or files: a "single file" icon is present in rows containing single attachment files; a "file folder" icon is present in rows containing multiple attachment files (that is, a file folder that contains multiple files). ▫ In Java Client, the attachment row must be selected in order to print, open, get, or view the file using buttons on the menu. ▫ In Web Client, click the filename to view the file in the Viewer.
File Description	Description of the referenced attachment files. To change File Description field, see Basic Procedures on the Attachments Tab on page 267.
File Size	Size of the file, in Bytes
File Type	The kind of file, for instance, document, graphic, drawing
Folder Number	The ID number assigned to the file folder
Folder Description	The description of the file folder
Folder Version	Reflects which version of the file folder that is being referenced by the business object. By default, the most recent version is shown, but you can select an earlier version.
Checkin User	Name of the person who checked in the referenced version of the file folder.
Checkout User	Name of the person who checked out the file folder; appears only when file folder is checked out
Checkout Date	Date when the file folder was checked out; appears only when file folder is checked out
Modified Date	Indicates when the file folder was checked back in after modifications
Last View Date	Date when the file was last viewed. (The **History** tab records detailed information about file viewing.)
Checkout Location	When you check out an attachment file and save a copy of the checked out file, Agile stores the checkout location (computer name and directory path name) in this field. When you check in, Agile uses the **Checkout Location** information to automatically locate the modified file to check in. **Note** In Web Client, this field is completed automatically only when using Advanced Productivity Components. See also Checking In Revised Attachment Files on page 283.
Attachment Type	File or Image

Basic Procedures on the Attachments Tab

On the **Attachments** tab of any business object, you can perform all the actions needed to add, view, manage, and update your attachment files.

Note	Your ability to use **Attachments** tab features is determined by your assigned roles and privileges. Contact your Agile administrator if you have questions about your **Attachments** tab privileges.

Getting Attachment Files

You can copy attachment files to the directory of your choice. This is called *getting* a file. You can get as many copies as you like. If you want to revise an attachment file and make the version public, you must check the file out, make changes, and check it back in. This is covered in Checking Out Attachment Files on page 282.

Several users can get the same attachment files simultaneously. You can get files that are checked out. Also, you can get a file even though the application used to create that file is not loaded on your computer.

You must have the appropriate privileges to get a copy of the file. If you have questions about your privileges, contact your Agile administrator.

Note	When you get an attachment file, the date and time stamps on your copy of the file reflects the date and time that you got the file, not the date that the file was attached or saved.

Java Client, Getting Attachment Files

To get copies of one or more attachment files from a business object in Java Client:

1. Display the **Attachments** tab of an object.
2. Select the rows of the files that you want to get.
3. Click the **Get Files** button .
   - If you selected a row with multiple files (indicated by a file folder icon in the row), the Select Files dialog opens.

     Select the files you want and click **OK**. The Select Directory dialog opens. Continue with the next step.
   - If you selected one or more rows that consist of a single attached file, the Select Directory dialog opens. Continue with the next step.
4. In the Select Directory dialog, specify the directory where you want to store the copies.

   If you want to get the files together in one ZIP file, click **Download the files in one ZIP file**. Specify a **ZIP filename**.
5. Click **OK**. The files (or ZIP file) are copied to the specified directory.

You will be prompted whether you want to open the file or files.

Java Client, Batch Get

To batch get copies of all the attachment files of a business object in Java Client:

1. Display the **Attachments** tab of an object.
2. Click the button drop-down menu for **Get Files** and select **Batch Get All Files from this Object**.
   - If the attachments table includes a row with multiple files (indicated by a file folder icon in the row), the Select Files dialog opens.

     Select the files you want and click **OK**. The Select Directory dialog opens. Continue with the next step.
3. In the Select Directory dialog, specify the directory where you want to store the copies.

   If you want to get the files together in one ZIP file, click **Download the files in one ZIP file**. Specify a **ZIP filename**.
4. Click **OK**. The files (or ZIP file) are copied to the specified directory.

   You will be prompted whether you want to open the file or files.

Web Client, Standard File Productivity, Getting Files

To get copies of attachment files from a business object in Web Client, using Standard File Productivity method:

1. Display the **Attachments** tab of an object.
2. Click the **Get** button in the row of a file you want.
   - If you selected a row with multiple files (indicated by a file folder icon in the row), the Select Files dialog opens.

     Select the files you want and click **Finish**. The Select Directory dialog opens. Continue with the next step.
   - If you selected one or more rows that consist of a single attached file, the Select Directory dialog opens. Continue with the next step.
3. The Save As dialog appears. Save the files to disk, specifying the directory where you want to place the files. Web Client copies the files to the selected directory. If you get copies of multiple files, they are placed in a ZIP file.
4. Click **OK**. The files (or ZIP file) are copied to the specified directory.

Web Client, Get All Attachments, Standard File Productivity

To get copies of all the attachment files from a business object in Web Client, using Standard File Productivity method:

1. Display the **Attachments** tab of an object.
2. Click the **Get All Files** button in the tab menu.
3. The File Download dialog appears.

4. Specify the directory where you want to place the files.
5. Click **Save** to save the ZIP file to disk, specifying the directory where you want to place the file. Agile PLM copies the files to the selected directory.

   Click **Open** to open a ZIP file in WinZip that contains all the attachment files.

Note	If there is a single file on the **Attachments** tab, you are prompted to either open the file in its native application or save it in its native format.

Web Client, Advanced File Productivity, Getting Files

To get copies of attachment files from a business object in Web Client, using Advanced File Productivity method:

1. Display the **Attachments** tab of an object.
2. Click the **Get** button in the row of a file you want.
   - If you selected a row with multiple files (indicated by a file folder icon in the row), the Select Files dialog opens.

     Select the files you want and click **Finish**. The Select Directory dialog opens. Continue with the next step.
   - If you selected one or more rows that consist of a single attached file, the Select Directory dialog opens. Continue with the next step.
3. The Save As dialog appears. Save the files to disk, specifying the directory where you want to place the files.

Note	When using the Advanced File Productivity method to get multiple files, Web Client gives you the choice of downloading individual files or downloading a ZIP.

4. If you want multiple files in a single ZIP file, check **Download the files in one ZIP file** and enter a ZIP file name.

Note	If you did not select multiple files, the ZIP file option and name field do not appear in the Select Directory dialog.

5. Click **OK**. The files (or ZIP file) are copied to the specified directory.

   You will be prompted whether you want to open the file or files.

Web Client, Get All Attachments, Advanced File Productivity

Note	For more information about the **Advanced File Productivity** preference, see Setting your File Productivity Preference on page 316.

To get copies of all the attachment files from a business object in Web Client, using Advanced File Productivity method:

1. Display the **Attachments** tab of an object.
2. Click the **Get All Files** button in the tab menu.

The Select Directory dialog appears.

3. Specify the directory where you want to place the files.
4. To place all the files in a single ZIP file, check the **Download the file in one ZIP file** checkbox and enter a zip file name.
5. Click **OK**. The files (or ZIP file) are copied to the specified directory.

Opening Attachment Files in their Native Applications

To open an attachment file from a business object in Java Client:

1. Display the **Attachments** tab of an object.
2. Select the rows of the files that you want to open.
3. Click the **Open Files** button . The files will open in their native application.
   - If you selected a row with a URL attachment, the URL is launched in a web browser.
   - If you selected a row with multiple files (indicated by a file folder icon in the row), the Select Files dialog opens.

     Select the files you want and click **Finish**.

   If a file's native application is not on your machine, AutoVue for Agile will open and display the file.

   You can also select a file and click the **View** button ; in this case, AutoVue for Agile opens the files for viewing.

To open an attachment file from a business object in Web Client:

1. Display the **Attachments** tab of an object.
2. Click the Filename link.

   The file opens in its native application providing the following conditions are both true:
   - The file is not in a format that is listed as a valid viewer file type. (Viewer valid file types are set by your Agile administrator.)
   - The native application installed on your computer.

Note	If the attachment is a URL, clicking the Filename link launches the URL in a web browser.

Printing Attachment Files

You must have the appropriate privileges to print an attachment file. If you have questions about your privileges, contact your Agile administrator.

Note	A "batch print" is simply printing the contents of a file folder that has multiple files. You still click the **Print** button and follow the sequence in AutoVue for Agile.

To print a file on the Attachments tab using AutoVue for Agile in Java Client:

1. With the **Attachments** tab displayed, select one or more attachment rows to print.

2. Click the **Print** button .

   You can also select a file and click the **View** button ; in this case you would start the viewer print functions manually.

3. If the file type is supported by AutoVue for Agile, the viewer opens and begins the printing process. Follow the instructions in the displayed dialog boxes to complete the printing process. When the printing process is complete, the Viewer automatically closes.

Note	When you print from within AutoVue for Agile, watermarks and banners can appear in addition to the contents of the attached file. For more information, see About Banners and Watermarks on the Printed Image on page 271.

To print a file on the Attachments tab using the AutoVue for Agile in Web Client:

1. With the **Attachments** tab displayed, click the **Print** button in the row you want.

   You can also click the Filename link to open the file in AutoVue for Agile. In this case you would start the viewer print functions manually.

2. If the file type is supported by AutoVue for Agile, the viewer opens and begins the printing process. Follow the instructions in the displayed dialog boxes to complete the printing process. When the printing process is complete, the viewer automatically closes.

   Otherwise, Web Client starts the file's native application and opens the file so you can print it using that application's printing commands. Choose the **Print** command for that application.

Note	When you print from within AutoVue for Agile, watermarks and banners can appear in addition to the contents of the attached file. For more information, see About Banners and Watermarks on the Printed Image on page 271.

It is also possible to get a copy of the file, open it in its native application, and use the native application's print functions to print the file. The native application must be installed on your computer before you can print the file. Follow the usual printing procedures according to the application's documentation.

About Banners and Watermarks on the Printed Image

When printed through AutoVue for Agile, the printed image has a banner above and below the image. The banner has six fields: top left, top center, top right, bottom left, bottom center, and bottom right.

The banner labels and contents for each object class are set by the Agile administrator.

In addition, the Agile administrator can choose to include a printed watermark on the printed image.

Accessing Different Versions of Attachments

You can get, open, view, and print any version of an attachment file from the **Attachments** tab of the business object.

You can easily access history without clicking through to the File Folder object. This is useful when a single file is being modified and accessed by multiple people/different functions. For instance, user can easily trace and identify which versions another user made their edits in - this is identified

from version create date and checkout user.

The Versions dialog displays, for each version, the Version Creation Date (date the version was created), whether that version has redlines (indicated by the **Has Been Redlined** icon), and the Checkout User (user who created that version). This allows you to easily see the history of an attachment from the **Attachments** tab, including who modified the file, and when it was modified.

To switch between versions of file folders from an object's Attachments tab in Java Client:

1. On the Attachments tab, select one or more attachment row that you want to access.
2. Click the **Show Versions** button. The Versions dialog appears.
3. Select the version row or rows that you want to access.
4. Click the appropriate action button (Get, Open, View, or Print).
5. Optionally, click the **Has Been Redlined** icon to open AutoVue for Agile and display the redlines.
6. Optionally, select two version rows, then choose **Compare** or **Overlay** in the View action button drop-down menu.

To switch between versions of file folders from an object's Attachments tab in Web Client:

1. On the **Attachments** tab, click the **Show Versions** button in the attachment row you want and the Versions dialog appears.
2. In the version row that you want to access, click the appropriate action button (Get, View, or Print).
3. Optionally, select two version rows, then choose **Compare** or **Overlay** in the View action button drop-down menu.

Using the File Folder Version Browser

When a File Folder object is open, you can view information about all versions of the File Folder in the Version Browser.

Note The Version Browser is available only in Web Client.

To open the Version Browser:

1. In the **Actions** menu, choose **Version Browser**. The Version Browser opens.

The Version Browser displays the following information about each version:

Version Browser Column	Description
Approval	An **Awaiting Approval** icon in this column indicates that the version is awaiting approval; the Routing Slip for that version lists users who have not yet signed off.
Version	The version number.
Checkin Date	The date the version was checked in and the user who performed the check in.

Version Browser Column	Description
Checkin User	When the version is checked out, these fields are blank.
Change Info	Indicates how the version was modified before it was checked in. **Files** indicates that the object's files were modified, for example, files were replaced, added, or deleted. For Design objects, **Structure** indicates that the Design's **Structure** tab was modified.
Label, **Revision**, **Revision Date**	These are version-specific editable fields used with Design data model objects.

Actions you can initiate in the Version Browser:

- **View Files**: Select any version row and click **View** to view the file or files in AutoVue for Agile.
- **Compare Files**: For single-file versions, select two version rows, and choose **Compare** in the **View** button drop-down list. The selected files are compared in AutoVue for Agile.

Adding and Removing Files via the Attachments Tab

This section includes the following topics:

- Adding Attachment Files from your Local Disk or Network on page 273
- Add Files by Search Options on page 277
- Adding a URL on page 278
- Adding Files by using SaveAs to Create a New Business Object on page 279
- Removing Attachments from the Attachments Tab on page 279
- Editing the Attachments Table on page 280

Adding Attachment Files from your Local Disk or Network

When adding files to a business object **Attachments** tab, Agile provides a simple and easy-to-use file uploader. The File Uploader allows you to drag and drop the files you want from your desktop or from an open directory window to the file uploader window. The uploader also has a **Browse** button so you can find the files you want in that manner.

Note For Web Client only: Depending on your company's policies, your Agile administrator may set a systemwide preference that prevents the use of the Advanced File Uploader. In that case, **Add > File** operations in Web Client are completed using the Add File dialog, as described in Using Web Client's Standard Add File Dialog on page 317.

Using the Advanced File Uploader

You can add as many files at one time as you like. There are two checkboxes; when checked, one will **Unzip all zipped files upon upload**, and the other will **Add all files to a single File Folder**. When you are ready, click **Upload**.

When the upload is completed, depending on Agile PLM system settings, you may be prompted "Would you like to delete the uploaded files from your local disk?" which is useful if you have loaded a file onto your machine only to attach it to an Agile object. When you uploaded the file, Agile File Manager created a copy of the file that is always stored in the file vault.

At any time before clicking **Upload**, you can **Cancel** the upload. Click **Close** to close the uploader dialog.

To add attachment files using Advanced File Loader in both Java Client and Web Client:

1. Click **Add** > **Files**.

   The blank File Uploader window is displayed. The instruction "Drag Files Here" appears in the window.

2. Open a directory window (for example, Microsoft Explorer) and size the window so that you can see both the File Uploader window and the directory window on your screen.
3. Navigate to the directory you want.
4. Select the file you want and drag it to the File Uploader window and drop it. The file name appears in the File Uploader window.
   - If you drag and drop a folder, all the files in the folder are added to the list in the File Uploader.
   - You can also click the **Browse** button in the File Uploader window and browse for the file you want. When using the browse function:

     Double-clicking on folder will open the folder's contents.

     Single clicking on folder and then clicking Open will add all contents of that folder (files as well as contents of subfolders within that folder)
5. Continue locating and dragging as many files as you want to want. You can open additional directory windows if you choose.

   Note To remove any file from the download dialogue box (for example, if you made a mistake and selected a file erroneously), simply click on the file and press the Delete key on your keyboard.

6. When you have selected the files you want, if desired, click the **Options** button to make additional choices:
   - **Type** — select the file folder type (subclass) you want to create.
   - **Unzip all zipped files upon upload** — unzips ZIP files so that they are stored in their native format.

     If this option is unchecked, a ZIP file is stored in its ZIP format.
   - **Add all files to a single File Folder** — adds all the selected files to a single file folder. You may enter a Folder Description.

If this option is unchecked, each file in the list is assigned its own unique file folder, one attachment file to one file folder. By default, Agile assigns attachments to the File Folder type (subclass).

- **Edit rows after adding** — presents an edit dialog which allows you to edit the newly added attachment table rows.

7. When you are done, click **Upload**.

   The files are added to the business object **Attachment** stab. The File Uploader window displays progress messages for each file as it is uploaded.

Note	Agile automatically creates a new file folder container for each of the uploaded files and sets the version of each file folder to 1. If you selected **Add all files to a single File Folder**, only one file folder container is created and the version is set to 1.

8. When the files are uploaded, you are asked if you want to delete the uploaded file from your local disk.

   - **Yes** (default) — removes the copy of the file from the directory from which you selected it. This ensures that the correct version of the file is maintained in the Agile file vault and you do not have any out-of-date copies on your local disk. To view or update the file, use the Agile **Attachments** tab.

Note	The copy of the file on your local disk is removed; it is **not** moved to your desktop recycle bin.

   - **No** — the copy of the file that you selected to add to the **Attachments** tab remains on your local disk.

Adding Files in Web Client without Advanced File Loader

If Advanced File Loader is not available to you in Web Client, there are two possible reasons:

- Due to your company's policies, your Agile administrator has set the system-wide preference such that Web Client users are not allowed to use the Advanced File Loader Java applet.
- Your company does allow Web Client use of the Advanced File Loader, however, your personal user profile preference attribute for File Productivity Preference is set to Standard. If this is the case, you can change your user profile preference to Advanced, which will allow you to use the Advanced File Loader.

Note	By default, your user profile is set to the Prompt preference. By responding to the prompt, you can select which file productivity method you prefer without editing your user profile. See the description of Prompt responses in Setting your File Productivity Preference on page 316.

Setting your File Productivity Preference

To modify your File Productivity Preference:

1. In Web Client, select **Tools > My Settings** to display the My Settings page.
2. On the My Settings page, click **User Profile**. Your tabbed user profile appears.
3. Click the **Preferences** tab.

4. Click **Edit**.
5. In the **File Productivity Preference** drop-down list, select one of the following:
   - **Advanced** — allows you to use the Advanced File Loader and other File Productivity components (providing the Agile system-wide preference is set to allow it). The next time you add a file or check in files on the **Attachments** tab, if it has not been previously installed, a Java applet will be installed. See Using the Advanced File Uploader on page 314.

   Note File Productivity components include both Advanced File Loader and Automated Checkin. In Web Client, File Productivity also allows you to get (download) a multi-file attachment row as individual files instead of a ZIP file, and enables the opening of an attachment in its native application when you click its Filename link.

   - **Standard** — Web Client standard Add File dialog is used when you add a file or check in files on the **Attachments** tab. See Using Web Client's Standard Add File Dialog on page 317.
   - **Prompt** — the next time you add a file to an **Attachments** tab, the Please Choose File Update Mode dialog is displayed to prompt you to choose whether to use the advanced productivity components (Advanced File Loader) or not. (By default, your **File Productivity Preference** is initially set to **Prompt**.)

     Your possible choices in the Please Choose File Update Mode dialog are as follows:

     Yes (and check **Do not show this dialog box again**) — if it has not been previously installed, a Java applet will be installed. The **File Productivity Preference** attribute in your user profile is set to **Advanced**. Every time you use **Add > Files** or check-in attachments on the **Attachments** tab, the Advanced File Loader is displayed.

     No (and check **Do not show this dialog box again**) — The **File Productivity Preference** attribute in your user profile is set to **Standard**. Every time you use **Add > Files** or check-in attachments on the **Attachments** tab, the standard Add Files dialog is displayed.

     Yes or **No** (and *do not* check **Do not show this dialog box again**) — The **File Productivity Preference** attribute in your user profile is remains set to **Prompt**. Every time you use **Add > Files** or check-in attachments on the **Attachments** tab, the Please Choose File Update Mode dialog is displayed and you can select the method you want to use.

     Once you respond to the prompts **and** you also check **Do not show this dialog box again,** your preferred file productivity method will always be used. The Please Choose File Update Mode dialog will no longer appear and the **File Productivity Preference** attribute in your user profile is set as described above for the **Yes** or **No** choice.

   Note At any time, you can use the above process (beginning with step 1) to edit the **File Productivity Preference** attribute in your user profile to change your preference and select the file upload method you prefer.

Using Web Client's Standard Add File Dialog

If you want to use the standard Add File dialog, make sure that the **File Productivity Preference** attribute in your user profile is set to Standard. See the Setting your File Productivity Preference on page 316 for instructions.

To use the standard Add File dialog:

1. In Web Client, on the **Attachments** tab, click **Add > Files**.

The Add File window appears with rows for up to five attachments.

2. Use the **Browse** button to locate and select files to add. You can select electronic files on a local drive or on your network.
3. Add descriptions for the files. You do not have to add a description now. You can add or edit a description at any time.
4. If desired, check the optional checkboxes:
   - **Unzip** — unzips ZIP files so that they are stored in their native format.

     If this option is unchecked, a ZIP file is stored in its ZIP format.
   - **Add All Files to a Single File Folder** — adds all the selected files to a single file folder. You may enter a Folder Description.

     If this option is unchecked, each file in the list is assigned its own unique file folder, one attachment file to one file folder.
5. Click **Finish**. The files are added to the **Files** tab and placed in the file server vault.

Add Files by Search Options

To reuse existing attachments and file folders, use the **Add > By Search** function**.** This option allows you to reuse existing attachments when needed.

To Add attachments by search:

1. Open the object to which you want to add an attachment, and click the **Attachments** tab.
2. Select **Add > By Search.** The Add Files by Search dialog appears.

   Add > By Search (button or menu choice) opens a dialog with three Search tabs.

   This dialog allows you to search for any business object (for example, items or manufacturer parts) and select the attachments of those objects to add to the current object.
   - **Search** tab lets you create a simple search or an advanced search. You can check to search attachment contents, too.
   - **Saved Searches** tab opens to your navigation pane where you can browse in search folders, select a search, and run it. Again, returned results may be moved to the Selected Items table, and click **OK**.
   - **Shortcuts** tab opens to your navigation pane where you can select objects from **My Bookmarks** or **Recently Visited**. The system displays shortcuts to only those objects that are appropriate to the operation you are performing.

Note	Only business objects with attached files appear in the search results table. For example, a business object that you viewed recently will not appear on the Recently Visited list of the Shortcuts tab if it has no attachments.

3. When the results of your search are returned, select a row in the Results table, and the related files for that object appear in the Related Files table.
4. In the Related Files table, select and move attachments to the Selected Files table.
   - If the object is an item, the Related Files table displays only the attachments on the latest Released Revision of the item (not pending or older revisions).

- For any other (non-item) object, the Related Files table displays only attachments currently on that **Attachments** tab (not previously associated files).

5. You can continue to run multiple searches or shortcuts until you are finished selecting the attachments you want.
6. If you want to edit the attachment table rows after you add the attachments, check **Edit rows after adding**.
7. Click **OK**.

The current business object now references (or points to) the existing attachments and file folders you selected.

Add by Search for Existing File Folder

If you have the appropriate privileges, you can use the Add by Search feature described above and select File Folders as the object type for your search.

To add by searching for existing file folders:

1. Select File Folders as the object type.
2. Use one of the available search methods: simple search, advanced search, saved search or shortcuts.
3. In the results table, select the file folder you want.
4. In the Related Files table, select the file folder version number you want to use. By default, the latest version is selected.
5. Move your file selections to the Selected Files table.
6. You can continue to run searches and select files to add by repeating the above steps.
7. When you are finished, if desired, check **Edit rows after adding**, then Click **OK**.

Adding a URL

To add a URL to the Attachments tab in both Java Client and Web Client:

1. Open the object to which you want to add a URL, and click the **Attachments** tab.
2. Select **Add > URL.** The add URL dialog appears.
3. Enter a URL and description. URLs must include the http syntax.

   Note The URL field is prepopulated with the text string **http://** to streamline this process.

4. To verify that you have typed the correct URL, click **Preview**. A new browser window opens using the URL you have entered.

   If desired, check the option **Add All URLs to a Single File Folder**. You can enter a Folder Description.

   If you leave this option unchecked, a separate file folder will be created for each URL.

5. Click **OK**. The URL is added to the **Attachments** tab.

Note	If a URL is added to a single file folder (there are no other files or URLs in that file folder) and the file folder version remains at Version 1, you can select the URL row on the **Attachments** tab, click **Edit**, then edit (modify) the URL. All the business objects that include the URL on their **Attachments** tab will display the newly edited URL.

Adding Files by using SaveAs to Create a New Business Object

When you use Save As to create a new business object (object B), if the object from which you are performing the Save As function (object A) has one or more attachments, an Agile system preference determines how object B's attachments are created.

If your Agile administrator has selected Prompt for this system preference, you will be prompted to choose between the following two options. If you are not prompted, the new object is automatically created using the specified system preference setting.

- **Create new copy of file(s)** means that as object A is being replicated to create new object B, the system creates a new copy of the attachment file and also a new (referenced) file folder. Object A references FF-1, ver. 5, now version 5 of the file has been copied but, in new file folder FF-2 referenced by object B, the file is at version 1.
- **Reference existing file(s)** means that as the object is being replicated to create a new object, the system will use the existing file folder and create a new reference to it. In this case, object A references FF-1, ver. 5, and object B also references FF-1, ver. 5; the object was replicated but no file folder nor copy of attachment file was created.
- **Do not copy file(s)** means that as object A is being replicated to create new object B, the system creates object B with no attachment files. Object B's attachment table is empty.
- **Prompt** means that the system will always prompt the user who performs a Save As whether they want to create a new copy of the attachment, simply reference existing file and folder, or create the new object with no attachments. This prompt does not display if object A does not have an attachment.

Removing Attachments from the Attachments Tab

You can modify the **Attachments** tab by removing attachment table rows.

Note	Removing an attachment table row removes only the reference to the attached file's file folder object. The file folder object and its contents are not deleted.

To remove attachments from the Attachments tab:

1. Open the object and click the **Attachments** tab.
2. Select the rows you want to remove.
3. Click the **Remove** button.

Note	You cannot remove an incorporated item's attachments. For more information about incorporated items and attachments, see About Item Revisions and File Folder Versions on page 285.

Editing the Attachments Table

Select the rows you want and use the **Edit** button to edit the File Description and Version of the selected attached file as well as any other editable fields and custom fields that your administrator has defined.

Note Your ability to use **Attachments** tab features is determined by your assigned roles and privileges. Contact your Agile administrator if you have questions about your **Attachments** tab privileges.

The following attachment row fields can be edited as described below:

Field	Edit method
Filename	If the selected row refers to a file folder that contains multiple files, you can use the drop-down list to select a different file. You can select All Files.
File Description	Edit the description for this version of the attached file. ▫ File Description is Folder Version specific. For example, if you modify the File Description for version 3, the File Description for version 1 remains unchanged. Each attachment version can have a different File Description, if needed. ▫ If the selected row refers to a file folder that contains multiple files and one specific file is selected in the Filename field, you can edit the File Description field. The File Description field on the file folder object **Files** tab is updated with the new file description. ▫ If the select row refers to a file folder that contains multiple files and All Files is selected in the Filename field, the File Description field is editable depending on your roles and privileges pertaining to the referenced file folder. ▫ If the selected version is incorporated to an item (which may not be the current business object that you are editing), the File Description field is not editable.
Folder Description	Edit the description of the file folder which contains the referenced file. ▫ If the file folder is referenced by multiple business objects, you must have the appropriate modify privileges to edit this field. ▫ If the file folder is referenced by multiple business objects and you have the appropriate privileges to modify this field, the new Folder Description appears on all the business object **Attachments** tabs that reference this file folder.
Folder Version	Select the attachment version (file folder version) you want. ▫ If the selected row refers to a file folder that contains multiple files, if you select Latest-x as the version, the Filename field is automatically set to All Files. ▫ You can select any version in the list. Note that if you select a non-latest version, you will not be able to checkout this attachment row. For more information about latest and non-latest versions, see What are Attachment Versions? on page 258.

Field	Edit method
Other editable fields	Your Agile administrator may have defined other custom fields. If you have the appropriate privileges, you can modify these additional fields. Contact your Agile administrator if you have questions about your **Attachments** tab privileges

To edit attachment table rows:

1. Open the object and click the **Attachments** tab.
2. Select the rows you want to edit.
3. Click the **Edit** button.
4. Make the modifications you want.
5. Click **OK** (Java Client) or **Save** (Web Client).

Revising Attachment Files

When you need to update or revise the attached file, Agile PLM uses **Check Out** and **Check In** functions to ensure that only one user at a time can revise the file.

This section includes the topics:

- Checking Out Attachment Files on page 282
- Checking In Revised Attachment Files on page 283
- Canceling Checkouts on page 284
- Checksum File Validation on page 284

Using the examples of Bob and Carl, engineers, and Doris, the document control manager. See Attachment Files and Agile File Folders: an Analogy to Papers, Desks, and Vaults on page 255, the following story illustrates the concepts of the **Check Out** and **Check In** features.

Doris keeps all the company's documents locked in a document vault. Each document is filed in a labeled file folder. When Bob or Carl need a copy of a document, Doris makes a copy and gives it to them. See Getting Attachment Files on page 267.

However, when Carl wants to revise a document, Doris gives him a copy of the latest version, and she marks the file folder as **Checked Out**. When a file folder is checked out, Doris does not allow any other person to update the drawings in that file folder, although anyone can still request a copy of the drawings.

When Carl brings Doris the updated drawing, she puts it in the file folder, records the new version number on the file folder and marks the file folder as **Checked In**.

In Agile PLM, **Check Out** and **Check In** features provide the following safeguards:

- When an attachment is **Checked In**, no one is allowed to revise the attachment. The attachment file is locked in the vault, however, any user with the appropriate privileges can check it out. The attachment is locked for all users.
- When an attachment is **Checked Out** only the checkout user can revise the attachment. The attachment file remains locked in the vault, and it is not available for checkout by any other

user. The attachment is unlocked for revision *only* by the checkout user.

Checking Out Attachment Files

Note To checkout an attachment file on a business object **Attachments** tab, the Folder Version for that row must specify the latest revision, either the latest revision number (for example, **3**) or the dynamic Latest-x revision (for example, **Latest-3**). If the Folder Version is a non-latest version, the **Check Out** feature is not available. For more information see What are Attachment Versions? on page 258.

Checkout is disabled for URL attachments.

To check out an attachment row of an object for revision, Java Client:

1. Display the **Attachments** tab of the object.
2. Select one or more attachment rows.
3. Click the Check Out button.

   If you have selected a row that cannot be checked out, an error message is displayed telling you which rows cannot be checked out and why (for example, non-latest version or already checked out).
4. If you have selected an attachment row that includes multiple files (a folder icon appears in the Filename field), the Select Files dialog appears. By default, all files are selected. Select the files you want, and click **OK**.
5. The Select directory dialog appears. Navigate to the directory where you want to save copies of the checked out files.

   To save the files in a ZIP file, check **Download the files in one ZIP file** and enter a ZIP file name.

   The checkout location is recorded on the **Attachments** tab Checkout Location field; it is also logged on the **History** tab.
6. Click **OK**.
7. The Open Files dialog appears. If you want to open the checked out files, click **Yes**.

To check out an attachment row of an object for revision, Web Client:

1. Display the **Attachments** tab of the object.
2. In the row you want to checkout, click the **Check Out** button .

   If a Check Out button does not appear in that row, the row cannot be checked out (for example, non-latest version).
3. In the Save As dialog, navigate to the directory where you want to save copies of the checked out files.

   Click **Save**.

   Note In Web Client, if you are not using the Advanced Productivity Tools, the **Checkout Location** field is not populated. See also Checking In Revised Attachment Files on page 283.

Checking In Revised Attachment Files

When you check in attachment files, Agile PLM verifies that the file has been modified.

The check in process retrieves the revised file from the Checkout Location recorded on the **Attachments** tab, and replaces the checked out version of the file. The Folder Version is advanced by 1. For example, If you checked out version 6, when you checkin, the version will be 7. Note that version 6 is still stored in the Agile file vault. If you wish to view it, use the Show Versions feature. See Accessing Different Versions of Attachments on page 271.

If the revised file has been moved from the checkout location, or you have changed its name, you are prompted to browse for the replacement file.

When the checkin process is finished, you are prompted to delete the checked-in files from your local disk.

To check in attachment files, Java Client:

1. Select the checked out rows that you want to check in.
2. Click the **Check In** button.
3. Agile PLM automatically checks in the revised files from the Checkout Location recorded on the **Attachments** tab when the files were checked out.
4. If any of the revised replacement files are not in the recorded Checkout Location where they were originally checked out, the Check In Files dialog appears.

Note	If you have moved the checked out file or changed its name, the Check In Files dialog appears so you can specify the check in replacement files.

   Use the **Browse** button to locate each replacement file.
5. When you are done, click **OK**.
6. When the check in process is complete, you are asked if you would like to delete the checked-in files from your local disk. The default response is **Yes**.
   - Click **Yes** to delete the copy of the checked-in files from the checkout location.
   - Click **No** to leave the copy of the checked-in files in the checkout location.

To check in attachment files, Web Client:

1. In the row you want to check in, click the **Check In** button.
2. The checkin process differs depending on your File Productivity Preferences.

   Advanced File Productivity Preference:

   - If your Agile system is set to use File Productivity tools and your user profile **File Productivity Preference** is set to Advanced, then Agile PLM automatically checks in the revised files from the Checkout Location recorded on the **Attachments** tab when the files were checked out.
   - If any of the revised replacement files are not in the recorded Checkout Location where they were originally checked out, the Check In Files dialog appears.

     Use the **Browse** button to locate each replacement file.

> **Note** If you have moved the checked out file or changed its name, the Check In Files dialog appears so you can specify the check in replacement files.

Standard File Productivity Preference:

- If you not using File Productivity tools, then you are prompted to browse to locate the revised files.

> **Note** For more information about File Productivity tools see Using the Advanced File Uploader on page 314.

3. When you are done, click **OK**.
4. When the check in process is complete, you are asked if you would like to delete the checked-in files from your local disk. The default response is **Yes**.
   - Click **Yes** to delete the copy of the checked-in files from the checkout location.
   - Click **No** to leave the copy of the checked-in files in the checkout location.

Canceling Checkouts

When you wish to discard edits to attachment files that you checked out, you can cancel the checkout.

A checkout can be canceled only by the user who checked out the attachment, or by a user with necessary privileges. If you have questions about your privileges, contact your Agile administrator.

When you cancel a checkout, copies of the attachment files remain in the checkout location you selected, but the original files are once more available to be checked out from the **Attachments** tab. Any edits you make to the remaining copies of the files do *not* appear in the public versions of the file (the versions of the file stored in the file vault).

To cancel a checkout from an object's Attachments tab in Java Client:

1. Display the **Attachments** tab of an object.
2. Select the checked-out row or rows for which you want to cancel the checkout.
3. Click the **Cancel Checkout** button .

To cancel a checkout from an object's Attachments tab in Web Client:

1. Display the **Attachments** tab on an object page.
2. Locate the checked-out row for which you want to cancel the checkout.
3. Click the **Cancel Check Out** button in the row for which you want to cancel the checkout.

Checksum File Validation

To enhance the security of file access and to inform the end-user or administrator of any illegal modification or corruption of a file, the Agile system performs file validation on attachment files with a utility called Handle File **Checksum**. The validation reveals when a file in the file server vault has been modified directly, that is, bypassing the Agile system. So when you try to view, get, check out, check in, or add a file that has been improperly modified, an error message appears and access to the file is prevented until the error is resolved.

In both Java and Web Clients, the **Attachments** tab of business objects and the **Files** tab of file folders have a field called **Has Checksum Error.** ! When a file on an attachment row has a checksum error, the Has Checksum Error field displays the same symbol. (If the administrator has disabled the Checksum Computation systemwide preference, however, this field will not display any errors. If you suspect there are security problems with files and this field is never populated, see your Agile administrator.)

You can resolve a checksum error only if you have been assigned the Reset File Checksum privilege mask. If you click the Checksum icon that appears on an attachment row and get a warning, you cannot resolve the problem; however, the system sends notification to the administrator and other designated users. The **History** tab of the file folder (with the offending attachment file) identifies users who have been notified, either during the validation process or during the "handle checksum" process.

Assuming you have been assigned the Reset File Checksum privilege (along with appropriate file folder privileges), clicking ! in the row of the offending file brings up a dialog that offers several options to resolve the problem. Because this privilege is usually assigned to Agile administrators or user administrators, more information about resolving checksum errors is found in *Agile PLM Administrator Guide*. See "Administering Attachments and Files."

About Item Revisions and File Folder Versions

This section distinguishes revisions to items (or other business objects) and versions of file folders (referencing attachment files), as well as other background information about the Introductory revision, the "Rev" list on items, change orders (ECO, MCO, SCO) in regard to items, and pending revisions. See *Product Collaboration User Guide* for more information about items, revisions, and the change control process.

Revision and Version Defined for Agile PLM

The words "revision" and "version" can be similar or synonymous in a variety of manufacturing contexts; here is what they mean in Agile PLM:

Revision — an item's state at a point in time; also, a BOM's structure at a point in time. Revisions are advanced in the change control process. (Items and change control are documented in *Product Collaboration User Guide*.)

Version — A file folder's state at a point in time; also, an attachment file's state as it is attached to an item or other business object. This latter definition was the only use in Agile 8.5 and earlier. With the introduction of file folders in Agile PLM, version primarily refers to how a file folder changes through file addition, deletion, and replacement.

Viewing a Different Revision

To view a different revision:

1. If you want to see a revision that pertains to a specific manufacturing site, select that site from the **Site** drop-down list.

Note	When you select ALL from the **Site** drop-down list, the default value in the **Rev** list is the latest released change for that item.

2. Select a revision from the **Rev** drop-down list above the tabs. When you select a revision, the corresponding effectivity date is displayed.

   When you select a different revision, *all* the tabs display information from the selected revision. For example, if the **BOM** tab is displayed, and you switch from revision C to revision B, the other tabs also show revision B.

Note	Not all tabs are revision-specific; for example, the **Where Used** tab and the **History** tab are not revision-specific. When you view tabs that are not revision-specific, the **Rev** drop-down list is disabled.

Introductory Revisions

The initial revision of an item—that is, the revision of a newly created, unreleased item—is called *Introductory*. Introductory revisions have no changes against them, the only rev on the list that is not associated with a change. It is never assigned a revision letter, for when an item is in the Introductory stage, it is not under change control and can therefore be modified directly.

Introductory revisions are treated the same as released revisions; they are considered to be the base revision by Where-used and Object searches, the **Where Used** tab, changes, and the Save As feature. All revision-specific rules that apply to ECO-created revisions also apply to the Introductory revision of an item.

Introductory appears at the bottom of the **Rev** drop-down list because it is the earliest revision. The user can select the Introductory rev and control all the attributes seen on every tab of the object (including **Attachments** tab). Even after pending revisions and released revisions are created, the Introductory rev remains a “baseline” with a single record of data about the item before any changes took effect.

How the Revision List Works

As stated above, a revision labeled **Introductory** in the **Rev** list indicates the initial revision of the object, with no pending changes. Once the object is listed on a change, a letter sequence of revisions is started.

For released revisions, the number of the releasing ECO is displayed next to its corresponding revision. (Remember, an item can be revised only by an ECO.) For example, for a part, if ECO E54321 resulted in the release of revision C, then revision C in the **Rev** drop-down list reads

```
C   E54321
```

A revision number or letter inside parentheses indicates that the revision is pending, not yet released:

```
(A)  C00004
```

You may see revisions in the list that are not Introductory and that do not have an assigned revision letter. These are referred to as *blank revisions*.

Blank revisions occur when an MCO is released against an item before an ECO releases the item. That releasing MCO creates a blank revision, as do any subsequent changes that occur before a

new ECO revision is created. The **Rev** list displays the number of the MCO instead of a revision letter:

```
M00001
```

MCOs and SCOs are based on item revisions, but neither can create a new revision of a part, and, therefore, neither has attachment capabilities. MCO and SCO modifications, which you can select in the **Rev** drop-down list, inherit the attachments of the ECO-created revision or the Introductory revision upon which they are based.

The MCO or SCO number is displayed next to the corresponding revision on the **Rev** drop-down list. For example, if there is a pending MCO M12345 against Rev B of a part, then on the **Rev** drop-down list, that revision is listed as "(B) M12345."

How Rev and Site Lists are Determined

All revisions are shown to all users regardless of their default site or site access. However, when you open an item, the **Rev** drop-down list is set to the last change for your default site.

An item's default revision shown is based on your default site. Even if you select a different site from the **Site** drop-down list, the default revision still reflects what you see from your default site.

Samples of Rev Lists with ECO, MCO, and SCO

Given the following list of revisions on the **Rev** drop-down list of an item that was initially released as an ECO, the second column describes the attachment capability of each revision.

Rev list entry	Attachment capabilities
(c) ECO -356	Yes, has attachment capabilities, because it is a pending ECO-created Rev.
B SCO-444	No attachment capabilities; it is based on Rev B and inherits Rev B's attachments.
B ECO-233	Yes, has attachment capabilities, because it is an ECO-created Rev.
A MCO-888	No attachment capabilities; it is based on Rev A and inherits Rev A's attachments.
A ECO-222	Yes, has attachment capabilities, because it is an ECO-created Rev.
INTRODUCTORY	Yes, has attachment capabilities, because it is an introductory revision. Introductory revisions have the same features as an ECO-created revision.

In the case of an item initially released by an MCO to create a blank revision:

Rev list entry	Attachment capabilities
(B) MCO-934	No attachment capabilities; pending MCO based on Rev B and inherits Rev B's attachments.
B ECO-572	Has attachment capabilities, because it is an ECO-created Rev.
A SCO-444	No attachment capabilities; it is based on Rev A and inherits Rev A's attachments.
A MCO-788	No attachment capabilities; it is based on Rev A and inherits Rev A's attachments.
A ECO-333	Has attachment capabilities, because it is an ECO-created Rev.

Rev list entry	Attachment capabilities
MCO-766	No attachment capabilities; it is based on the Introductory revision and inherits the Introductory revision's attachments.
INTRODUCTORY	Has attachment capabilities, because it is an introductory revision. Introductory revisions have the same features as an ECO-created revision.

Working with Pending Revisions

You can create a pending revision of an item. When you create an ECO against an item, the ECO creates a pending revision of that item. Pending revisions let you incorporate (lock) attached files into the item. When the preliminary ECO affecting the item is released, the attached files stay with the new revision of the item and are incorporated (unless your Agile administrator has opted to alter this behavior).

A pending revision is identified by parentheses around the revision number in the **Rev** field, for example, (A).

The pending revision is always based on the latest released revision of the item. If there is an existing pending revision —the item is already on the **Affected Items** tab of an unreleased change order—and you choose to add the item anyway, the pending revision associated with your change order is based on the latest released revision, not the existing pending revision. So, if ECO-1 has an existing pending rev on Part 123, and ECO2 is created by SaveAs of ECO-1, then ECO-2 pending rev does *not* reflect any ECO-1 pending rev BOM redlines, manufacturer redlines, attachment redlines, or attachment additions/deletions made to ECO-1 pending rev.

Attachments on Pending Revisions

By default, when a pending revision is created, it inherits whatever files are attached to the current default revision. If any files are then either added to or removed from the current default revision, those modifications are not reflected on the **Attachments** tab of the pending revision.

The administrator sets your system to either allow or disallow attachments to be copied to a new pending revision.

Effects of CopyFilesToRev SmartRule

The **CopyFilesToRev** (**Copy Files to Rev**) SmartRule setting determines how pending revision item attachments are created or referenced. The Agile administrator sets the Agile PLM system to either copy, copy with warning, reference, reference with warning or disallow the list of attachments to be copied to a new pending revision.

When you add an item to the Affected Items table of a pending ECO, you create a pending revision of an item. Depending on the Agile PLM **Copy Files to Rev** SmartRule setting, pending revision attachments are processed as followed:

- **Copy** - For the item's new pending revision, Agile creates a new file folder and creates a new copy of the attachment file, which is placed in the new file folder.
- **Reference** - Agile uses the existing file folder and creates a new reference to it on the item's new

pending revision **Attachments** tab.

- **Disallow** - The new item pending revision is created with no attachments.
- **Copy with Warning** - The same as the **Copy** setting, with the option of choosing no attachments for the new pending revision.

  When you add items to the pending ECO, you are presented with a warning dialog that includes a row for each item you are adding.

  - To add the item and to copy the attachments, check both the **Add** checkbox and the **Attachments** checkbox.
  - To add the item with no attachments, check only the **Add** checkbox.
- **Reference with Warning** - The same as the **Reference** setting, with the option of choosing no attachments for the new pending revision.

  When you add items to the pending ECO, you are presented with a warning dialog that includes a row for each item you are adding.

  - To add the item and to reference the existing attachments, check both the **Add** checkbox and the **Attachments** checkbox.
  - To add the item with no attachments, check only the **Add** checkbox.

When this SmartRule is set to **Reference** or **Reference with Warning**, if there are multiple versions of any attachment file, only the reference to the latest version is used for the new reference on the pending revision.

For example, if you create an ECO against Part 456, Rev C (thus creating a pending Rev D), all the attachment files that are attached to Rev C are also attached to pending Rev D. (The file and file folder references on the **Attachments** tab of released Rev C are duplicated on the **Attachments** tab of pending Rev D.) Any attachment files that are added to the **Attachments** tab of Rev C, or any other Rev C **Attachments** tab modifications (for example, modifying the file folder version numbers) after the creation of the ECO are *not* copied to pending Rev D.

Note	Attachment files that are added to the Introductory revision after the object is associated with a change (that will result in released Rev A) will not be copied to subsequent revs. This SmartRule does not affect MCO or SCO revisions because MCOs and SCOs do not create separate new revisions.

Availability of Attachment Operations

Certain situations affect access to attachment operations. If operations are disabled, check for the following:

- Are you looking at the desired version of the attachment? Always check the number in the **Version** column to ensure you are looking at the latest version, or other specific version you may want to revise.
- Are you viewing an item MCO revision? Attachment operations are not available on MCO revisions.

  For more information about item revisions and attachment capabilities, see Samples of Rev Lists with ECO, MCO, and SCO on page 287.

- Have you been granted sufficient privileges? Check with your Agile administrator. You may be granted certain privileges for some files but not for others.
- Is the item released? Your privileges may allow you to modify the attachments of an unreleased item, however, you may not have sufficient privileges to modify the attachments of a released item. Check with your Agile administrator.
- Is the item revision incorporated? You cannot modify the attachments of an incorporated revision.

  More specifically, once an item revision is incorporated, that revision's attachments cannot be checked out from the item **Attachments** tab. (If you select an unincorporated revision of the item, including pending revisions, you can check out from the item **Attachments** tab.) However, you can still check out or check in the associated attachment files in the file folder. Modifications to the file folder (adding, removing, or editing the attachment file) will not affect the incorporated item revision's attachment, since the version of folder (holding the attachment) is fixed when the item's revision is incorporated; while modifications to the file folder will bring about a new version number upon checkin.

For more information about items, incorporation, and changes (for example, ECOs and MCOs), see the *Product Collaboration User Guide*.

See also: Adding Files by using SaveAs to Create a New Business Object on page 279.

Viewing and Redlining Attachment Files in the AutoVue for Agile Viewer

With appropriate privileges, you can view attachment files in AutoVue for Agile, redline them, and print them with datestamps, timestamps, and other banner and watermark information.

For more information about working with AutoVue for Agile, see *Viewer Supplement*.

To view a file using the AutoVue for Agile, starting from Java Client:

1. Display the **Attachments** tab of the object.
2. Select one or more rows in the files or attachments table.
3. Click the **View** button . The attachment file opens in AutoVue for Agile.

To view a file using the AutoVue for Agile in Web Client:

1. Display the **Attachments** tab of the object.
2. Click the name of a file.

   When you click the filename link, the results are as follows:

   - If the file folder holds a single file, and the file is viewable with AutoVue for Agile, the attachment file opens in the viewer.
   - If the file folder holds a single file, and the file is *not* viewable with AutoVue for Agile, the attachment file opens in the native application, if it is installed on your computer, provided you are using Advanced File Productivity tools. For more information, see Using the Advanced File Uploader on page 274.

- If the file folder holds multiple files, and at least one of the files is viewable with Viewer, the viewable file opens in the viewer. If multiple files are viewable, they are all opened in one Viewer window; use Viewer menu selection **View** > **Multicontent** to select another file to view.
- If the file folder holds multiple files, and *none* of the files are viewable with AutoVue for Agile, the filename is not a link. Click the **Get** button to get a copy of the file.

Redlining or Marking Up Files in AutoVue for Agile

With AutoVue for Agile, you can add redline layers or "markup files" to attachment files that are referenced by Agile items. To redline or mark up attachment files associated with an item, that item must be on the **Affected Items** tab of an ECO. From the ECO, you click the **Redline Attachments** tab, open the attachment files, and mark up or redline using AutoVue for Agile.

Note	For more information about ECO redlining and ad hoc file folder redlining, see *Viewer Supplement*.

Attachment files can be redlined in two ways:

- Use an engineering change order (ECO). You cannot use the other routable objects to redline files.

  See Marking Up or Redlining Attachment Files from an ECO on page 291.

- "Ad hoc redlining" can be done from the **Files** tab of a file folder that holds the object.

  See Ad Hoc Redlining or Marking Up of Attachment Files from the File Folder (on page 325).

Attachment-file redlines follow these rules:

- You must have appropriate privileges to redline attachment files.
- Only the file folders referenced by parts and documents can be ECO-redlined.
- Multiple users may redline a file at the same time. If that happens, Agile saves the redlines from the first user and closes the file. When the other users attempt to save their redlines, they see a warning message and can save the redlines to a different location.
- Each user can redline in a different color.
- For a specific file, for example, FILEA.txt, ECO-created redlines and ad hoc file folder redlines are separate from each other. To view ECO-created redlines, you must open the ECO object or the affected item object; ad hoc file folder redlines are not visible via the ECO. To view ad hoc file folder redlines, you must open the file folder object; ECO-created redlines are not visible via the file folder object.

Marking Up or Redlining Attachment Files from an ECO

One method to mark up or redline an attachment file is to create a change order for an item with an attachment, and approach the attachment via the **Redline Folders** tab of the change.

Note When redlining an attachment through an ECO, the pending revision attachment Folder Version must be set to a specific version number; if the Folder Version is set to **LATEST-x**, you will not be able to create redline markups. However, you can edit the Folder Version on the **Attachments** tab of the pending revision so that it refers to a specific Folder Version.

For example, if the pending revision of the item refers to Folder Version **LATEST-7** of the file folder, select that row on the **Attachments** tab, click the **Edit** button and use the **Folder Version** drop-down list in the Edit dialog box to select **7**. Click **OK** to complete the edit process. You will now be able to create redline markups for that attachment. Select the added item on the **Affected Items** tab of the ECO.

To mark up or redline an attachment file from an ECO in Java Client:

1. If you have not already done so, add an item with an attachment to the **Affected Items** tab of an unreleased ECO. The item now has a pending revision associated with the unreleased ECO.
2. Select the added item on the **Affected Items** tab of the ECO.
3. On the **Redline Attachments** tab, select the row containing the file you want to redline.
4. Click the **View** button.
5. When AutoVue for Agile appears, click the **Markup** button. (This button is available only when markups are allowed.)
6. Use the tools described in the viewer online Help to redline the attachment. To view online Help, choose **Help > Content** in the menu bar.

   Note ECO markups are saved against and associated with the pending revision of the item.

To mark up or redline an attachment file from an ECO in Web Client:

1. If you have not already done so, add an item with an attachment to the **Affected Items** tab of an unreleased ECO. The item now has a pending revision associated with the unreleased ECO.
2. On the **Affected Items** tab, click the **Do Redlines** button next to the item to open the Redlines page.
3. If the item has already been redlined, the **Has Redlines** button will be displayed in the same column. Click either or to access the redlines page.
4. On the **Redline Folders** tab, click the **Do Redlines** button (or **Has Redlines** button) on the row of the file you want to redline. (This button is available only when markups are allowed.)
5. Use the tools described in the viewer online Help to redline the attachment. To view online Help, choose **Help > Content** in the menu bar.

   Note ECO markups are saved against and associated with the pending revision of the item.

For information about redlining 3D files from a change order, and about viewing change order redlines on the Pending revision of the item's **Attachments** tab, please see *Viewer Supplement*.

Configuring File Associations for Opening Files in Web Client

When you are using Web Client, you can open attachment files in your browser. This feature works for those file formats for which you have the corresponding applications installed, and when the file association is set up for your browser between those applications and file formats. Web Client relies on the file format associations, which are set up in your operating system, to open the appropriate application with which to open a file.

Your system administrator can help you determine the file format associations that need to be set up in your system to handle the file formats you are working with.

Some examples of common file formats and their associations are shown in the following table:

File format	File extension	Application often associated
Microsoft Word document	DOC	Microsoft Word for Windows
Microsoft Excel file	XLS	Microsoft Excel for Windows
JPEG graphic	JPEG, JPG	Default browser
GIF graphic	GIF	Default browser
HTML	HTML, HTM	Default browser
PDF	PDF	Adobe Acrobat Reader

For UNIX users, Web Client attempts to display the file within a new instance of the browser window. The file types that can be displayed depend on a number of factors, including the UNIX vendor and the version of Netscape Communicator that has been installed. If you have questions, see your system administrator for assistance.

If you cannot view the file, you can get a copy instead (using the **Get** button), and view it in the file's associated application.

Generating Attachment Quick Access URLs

Attachment URLs allow you to do the following:

- Generate a URL for an attachment on item objects.
- Generate a URL for a file on file folder objects.
- Generate a URL for a file on the **Content** tab of Program objects.
- Paste URLs from Agile to another application
- Externally open files outside of the Agile application.

You can generate attachment URLs from Items, Activities, and File Folders by two methods:

- Using Agile PLM commands to copy a URL to your clipboard:

  Agile-Generated Attachment Quick Access URLs on page 294
- Manually typing an Attachment Smart URL in an easy-to-understand format:

User-Generated Attachment Quick Access Smart URL Formats on page 294

The URL format enables you to identify which object and files are being referenced. Because of the easy-to-understand format, you can generate your own URLs to point to specific file attachments without logging into the Agile system, if you know where the files are located.

Agile-Generated Attachment Quick Access URLs

From Web Client, you can only generate Attachment Quick Access URLs from the **Attachments** tab of any object, the **Content** tab of Activities, and **Files** tab File Folders by clicking **Get Shortcut** after performing one of the following scenarios:

- Selecting **only** one row from the **Attachments**, **Content**, or **Files** tab to generate a URL that points to the folder corresponding to the file on that row.
- Selecting all the rows on the **Attachments**, **Content**, or **Files** tab to generate a URL that points to the collection of files on the tab.

Note You must have Read privileges for an object in order to generate a URL for the object.

Caution If you select more than one row on the **Attachments**, Content, or **Files** tab, the Get Shortcut link is disabled.

The URL is copied to your clip board. You can then paste it into another application or file, such as a word processing file, a spreadsheet file, or an email.

User-Generated Attachment Quick Access Smart URL Formats

With the easy-to-understand Smart URL format, you can generate your own URLs to point to specific file attachments without logging into the Agile system, if you know where the files are located.

The formats of user-generated attachment Smart URLs depend on the object type, and fall into three main categories:

- Item Attachment Quick Access URL Formats (on page 294)
- File Folders Quick Access URL Formats (on page 296)
- Program Content Quick Access URL Formats (on page 297)

Item Attachment Quick Access Smart URL Formats

You can generate Smart URLs for item attachments in the following format:

http://<server:port>/<VirtualPath>/link/<ObjectType>/<ObjectNumber>[/Revision/ChangeNumber]/files/Folder/<FolderNumber>[/<FileAction>]

or

http://<server:port>/<VirtualPath>/link/<ObjectType>/<ObjectNumber>[/Revision/ChangeNumber]/files/<FileName>[/<FileAction>]

where

<Server:Port>/<Virtual Path> element	Identifies the Agile instance
link	The text "link" identifies the URL as a special attachment URL to the Agile server.
ObjectType	Refers to the subclass of the Item, File Folder, or Program/Activity.
ObjectNumber	Refers to the actual object number for the object type.
Revision	Identifies an item revision by specifying the change number corresponding to that revision.
ChangeNumber	Identifies a unique revision (Released or Pending) of the item. If the number is not specified, the latest released revision is attached. If the number is not specified and the item does not have a released change, the Introductory revision is attached.
Folder	Indicates that the object is a file folder, not the actual file.
FolderNumber	Identifies the file folder related to the selected row. The version of the file retrieved is the most current version, based on the specific revision of the item.
FileName	Refers to the name of the specific file attached to the specified revision of the item.
FileAction	Determines the action performed with the retrieved files. Values are GET or VIEW. If FileAction is not specified, a GET is performed. If the parameters specified in the URL point to a single file, the file is retrieved in its native format. If the parameters specified in the URL point to a collection of files, then all the files are returned as a zipped file called "Download.zip".

If the specific revision of an item has multiple files contained in the same folder on the Attachments tab, but is referenced from different versions of the folder, then a Folder-based URL may not reflect the actual set of attachments from the item revision's Attachments tab.

Examples of user-generated URLs for item attachments:

- http://myappserver/mycompany/Link/Document/DOC0001/files/Folder/Folder001

  Returns a zipped file containing all files from Folder001 that are attached to the latest released revisions of DOC0001.

- http://myappserver/mycompany/Link/Document/DOC0001/files/Folder/Folder001/VIEW

  Opens all files from FOLDER001 that are attached to the latest released revision of DOC0001 in AutoVue for Agile.

Limitations for Item Object Attachment Quick Access Smart URLs

The following limitations apply to retrieving the attached files of item objects:

- In the case where a specific revision of an item has multiple files on its **Attachments** tab that belong to the same folder, but are referenced from different versions of the folder, a folder-based URL may not reflect the true set of attachments from that item+revision's **Attachments** tab. For example, consider an item P0001, whose revision A has two attachments:

P0001_3dmodel.dwg and P0001_specs.pdf, both in Folder1. Assume that the DWG file is from version 2 of the file folder, and the PDF file is from version 5 of the file folder. In this case, the following URL:

http://server:port/<VirtualPath>/link/Part/P0001/Revision/C0001/files/Folder/Folder1

returns all the files contained in either version 5 or version 2 (results are not predictable) of Folder1.

However, the following URL:

http://server:port/<VirtualPath>/link/Part/P0001/Revision/C0001/files/ALL

returns the complete set of files belonging to revision A of the item, including P0001_3dmodel.dwg from version 2 of Folder1 and P0001_specs.pdf from version 5 of Folder1.

- You cannot generate an item-based URL that will return a file from a historical version of a file folder referenced on an item's attachments tab. The user can, however, generate a folder-based URL to achieve this.
- In case of the following format example,

  http://server:port/<VirtualPath>/link/ObjectType/ObjectNumber[/Rev/ChangeNumber]/files/FileName[/FileAction]

  If two files of the same name (filename + file extension) exist on the attachments table, and a user generate a URL using filename, only the first encountered file is retrieved. If the "ALL" option is used to access files from the **Attachments** tab of an item where there are multiple files by the same name on the attachments table, or if a URL is generated to return all the files of a file folder where there are more than one file with the same name, an error is displayed indicating that there are multiple files by the same name and therefore a valid zip archive of files cannot be generated.
- If the ALL option is used to access files from a Program's **Content** tab where multiple files with the same name exist, an error is displayed indicating that there are multiple files by the same name and therefore a valid zip archive of files cannot be generated.

File Folders Quick Access Smart URL Formats

You can generate Smart URLs for file folders in the following format:

http://<server:port>/<VirtualPath>/link/<ObjectType>/<ObjectNumber>/files/<FileName>[/</version][/<FileAction>]

where

<Server:Port>/<Virtual Path> element	Identifies the Agile instance
link	The text "link" identifies the URL as a special attachment URL to the Agile server.
version	Identifies the specific version of the file folder. The value can be a number, or the string, LATEST (default).
FileName	Refers to the name of the specific file from the folder or string ALL which attaches all the files in the specified version of the folder. If more than one file of the same name exists in a specific version of a

	folder and a URL is generated based on filename, only the first version of the file is attached. You cannot use the ALL value to access files from a folder where more than one file of the same name exists.
FileAction	Determines the action performed with the retrieved files. Values are GET or VIEW. If fileaction is not specified, a GET is performed. If the parameters specified in the URL point to a single file, the file is retrieved in its native format. If the parameters specified in the URL point to a collection of files, then all the files are returned as a zipped file called "Download.zip".

Examples of user-generated URLs for file folder attachments:

- http://myappserver/mycompany/Link/FileFolder/Folder0001/files/abc.txt/1

  Gets the abc.txt file from version 1 of Folder0001.

- http://myappserver/mycompany/Link/FileFolder/Folder0001/files/ALL/VIEW

  Opens all files from the latest version of FOLDER001 in AutoVue for Agile.

Program Content Quick Access Smart URL Formats

You can generate Smart URLs for files on the **Content** tab of Programs and Activities. The **Content** tab allows specification of any object as valid content and allows the addition of external files, just like the **Attachments** tab. However, the **Content** tab stores the folder object related to an attached file as valid content. So, when retrieving, you must attach the entire folder.

The Smart URL for files on the **Content** tab is generated in the following format:

```
http://<server:port>/<VirtualPath>/link/<ObjectType>/<ObjectNumber>/content/Folder/<FolderNumber>[/<FileAction>]
```

where

ObjectType	Represents the subclass of the Program object.
ObjectNumber	Represents the identifier of the Program object.
Content	Indicates the Content tab.
Folder	Indicates that a specific folder is being retrieved.
FolderNumber	Refers to the number of the folder being retrieved from the Content tab. The most current version of the folder is always retrieved.
FileAction	Determines the action performed with the retrieved files. Values are GET or VIEW. If fileaction is not specified, a GET is performed. If the parameters specified in the URL point to a single file, the file is retrieved in its native format. If the parameters specified in the URL point to a collection of files, then all the files are returned as a zipped file called "Download.zip".

Accessing Attachment Files using Quick Access URLs

After clicking or opening an Attachment Quick Access URL, a login popup appears and you must

log into the Agile system to view the attachment. Agile PLM then validates that you have the appropriate privileges to get or view the file or set of files specified in the URL. The attachments are viewable in all supported browsers, AutoVue for Agile, or the native application.

For example:

1. In an email, the user clicks the Attachment Quick Access URL and an Agile login popup is displayed.
2. The user enters her login information.

   Agile PLM verifies that the user has the appropriate privileges to read and view the file.

Note	If the URL returns a collection of files and the user does not have the appropriate Get or View privilege for one or more files, those files are excluded from the returned collection. However, a collection of files is returned to the user containing the rest of the files for which he does have the appropriate Get or View privileges.

Scan Utility

The Scan utility lets you scan drawings and documents for use in Agile. After the scanned image file is created, it is referenced by a file folder, which can be attached to a business object. The name and description that you give the image appears on the **Attachments** tab of any object that points to that file folder. The Scan utility is accessed by choosing **File** > **Scan Files** or by selecting **Add** > **By Scan** on either the business object's **Attachments** tab or the **Files** tab of file folders.

Agile PLM uses the application TWAINER (twainer.exe) installed on an appropriate scanner to perform its scan function. Scan runs smoothly with or without a Kofax driver installed. You must install a Twain-driver–driven scanner, such as CanoScan N650U/N656U. Agile's TWAINER reads data from a standard TWAIN data source.

Kofax VRS is an electronic checkpoint for scanned images, working with its certified scanners and connection interfaces. If Kofax VRS is associated with such a scanner, like CanoScan N650U/N656U with TWAIN driver installed and USB connection, then it's a candidate for TWAINER's data source.

Scan supports all objects that can be created in Agile PLM. Scan does not require any roles or privileges. However, your Discover, Read, and Modify privileges may affect Scan.

Installing a Scanner

To install a scanner on your machine:

1. Connect the scanner to the computer and install the scanner.
2. Install Kofax driver.
3. Go to **Start** > **Settings > Control Panel** > **Scanners and Cameras**.
4. Double-click **KSM (32-bit)** to start the Kofax Source Manager wizard.
5. Click **Next**. Remove all configured sources.
6. Create a new source. In Source Properties dialog, define Source Name and Source Type as follows:

Source Name: Canon

Source Type: TWAIN scanning

7. In Select TWAIN Source dialog, select Canon CanoScan N650U/N656U.
8. Click **Finish**.

Using the Scan Utility

The following is a general sequence for using the Scan utility.

1. From an object's **Attachments** tab, select **Add** > **By Scan** .

   Note You can also select **File > Scan File** in the Java Client main menu.

2. Java Client creates the twainer.exe file in %USERPROFILE%\.AgileCM\twainer.exe.

   Java Client is suspended while twainer.exe completes its execution.
3. Twainer.exe retrieves a list of the TWAIN supporting devices on the client machine and displays the Select Source dialog showing available TWAIN devices.
4. Select one of the devices, and twainer.exe displays the TWAIN user interface for that device.
5. You can scan your images or documents and exit the user interface. Any scanned files are stored by twainer.exe in a temp directory.
6. Twainer.exe write status and scan information to its standard output stream and terminates. Java Client is reactivated and reads the status information.
7. Java Client converts images from the TWAIN standard BMP format to PNG and adds the scanned files as an attachment file to the file folder. If an error occurred, Java Client displays an appropriate error message.
8. Java Client deletes all temporary scanned files and also deletes the twainer.exe program after logging off Java Client.

Chapter 10

Working with File Folders

This chapter includes the following:

- What are File Folders? 301
- Working with File Folders 303
- File Folder Tabs, Buttons and Menus 303
- Switching Between Versions 312
- Printing Contents of File Folders 312
- Creating File Folders 313
- Adding Attachment Files and URLs to File Folders 313
- Deleting Attachment Files and URLs from File Folders 318
- Purging Unused File Folder Versions 319
- Getting and Revising Attachment Files and File Folders 320
- Other File Folder Operations 326

What are File Folders?

Attachment file storage and retrieval is managed automatically by your Agile PLM system. Attachment files are stored in the Agile File Vault and each attachment file in the vault is associated with a numbered Agile file folder object. The concept is similar to the way in which you would file and store paper documents: sort the documents into file folders, label or number the file folders, and store them in a filing cabinet.

The relationships between attachments files, file folders, and business objects is explained in detail in:

- Attachment Files and Agile File Folders: an Analogy to Papers, Desks, and Vaults on page 255.
- Agile Document Management: Even More Efficient than Doris on page 256.

Why Use and Modify File Folders Directly?

If you have the appropriate privileges, you can perform file maintenance actions on file folder objects directly. Updating and maintaining documents from the file folder object is useful when those documents are attached to many different business objects.

For example, you can update and maintain a document that describes a company-wide procedure by checking out and checking in the associated file folder object. The procedure document (and its associated file folder) may appear on the attachments table on the **Attachments** tabs of many Agile business objects, but you do not need to open each of those business objects in order to update the procedure attachment.

File folders can be managed and updated independently of other objects in the database. All attachment files are stored in the file vault, part of Agile File Manager.

Examples of file folder content are:

- Drawing files such as CAD drawings or scanned image files in viewable formats
- Web-based information in the form of URLs
- Specifications and other documents
- Non-viewable files, compressed (ZIP) files, and so on

It is generally a best practice to limit each file folder to a single, attachable file or URL; however, file folders can contain any number of files and URLs.

Advantages of File Folders

The file folder object was developed to manage documents and URLs that support your company's manufacturing, production, or specification processes. These are some specific advantages of file folder objects:

- You can create, modify, or delete file folders. Like any other object in Agile, you can search for file folders and bookmark them.
- You can view, redline, and print files from the file folder.
- You can search for file folders by file folder attributes, including Filename or File Type, regardless of what business objects the file folders may be attached to.

  For more information about searching for attachment content, see Full Text Search for Content in Attachment Files on page 156.
- File folders can be sent to reviewers for approval without using the change control process. You can track who has received, reviewed, and accepted or rejected file folder content files.
- Files that are referenced in a file folder are subject to version control. On the **Attachments** tab, in the Folder Version field, if you edit the row and select **Latest Version**, the object always references the latest version of the file folder, even when the item's revision changes.
- File folders can be created by users manually as well as automatically. A file folder is created automatically when you attach a file or URL to an object; the file folder is generated, and it is already associated with the object. Now that the file folder exists, it can be associated with other objects.

  It may be useful to create a file folder object manually, for instance, when specifications and related design and drawing files are brought together before the part objects (that they describe) have been created in the Agile system. These are later associated with any object in Agile on each object's **Attachments** tab.
- With appropriate roles and privileges, files (2D and 3D) can be redlined from the **Files** tab of file folder object.

  See Viewing and Redlining Attachment Files in the AutoVue for Agile Viewer on page 290. There is additional information about marking up and redlining attachment files in the *Viewer Supplement*.

Working with File Folders

The next sections describe tabs, buttons, actions, fields, and other user-interface elements that you encounter in your work with file folders.

- A file folder's **Files** tab lists files and URLs, and you can add and remove files and URLs in the file folder. You can check out and check in file folders from here and then get and edit single or multiple attachment files. See Working with the Files Tab of File Folders on page 308.
- A file folder's **Where Used** tab is populated automatically with a link to any business object that references the file folder on the object's **Attachments** tab.

File Folder Tabs, Buttons and Menus

File folders are listed in a window (Java Client) or page (Web Client) with the following elements:

- **Tabs** on file folder objects include **Title Block**, **Files**, **Routing Slip**, **Relationships**, **Where Used**, and **History**. The contents and operations of the **Files** tab are described in Working with the Files Tab of File Folders on page 308.

  The contents and operations of the **Attachments** tab of objects that reference file folders are described in Working with the Attachments Tab of Business Objects on page 259.

- **Buttons** on the main toolbar of file folder objects in both clients are **CheckOut, CheckIn, Cancel CheckOut**.

  - Java Client buttons also include **Approve**, **Reject**, and **Comment**.

    Additional **buttons** in Java Client are **Send, Print, Delete**, **Comment**, and **Add Bookmark**. A final button, **More**, is a drop-down menu offering these functions: **Subscribe**, **SaveAs**, **Sharing**, **Process Extensions**, **Mass Update**, and **Get All Files**.
  - For Web Client, the **Approve** and **Reject** buttons are visible when you are listed as an approver or observer of the selected version.

  Checkout, Checkin, and Cancel Checkout are described in Getting and Revising Attachment Files and File Folders on page 320. Approve, Reject, and Comment are described in Routing and Reviewing File Folders on page 327. Subscription and sharing are discussed in Chapter 5, "Working with Business Objects." Mass update is covered in Performing a Mass Update of a File Folder on page 326.

- Drop-down **menus** include:

  - The **Version** list shows the number of times a file has been checked out and checked back in, unless it was modified. By default, the most recent version is shown, but you can select an earlier version. Each time an attachment file is checked out and modified, a new version is created.

    If the most recent version is a checked out version, the version number is enclosed in brackets, for example, `[4]`.
  - The **Actions** drop-down menu in Web Client offers these actions to perform on the object: **Bookmark**, **Subscribe**, **Save As**, **Delete**, **Print**, **Purge Folder Version**, **Version Browser**, **Copy URL to Clipboard**, **Get All Files**, **Mass Update**, **Print**, **Send**, **Sharing**, or **Comment**. Any existing process extensions are also listed.

The **Actions** shortcut menu in Java Client opens when you right-click anywhere on the file folder object. It offers these actions to perform on the attachment: **Cut**, **Copy**, **Paste**, **Add Bookmark, Subscribe, Save As, Delete**, **Print, Send, Sharing, Process Extensions, Mass Update**, **Get All Files**, **Check Out, Check In,** and **Cancel Check Out**.

File Folder Tabs

File folders include the following tabs. Some tabs may not be visible in your Agile system, depending on how your Agile administrator has configured Agile PLM.

This table lists the tabs found on all file folder objects, with file folder–specific definitions.

Tab	Description
Title Block	Provides general information about the file folder, such as a description, the object number, and the date the file folder was last modified. Your administrator may have added **Page Two** and **Page Three** sections (which may be named differently) that contain additional information—class-specific and subclass-specific, respectively.
Files	Lists all the contents of the file folder object, and it is where you add and remove files and URLs in the file folder. For details about the **Files** tab, see Working with the Files Tab of File Folders on page 308.
Routing Slip	Allows you to route the file folder for approval, and shows a signoff summary for the file folder—a record of which users have viewed and signed off on it. You can add or remove approvers and observers for the file folder object on this tab.
Relationships	The **Relationships** tab allows you to create relationships with other Agile objects and to create dependencies (relationships with rules) between the current file folder object and other routable objects. For more information about relationships and relationship rules, see Relationships and Dependencies Between Objects.
Where Used	Populated automatically with any business object that references the file folder on the object's **Attachments** tab. To open an object listed on the tab, click its Number or Name link.
History	The **History** tab is a record of actions taken on the file folder and the users who performed those actions. The **History** tab is populated automatically.

Where Used Tab, File Folder

Note The File Folder object **Where Used** tab is version-specific and displays the where-used status of the currently selected version.

When you select a different version in the **Version** drop-down list, the Where Used table displays information about the selected version only.

The Attachments table lists all the Agile business objects where the currently selected version of the File Folder object is attached, that is, all the Agile business objects that have the current version of the File Folder object listed on their **Attachments** tab.

Buttons on the Files Tab

You need the appropriate privileges to add or remove files on the **Files** tab. The buttons on the **Files** tab are enabled or disabled, depending on your privileges and administrative settings. File Validation (Handle File Checksum) on page 328 addresses some of these dependencies. If you have questions about your privileges, contact your Agile administrator.

The buttons described in the following tables are available to users with the required privileges on Agile object pages. Many of the operations in this and subsequent tables are elaborated on later in this chapter.

Buttons on Files tab in Java Client

Button	Name	Description
	Get Files	Places copies of the files in the location of your choice. Click the drop-down arrow and select **Get files from selected attachments** or **Batch Get all files from this object**. These copies are in native application formats. Select the rows you want, then click the **Get Files from Selected Attachments** button to place a copy of the selected files in the directory folder or location of your choice. These copies are in native application formats. Or Click the button and select **Batch Get All Files from this Object** to place a copy of all the file folder's files in the folder or location of your choice. These copies are in native application formats. ▫ If you selected more than one file, you are prompted to choose whether or not a ZIP file containing the selected files is created and placed in the folder or location of your choice. ▫ If you choose to create a ZIP file, you can fill in a ZIP filename; if you choose no ZIP file, the individual files are placed in the specified location.
	Open Files	With a file or files selected, opens the file(s) in its native application, if possible.
	Print Files	With a file or files selected, prints the corresponding files. The Viewer is started in a separate browser window and begins the printing process.

Button	Name	Description
	View Files	Click the View Files button to view the selected files in the Viewer. Or, click the **View Files** button's drop-down arrow and select from the menu: ▫ **View** – view the files in the Viewer. ▫ **Cross Probe** – crossprobe between PCB and layout ECAD files. (For more information, see Viewer Supplement.) ▫ **Compare** – visually compare two files in a third compare viewer window. ▫ **Overlay** – lets you lay other files over the current active file. (For more information, see *Viewer Supplement.*) ▫ **Digital Mockup** – mockup designs from disparate MCAD and ECAD systems in a virtual workspace. Loads the selected files into the same workspace in the Viewer, where you can manipulate them. (For more information, see *Viewer Supplement.*) ▫ **By Search** – find other files in the system, which you may want to (select from menu) cross probe, compare, overlay, or digital mockup (see above), without having to select two files from the same folder; that is, you could search and select one file in file-folder A and another file in file-folder B. You can search for file folder objects or for any other object type with attachments.
	Edit	Modify the File Description field of the selected file or files, and any other editable, custom fields that your administrator has defined. The **Edit** button is disabled if the file folder is checked in.
   	Add Files **Add URL** **Add Scan**	Click the **Add** drop-down menu button to add to the **Files** tab. It can be a file, URL, or you can scan a document to create an attachment. Click the **Add** button to open the File Uploader. Or, click the **Add** button's drop-down arrow and select from the menu: ▫ **Files** – displays the File Uploader dialog, which allows you to drag and drop the files you want to attach. You can also click **Browse for Files** button to browse your computer or network for the files you want. To add multiple files as a single file folder, click the **Add all files to a single file folder** button. If you select the **UnZip all zipped files upon upload** checkbox, the ZIP file is unzipped and the contents are added as individual files. **Note** Selecting the **UnZip** checkbox is not recommended for very large files. ▫ **URLs** – brings up the Add URLs dialog ▫ **By Scan** – permit direct access to a file you want to scan. (Windows only, Java Client only) Runs a Windows application that scans documents using a TWAIN interface. The resulting images are added as file types that are specified by the user using Agile Scan; see Scan Utility on page 298.
	Replace Files	Replaces a file that has been revised (the file folder object must be checked out). Click **Replace** to remove the file and add a new version of the file, then check the folder in.

Button	Name	Description
	Remove	Removes all selected files from the **Files** tab (the file folder object must be checked out). The **Remove** button is disabled if the file folder is checked in.
!	**Handle File Checksum Error**	Shows whether files have been modified directly in the file server vault. For more information, see File Validation (Handle File Checksum) on page 328.

Buttons on Files tab in Web Client

Button	Name	Description
	Get	The **Get** button places copies of the selected, referenced files in a location of your choice. The method used depends on your File Productivity Preference. See Setting your File Productivity Preference on page 316. These copies are in native application formats. If you select more than one file, a ZIP file containing the selected files is created and placed in the folder or location of your choice.
	View	Click the View Files button to view the selected files in the Viewer. Or, click the **View Files** button's drop-down arrow and select from the menu: ▫ **View** – view the files in the Viewer. ▫ **Cross Probe** – crossprobe between PCB and layout ECAD files. (For more information, see *Viewer Supplement*.) ▫ **Compare** – visually compare two files in a third compare viewer window. ▫ **Overlay** – lets you lay other files over the current active file. (For more information, see *Viewer Supplement*.) ▫ **Digital Mockup** – mockup designs from disparate MCAD and ECAD systems in a virtual workspace. Loads the selected files into the same workspace in the Viewer, where you can manipulate them. (For more information, see *Viewer Supplement*.) ▫ **By Search** – find other files in the system, which you may want to (select from menu) cross probe, compare, overlay, or digital mockup (see above), without having to select two files from the same folder; that is, you could search and select one file in file-folder A and another file in file-folder B
	Print	With a file or files selected, prints the corresponding files. The Viewer is started in a separate browser window and begins the printing process.
	Edit	Click the **Edit** button to modify the File Description field of the selected file, and any other editable, custom fields that your administrator has defined. The **Edit** button is disabled if the file folder is checked in.

Button	Name	Description
	Remove	Removes all selected files from the **Files** tab (the file folder object must be checked out). The **Remove** button is disabled if the file folder is checked in.
	Add	Click the **Add** drop-down button to add a folder reference to the object. It can be a file or a URL. This button is disabled when the file folder is checked in. Click the **Add** button to open the File Uploader. Or, click the **Add** button's drop-down arrow and select from the menu: ▫ **Files** – if you are using File Productivity tools, displays the File Uploader dialog, which allows you to drag and drop the files you want to attach. You can also click **Browse for Files** button to browse your computer or network for the files you want. To add multiple files as a single file folder, click the **Add all files to a single file folder** button. If you select the **UnZip all zipped files upon upload** checkbox, the ZIP file is unzipped and the contents are added as individual files. ▫ **Files** – (no File Productivity tools) displays the Add File dialog, which allows you to browse for up to five files, add the files to a single file folder, and unzip zipped files. **Note** Selecting the **UnZip** checkbox is not recommended for very large files. For more information about File Productivity tools, see Using the Advanced File Uploader on page 314. **Note** Either Advanced File Uploader or Standard File Uploader will be used depending on your user profile **File Productivity Preference** setting. For more information see Setting your File Productivity Preference on page 316. **Note** **URLs** – brings up the Add URLs dialog

Working with the Files Tab of File Folders

You can use the **Files** tab of file folders to:

- Add files and URLs to the file folder
- Delete files or URLs from the file folder
- "Get" a copy of an attachment file (but not revise it)
- With the file folder checked out, get a file for revision, then replace the version of the file
- Print files
- View and redline an attachment file
- Open a file without being prompted to download it (Java Client only).

To display the Files **tab of a file folder:**

1. Open a file folder. (You may wish to use a Quick Search for **FOLDER***.)
   - In Web Client, click the folder number in the **Attachments** tab to open the folder object.
   - In Java Client, double-click the folder number on the **Attachments** tab to open the folder object.
2. Click the **Files** tab to display the contents of the file folder.

To open a file or files in a file folder in Java Client:

1. On the **Files** tab of the folder, select the file or files you want to open.
2. Click the **Open Files** button . The attachment file opens in its native application, if possible.

To open a file or files in a file folder in Web Client:

1. On the **Files** tab of the folder, click the filename of the file or files you want to open.
2. If the file is a supported file format (see *Agile PLM Administrator Guide* for a list of supported file formats), the file opens in AutoVue for Agile. With the appropriate privileges, you can use all viewer features, as described in Viewing and Redlining Attachment Files in the AutoView for Agile Viewer on page 290.

   If the file is not a supported file format, the attachment file opens in its native application, if possible.

Fields on the Files Tab

The following table lists fields on the **Files** tab.

Field	Description
	If a file has been modified directly in the file server vault, this icon appears in the field to indicate that the file **Has checksum error**. Click the icon to get information about the checksum error. See File Validation (Handle File Checksum) on page 328.
	This icon appears in the field if the file **Has been redlined**. The **Do Redlining** icon will appear here from the file folder level for any file type that is listed in the Supported File Types and Valid Model File Type settings in Administrator. Both of these cases allow ad-hoc viewing and redlining.
File Name	The name of the file. ▫ In Java Client, the files table row must be selected in order to print, open, get, or view the file. ▫ In Web Client, click the filename to view the file in the Viewer.
File Path	Can be manually set.
File Type	The format of the file
File Size	The size of the file, in bytes

Field	Description
Last Viewed Date	Date when the file was last viewed (The **History** tab records detailed information about file viewing.)
Checkout Location	Records where checked out files were placed during the check out procedure. If you are using the Java Client or you are using Web Client with Advanced File Productivity preference selected, **Checkout Location** is used to automatically locate and checkin the checked-out files.
File Description	Description of the file
Document Text	If needed, this field will be filled in automatically by the Agile system.

Opening and Viewing Contents of File Folders

This section includes the topics:

- Java Client, Getting File Folder Files on page 310
- Java Client, Batch Get on page 310
- Web Client, Standard File Productivity on page 311
- Web Client, Advanced File Productivity on page 311

Java Client, Getting File Folder Files

To get copies of files from a file folder in Java Client:

1. Display the **Files** tab of the file folder.
2. Select the rows of the files that you want to get.
3. Click the **Get Files** button .

   The Select Directory dialog opens.
4. In the Select Directory dialog, specify the directory where you want to store the copies.

   If you selected more than one row, and you want to get the files together in one ZIP file, click **Download the files in one ZIP** file. Specify a **ZIP filename**.
5. Click **OK**. The files (or ZIP file) are copied to the specified directory.

   You will be prompted whether you want to open the file or files.

Java Client, Batch Get

To batch get copies of all the files from a file folder in Java Client:

1. Display the **Files** tab of the file folder.
2. Click the button drop-down menu for **Get Files** and select **Batch Get All Files from this Object**.

3. In the Select Directory dialog, specify the directory where you want to store the copies.

   If you want to get the files together in one ZIP file, click **Download the files in one ZIP file**. Specify a **ZIP filename**.

4. Click **OK**. The files (or ZIP file) are copied to the specified directory.

   You will be prompted whether you want to open the file or files.

Web Client, Standard File Productivity

To get copies of files from a file folder in Web Client, using Standard File Productivity method:

1. Display the **Files** tab of the file folder.
2. Select the rows of the files that you want to get.
3. Click the **Get** button .

   The Select Directory dialog opens.

4. The Save As dialog appears. Save the files to disk, specifying the directory where you want to place the files. Web Client copies the files to the selected directory. If you get copies of multiple files, they are placed in a ZIP file.
5. Click **OK**. The files (or ZIP file) are copied to the specified directory.

Web Client, Advanced File Productivity

To get copies of files from a file folder in Web Client, using Advanced File Productivity method:

1. Display the **Files** tab of the file folder.
2. Select the rows of the files that you want to get.
3. Click the **Get** button .

   The Select Directory dialog opens.

4. The Save As dialog appears. Save the files to disk, specifying the directory where you want to place the files.

Note	When using the Advanced File Productivity method to get multiple files, Web Client gives you the choice of downloading individual files or downloading a ZIP.

5. If you want multiple files in a single ZIP file, check **Download the files in one ZIP file** and enter a ZIP file name.

Note	If you did not select multiple files, the ZIP file option and name field do not appear in the Select Directory dialog.

6. Click **OK**. The files (or ZIP file) are copied to the specified directory.

   You will be prompted whether you want to open the file or files.

Switching Between Versions

To switch between versions of a file folder from within the file folder in Java Client:

From the **Version** drop-down list at the top of the folder object, select the version you want to view.

To switch between versions of a file folder from within the file folder in Web Client:

From the **Version** drop-down list at the top of the folder object, select the version you want to view.

Note	A version number in brackets, for example `[4]`, indicates a version that has not yet been checked in. In this example, when version `3` was checked out, a pending version `[4]` was created. Selecting `[4]` in the version drop-down list allows you to view and work with the pending version.

Printing Contents of File Folders

You must have the appropriate privileges to print an attachment file. If you have questions about your privileges, contact your Agile administrator.

Note	A “batch print” is simply printing the contents of a file folder that has multiple files. You still click the **Print** button and follow the sequence in AutoVue for Agile.

To print a file on the Files tab using the AutoVue for Agile:

1. With the **Files** tab displayed, select the rows you want to print.
2. Click the **Print** button .

   You can also select a row and click the **View** button ; in this case you would start the viewer print functions manually.
3. If the file type is supported by AutoVue for Agile, the viewer opens and begins the printing process. Follow the instructions in the displayed dialog boxes to complete the printing process.

   Otherwise, Web Client starts the file’s native application and opens the file so you can print it using that application’s printing commands. Choose the **Print** command for that application.

Note	When you print from within AutoVue for Agile, watermarks and banners can appear in addition to the contents of the attached file. For more information, see About Banners and Watermarks on the Printed Image on page 271.

It is also possible to get a copy of the file, open it in its native application, and use the native application’s print functions to print the file. The native application must be installed on your computer before you can print the file. Follow the usual printing procedures according to the application’s documentation.

About Banners and Watermarks on the Printed Image

When printed through AutoVue for Agile, the printed image has a banner above and below the image. The banner has six fields: top left, top center, top right, bottom left, bottom center, and bottom right.

The banner labels and contents for each object class are set by the Agile administrator.

In addition, the Agile administrator can choose to include a printed watermark on the printed image.

Creating File Folders

There are two ways to create a file folder: automatically, when you attach a file or URL to a business object in the **Attachments** tab of the object, and manually, using the create object functions of Java Client and Web Client.

To create a file folder manually:

1. Create the file folder using the **New** button in Java Client or the **Create** button in Web Client.
2. The file folder that you have created is an empty container, that is, it has no files in it. To add files to the file folder, see Adding Attachment Files and URLs to File Folders on page 313.

For more information on creating business objects, see Creating Objects on page 92.

Revising File Folders

Revising or editing a file folder object requires the appropriate modify privileges, just as editing any Agile object requires the appropriate modify privileges. In addition, you must also have privileges that allow you to check out and check in a file folder.

To revise the **Files** tab, or the content of the file folder, you must check out the file folder, modify files, add files or remove files, then check in the file folder. For details, see:

- Adding Attachment Files and URLs to File Folders on page 313.
- Deleting Attachment Files and URLs from File Folders on page 318.
- Getting and Revising Attachment Files and File Folders on page 320.

Adding Attachment Files and URLs to File Folders

You must have the appropriate privileges to add attachment files to file folders. If you have questions about your privileges, contact your Agile administrator.

Each time you add a file to the Agile system, it is copied into the Agile File Manager vault as an independent file with a unique numeric vault filename.

You can also include a URL (Internet address) in a file folder. URL attachments point to Internet sites; they are not, themselves, documents on the Agile File Manager file server.

Note	When you check out a file folder, the **Version** field increments by 1, however, other users are still able to view the current version. When you check the file folder in, and it has been changed, the new version number holds. The system will not let an unchanged file folder be checked in. If you did not make a change to the file folder, complete the action by clicking **Cancel Checkout**, and the version number reverts to the previous numeral.

Deleting attachment files is covered in Deleting Attachment Files and URLs from File Folders on page 318.

When adding files to a file folder **Files** tab, Agile provides a simple and easy-to-use file uploader. The File Uploader allows you to drag and drop the files you want from your desktop or from an open directory window to the file uploader window. The uploader also has a **Browse** button so you can find the files you want in that manner.

Note	For Web Client only: Depending on your company's policies, your Agile administrator may set a systemwide preference that prevents the use of the Advanced File Uploader. In that case, **Add > File** operations in Web Client are completed using the Add File dialog, as described in Using Web Client's Standard Add File Dialog on page 317.

Using the Advanced File Uploader

You can add as many files at one time as you like. When adding to the Files tab, the Advanced File Loader includes one checkbox; when checked, it will **Unzip all zipped files upon upload**. When you are ready, click **Upload**.

When the upload is completed, depending on Agile PLM system settings, you may be prompted "Would you like to delete the uploaded files from your local disk?" which is useful if you have loaded a file onto your machine only to attach it to an Agile object. When you uploaded the file, Agile File Manager created a copy of the file that is always stored in the file vault.

At any time before clicking **Upload**, you can **Cancel** the upload. Click **Close** to close the uploader dialog.

To add attachment files to the file folder Files tab using Advanced File Loader in both Java Client and Web Client:

1. Open the file folder you want and, if it is not already checked out, click the **Check Out** button.
2. On the **Files** tab, select **Add > Files**.

   The blank File Uploader window is displayed. The instruction "Drag Files Here" appears in the window.
3. Open a directory window (for example, Microsoft Explorer) and size the window so that you can see both the File Uploader window and the directory window on your screen.
4. Navigate to the directory you want.
5. Select the file you want and drag it to the File Uploader window and drop it. The file name appears in the File Uploader window.
   - If you drag and drop a folder, all the files in the folder are added to the list in the File Uploader.
   - You can also click the **Browse** button in the File Uploader window and browse for the file

you want. When using the browse function:

- Double-clicking on folder will open the folder's contents.
- Single clicking on folder and then clicking Open will add all contents of that folder (files as well as contents of subfolders within that folder)

6. Continue locating and dragging as many files as you want to want. You can open additional directory windows if you choose.

Note	To remove any file from the download dialogue box (for example, if you made a mistake and selected a file erroneously), simply click on the file and press the Delete key on your keyboard.

7. When you have selected the files you want, if desired, check the optional checkbox.
8. **Unzip all zipped files upon upload** — unzips ZIP files so that they are stored in their native format.

   If this option is unchecked, a ZIP file is stored in its ZIP format.
9. When you are done, click **Upload**.

   The files are added to the file folder's **Files** tab. The File Uploader window displays progress messages for each file as it is uploaded.
10. When the files are uploaded, you are asked if you want to delete the uploaded file from your local disk.
    - **Yes** (default) — removes the copy of the file from the directory from which you selected it. This ensures that the correct version of the file is maintained in the Agile file vault and you do not have any out-of-date copies on your local disk. To view or update the file, use the Agile **Files** tab.
    - **No** — the copy of the file that you selected to add to the **Files** tab remains on your local disk.
11. When you are finished, remember to check in the file folder by clicking the **Check In** button.

Adding Files in Web Client without Advanced File Loader

If Advanced File Loader is not available to you in Web Client, there are two possible reasons:

- Due to your companies policies, your Agile administrator has set the system-wide preference such that Web Client users are not allowed to use the Advanced File Loader Java applet.
- Your company does allow Web Client use of the Advanced File Loader, however, your personal user profile preference attribute for File Productivity Preference is set to Standard. If this is the case, you can change your user profile preference to Advanced, which will allow you to use the Advanced File Loader.

Note	By default, your user profile is set to the Prompt preference. By responding to the prompt, you can select which file productivity method you prefer without editing your user profile. See the description of Prompt responses in Setting your File Productivity Preference on page 316.

Setting your File Productivity Preference

To modify your File Productivity Preference:

1. In Web Client, select **Tools > My Settings** to display the My Settings page.
2. On the My Settings page, click **User Profile**. Your tabbed user profile appears.
3. Click the **Preferences** tab.
4. Click **Edit**.
5. In the **File Productivity Preference** drop-down list, select one of the following:
   - **Advanced** — allows you to use the Advanced File Loader and other File Productive components (providing the Agile system-wide preference is set to allow it). The next time you add a file or check in files on the **Files** tab, if it has not been previously installed, a Java applet will be installed. See Using the Advanced File Uploader on page 314.

     Note File Productivity components include both Advanced File Loader and Automated Checkin. In Web Client, File Productivity also allows you to get (download) a multi-file attachment row as individual files instead of a ZIP file, and enables the opening of an attachment in its native application when you click its Filename link.

   - **Standard** — Web Client standard Add File dialog is used when you add a file or check in files on the **Files** tab. See Using Web Client's Standard Add File Dialog on page 317.
   - **Prompt** — the next time you add a file to an **Files** tab, the Please Choose File Update Mode dialog is displayed to prompt you to choose whether to use the advanced productivity components (Advanced File Loader) or not. (By default, your **File Productivity Preference** is initially set to **Prompt**.)

     Your possible choices are as follows:

     *** Yes** (and check **Do not show this dialog box again**) — if it has not been previously installed, a Java applet will be installed. The **File Productivity Preference** attribute in your user profile is set to **Advanced**. Every time you use **Add > Files** or check-in attachments on the **Files** tab, the Advanced File Loader is displayed.

     *** No** (and check **Do not show this dialog box again**) — The **File Productivity Preference** attribute in your user profile is set to **Standard**. Every time you use **Add > Files** or check-in attachments on the **Files** tab, the standard Add Files dialog is displayed.

     *** Yes** or **No** (and *do not* check **Do not show this dialog box again**) — The **File Productivity Preference** attribute in your user profile is remains set to **Prompt**. Every time you use **Add > Files** or check-in attachments on the **Files** tab, the Please Choose File Update Mode dialog is displayed and you can select the method you want to use.

     Once you respond to the prompts **and** you also check **Do not show this dialog box again,** your preferred file productivity method will always be used. The Please Choose File Update Mode dialog will no longer appear and the **File Productivity Preference** attribute in your user profile is set as described above for the **Yes** or **No** choice.

     Note At any time, you can use the above process (step 1 through step 5) to edit the **File Productivity Preference** attribute in your user profile to change your preference and select a the file upload method you prefer.

Using Web Client's Standard Add File Dialog

If you want to use the standard Add File dialog, make sure that the **File Productivity Preference** attribute in your user profile is set to Standard. See Setting your File Productivity Preference on page 316 for instructions.

To use the standard Add File dialog:

1. In Web Client, open the file folder you want and, if it is not already checked out, click the **Check Out** button.
2. On the **Files** tab, select **Add > Files**.

   The Add File window appears with rows for up to five attachments.
3. Use the **Browse** button to locate and select files to add. You can select electronic files on a local drive or on your network.
4. Add descriptions for the files. You do not have to add a description now. You can add or edit a description at any time.
5. If desired, check the optional checkboxes:
   - **Unzip** — unzips ZIP files so that they are stored in their native format.

     If this option is unchecked, a ZIP file is stored in its ZIP format.
6. Click **Finish**. The files are added to the **Files** tab and placed in the file server vault.
7. Click **Check In** to check in the file folder.

Adding URLs

Note	If a URL is added to a single file folder (there are no other files or URLs in that file folder) and the file folder version remains at Version 1, you can select the URL row on the **Files** tab, click **Edit**, then edit (modify) the URL. All the business objects that include the URL on their **Attachments** tab will display the newly edited URL.

To add a URL to the Attachments tab in both Java Client and Web Client:

1. Open a file folder, and click the **Check Out** icon to check out the file folder.
2. Click the **Files** tab to display its contents.
3. Select **Add > URL.** The add URL dialog appears.
4. Enter a URL and description. URLs must include the http syntax.

Note	The URL field is prepopulated with the text string **http://** to streamline this process.

5. To verify that you have typed the correct URL, click **Preview**. A new browser window opens using the URL you have entered.
6. Click **OK**. The URL is added to the **Files** tab.
7. Click **Check In** to check in the file folder.

Editing the Files Table

When a file folder is checked out, you can modify the editable fields on the **Files** tab.

To edit the files table in either Java Client or Web Client:

1. Open the file folder you want and, if it is not already checked out, click the **Check Out** button.
2. Click the **Files** tab to display it.
3. Select the rows you want to edit, and click the **Edit** button.
   - Web Client — the Files tab is displayed in edit mode. Make the desired modifications and click **Save**.
   - Java Client — the Edit dialog appears. Make the desired modifications and click **OK**.

Note	If a URL is added to a single file folder (there are no other files or URLs in that file folder) and the file folder version remains at Version 1, you can select the URL row on the **Files** tab, click **Edit**, then edit (modify) the URL. All the business objects that include the URL on their **Attachments** tab will display the newly edited URL.

If there are multiple files or URLs on the **Files** tab, or the file folder has been advanced from Version 1, you will not be able to edit the URL. However, if the file folder is checked out, you can delete the URL row from the table and use **Add > URL** to add a new URL row.

Deleting Attachment Files and URLs from File Folders

When you delete a referenced attachment file, Agile removes the file from the File Management vault. The outside file at its original location is untouched; only the Agile copy in the vault is deleted.

Each time you use an outside file to create a referenced attachment file, it is copied into the File Management vault as an independent file with a unique numeric vault filename. This is true even if you add the same outside file to several different file folders. You can delete the file from one file folder without affecting any of the copies.

You must have the appropriate privileges to delete files and URLs from the **Files** tab. If you have questions about your privileges, contact your Agile administrator.

Note	If the file you want to delete has been checked out from the **Attachments** tab of the business object that references it, (unless you have sufficient privileges) you cannot delete it from the file folder until it has been checked back in on the **Attachments** tab.

To delete files and URLs from a file folder in Java Client:

1. On the **Files** tab of the checked-out file folder, select the files and URLs that you want to delete.
2. Click the **Delete** button .

Note	Be sure to use the **Delete Attachments** button on the **Files** tab. *Do not* use the **Delete** command on the **File** menu and *do not* use the **Delete Object** button in the object window toolbar. This deletes the *entire object you are working with*, not just the attachment.

To delete files and URLs from a file folder in Web Client:

1. On the **Files** tab of the checked-out file folder, select the files and URLs that you want to delete.
2. Click the **Delete** button.

Note	Be sure to use the **Delete** button on the **Files** tab. *Do not* use the **Delete** command on the **Actions** menu. This deletes the *entire object you are working with*, not just the attachment.

Purging Unused File Folder Versions

If you have the appropriate privileges, you can purge checked-in file folder versions that are not referenced by any Agile object. Purging a file folder version removes from the File Management vault all the files checked in for that version. The version number is also removed from the file folder drop-down list.

Purging a file folder version and deleting attachment files have similar results because both actions remove files from the Agile file vault. These actions differ in the following ways:

- When deleting files or URLs from a file folder, the file folder must be checked out. While the file folder is checked out you can selectively delete or replace files and URLs in that checked-out file folder version. When you check in the file folder version, any files or URLs you deleted are removed from the File Management vault. For more information, see Deleting Attachment Files and URLs from File Folders on page 318.
- Purging an unused file folder version action can be performed only to a checked-in file folder version. The checked-in file folder version cannot be referenced by any Agile object and it cannot contain any redlined files. Purging a file folder version removes all the files and URLs in that version from the Agile File Management vault.

Why Purge Unused File Folder Versions?

Mary has checked out the Version 5 file attachment from an Item object **Attachments** tab. Mary works on her local copy of the file, and then checks in the Version 6 file attachment for the Item object. After she has checked in, Mary realizes that the file she checked in is incorrect. She checks out the attachment again, replaces it with the correct file and checks in Version 7. The incorrect file in file folder Version 6 remains in the file vault. Even though Version 6 can be considered only an historical document, and the Item attachment table no longer points to Version 6, Mary would like to remove Version 6 completely because it is incorrect.

To remove an unused file folder version:

1. Before you begin, you can verify that the file folder version you want to purge is not referenced by any other Agile object, on an **Attachments** tab or a **Content** tab.
   a. Navigate to the file folder object and click the **Where Used** tab.
   b. In the **Version** drop-down list, select the version you want to purge.

If the Where Used table for the selected version is empty, the file folder version is not in use.

c. If the Where Used table for the selected version lists one or more objects, if you have the appropriate privileges, you can modify those objects so they use a different file folder version:
   - Navigate to each object and edit the **Attachments** tab or the **Content** tab of the object to select a version of the file folder other than the version you wish to purge. You can choose an earlier version, a more recent version, or the latest version (providing the version you want to purge is not the latest version).

2. With the file folder object open, from the **Version** drop-down list, select the version you wish to purge.
3. From the Web Client **Actions** menu or the Java Client **More...** menu, select **Purge Folder Version**.
4. Confirm the prompt.

   Agile PLM checks whether the selected file folder version meets the requirements that allow it to be purged:

   - If the selected file folder version is in use (on an Agile object **Attachments** tab or **Content** tab) or if the file folder version has been incorporated to an item object, Agile PLM displays a warning message and the file folder version is not purged.
   - If the selected file folder version contains redlined files, Agile PLM displays a warning message and the file folder version is not purged.
   - If the selected file folder version is checked out, Agile PLM displays a warning message and the file folder version is not purged.

   If the file folder version meets the requirements, it is purged. All files and URLs are removed from the Agile File Management vault and the version number is removed from the file folder's **Version** drop-down list.

The Purge Folder Version menu selection is disabled if:

- The user does not have the Purge Folder Version privilege.
- The latest version of the file folder is zero (0).

Getting and Revising Attachment Files and File Folders

If you have searched and found an attachment file that you are interested in, you may want to read it, revise it, or print it, among other possibilities. To print the file, see Printing Attachment Files on page 270.

If you want to read the file without revising it (or, revise the file as you wish without other people being able to access your revised version through Agile), or review the contents of a file folder without revising it, you will just perform a “Get” procedure, as described below.

Note In Web Client, the Get procedure differs depending on your File Productivity Preference user profile setting. See Setting your File Productivity Preference on page 316.

You must have the appropriate privileges to check out and check in a file folder and to cancel a checkout, whether you are performing the operation at the file folder itself or from the Attachments

tab of a business object. If you have questions about your privileges, contact your Agile administrator. If you are going to work with file folders often, it may be appropriate that you be assigned the File Folder Administrator or File Folder Manager role.

Getting Attachment Files or File Folders

You can copy files on the **Files** tab of a File Folder object or a Design object to the directory of your choice. This is called *getting* a file. You can get as many copies as you like. If you want to revise an attached file and make the version public, you must check the File Folder object out, make changes, and check it back in. This is covered in Checkout and Checkin to Revise Attachment Files or File Folders on page 323.

Several users can get the same attachment files simultaneously. You can get files that are checked out. Also, you can get a file even though the application used to create that file is not loaded on your computer.

You must have the appropriate privileges to get a copy of the file. If you have questions about your privileges, contact your Agile administrator.

Note	When you get an attached file, the date stamp on your copy of the file reflects the date that you got the file, not the date that the file was attached or saved.

Java Client, Batch Get

To batch get copies of all the attachment files of a file folder object in Java Client:

1. Display the **Files** tab of the file folder.
2. Click the button drop-down menu for **Get Files** and select **Batch Get All Files from this Object**.
3. In the Select Directory dialog, specify the directory where you want to store the copies.

   If there is more than one file on the **Files** tab, and you want to get the files together in one ZIP file, click **Download the files in one ZIP file**. Specify a **ZIP filename**.
4. Click **OK**. The files (or ZIP file) are copied to the specified directory.

   You will be prompted whether you want to open the file or files.

Java Client

To get copies of attachment files from a file folder object in Java Client:

1. Display the **Files** tab of the file folder.
2. Select the rows of the files that you want to get.
3. Click the **Get Files** button .

   In the Select Directory dialog, specify the directory where you want to store the copies.

   If you selected more than one file, and you want to get the files together in one ZIP file, click **Download the files in one ZIP file**. Specify a **ZIP filename**.
4. Click **OK**. The files (or ZIP file) are copied to the specified directory.

   You will be prompted whether you want to open the file or files.

Web Client, Standard File Productivity

To get copies of attachment files from a file folder object in Web Client, using Standard File Productivity method:

1. Display the **Files** tab of the file folder.
2. Select the rows of the files that you want to get.
3. Click the **Get** button in the row of a file you want.
4. The Save As dialog appears. Save the files to disk, specifying the directory where you want to place the files. Web Client copies the files to the selected directory.

   Note If you get copies of multiple files, they are automatically placed in a ZIP file.

5. Click **OK**. The files (or ZIP file) are copied to the specified directory.

Web Client, Get All Files, Standard File Productivity

To get copies of all the files from a File Folder object or Design object in Web Client, using Standard File Productivity method:

1. Display the **Files** tab of an object.
2. Click the **Get All Files** button in the tab menu.
3. The File Download dialog appears.
4. Specify the directory where you want to place the files.
5. Click **Save** to save the ZIP file to disk, specifying the directory where you want to place the file. Agile PLM copies the files to the selected directory.

   Click **Open** to open a ZIP file in WinZip that contains all the attachment files.

   Note If there is a single file on the **Files** tab, you are prompted to either open the file in its native application or save it in its native format.

Web Client, Advanced File Productivity

Note For more information about the **Advanced File Productivity** preference, see Setting your File Productivity Preference on page 316.

To get copies of attachment files from a file folder object in Web Client, using Advanced File Productivity method:

1. Display the **Files** tab of the file folder.
2. Select the rows of the files that you want to get.
3. Click the **Get** button in the row of a file you want.

   The Select Directory dialog opens.

Note	When using the Advanced File Productivity method to get multiple files, Web Client gives you the choice of downloading individual files or downloading a ZIP.

4. If you want multiple files in a single ZIP file, check **Download the files in one ZIP file** and enter a ZIP file name.

Note	If you did not select multiple files, the ZIP file option and name field do not appear in the Select Directory dialog.

5. Click **OK**. The files (or ZIP file) are copied to the specified directory.

   You will be prompted whether you want to open the file or files.

Web Client, Get All Files, Standard File Productivity

To get copies of all the files from a File Folder object or Design object in Web Client, using Standard File Productivity method:

1. Display the **Files** tab of an object.
2. Click the **Get All Files** button in the tab menu.
3. The File Download dialog appears.
4. Specify the directory where you want to place the files.
5. Click **Save** to save the ZIP file to disk, specifying the directory where you want to place the file. Agile PLM copies the files to the selected directory.

   Click **Open** to open a ZIP file in WinZip that contains all the attachment files.

Note	If there is a single file on the **Files** tab, you are prompted to either open the file in its native application or save it in its native format.

Checkout and Checkin to Revise Attachment Files or File Folders

There are several factors that determine how you check an attachment file out for modification and check it back in, and how you check out a file folder for revision and check it back in. To revise an attachment file means, of course, to alter the contents of the file itself. To revise a file folder means making structural changes to the file folder's contents, such as adding a file, deleting a file, replacing one file with another, or editing the File Description.

Note	When you download a file for revision, you simply get a copy of the file, make your revisions, and replace the original file when you are checking it back in.

A file folder can contain one file or multiple files. All the files are stored in the file vault, part of Agile File Manager, each file identified with its file folder. In order to modify a file in the file vault, you must first check out its file folder.

When you check out a file folder, the system makes the attachment files available for modification by the Checkout User only—unlocks them—and renders the file folder inaccessible for modification by others. You can download and edit the file(s), which no one else can do until you either check the folder in or cancel the checkout.

Important	To many people in manufacturing industries and from Agile business objects, to "check out a file" means a one-step operation in which the checked out file is automatically downloaded to the user's computer. In Agile PLM File Folders, think of **CheckOut** as synon*ymous wit*h unlocking a file, making it available to only the file folder Checkout User for modification. After modifying and replacing the referenced file(s), **CheckIn** is synonymous with *locking* the file in the file vault.

Once you have modified an attachment file and checked a containing folder back in, every user who views objects that reference that file, from the same or another file folder object, will see the modified version of the file—provided the user accesses the Latest Version of the folder object.

By default, only you or a user with "file folder administration" privileges can check in a file folder that you checked out, or cancel a checkout. However, your Agile administrator can alter the privilege masks so that anyone can check in any file folder. Also, with appropriate privileges, you can edit the filenames when you check in the attachment.

The following procedure works from a file folder's **Files** tab. For information about checking out from a business object Attachments tab, see Checking Out Attachment Files on page 282.

To check out a file folder and get attachment files for modification:

1. Open a file folder.
2. Click the **Check Out** button .
   - In Java Client, "[Checked out]" appears in red type at the upper-right portion of the object.
   - In Web Client, a checked out file folder icon appears in the upper-left portion of the object page.

   The **Version** number of the folder is advanced, from the latest previous version to the next number. If the checkout is canceled, the version number will revert.

   On the **Title Block** tab of the file folder, the checkout information is filled in, for example, Checkout User and Checkout Date.
3. Click the **Files** tab. The files in the file folder are listed (URLs are listed too).
4. To change the file folder itself, click the **Edit**, **Add > Files**, or **Add > URLs** button. Note that **Edit** button gives you the control information about the folder, and you are not editing the file itself. You can edit the File Description field or the File Path field.

   To change the contents of attachment file(s), having checked the folder out, now select the files you want and click the **Get Files** button .
5. Revise and save the files.
6. Return to the checked-out file folder from which you got the attachment file you have modified.
7. Replace the file on the Files tab with the file you modified, using the appropriate instructions below for either Java Client or Web Client.

   When you have completed all your modifications (Replace, Add, Delete, and Edit) click the **Check In** button . The file folder is checked in, and the version increments.

Java Client, replace files:

a. Select the row to enable the **Replace File** button.

b. Click the **Replace File** button .
c. The Select File dialog appears.
d. Select the modified file or navigate to the directory you want and select the file.
e. Click **Open** to complete the replacement process.

Web Client, replace files:

a. In the file row you want to replace, click the **Replace File** button .
b. The Replace File dialog appears.
c. Click the **Browse** button to navigate to the directory you want and select the file.
d. When you are done, click **Finish**.

Note	From the **Files** tab of the file folder, you can choose to replace a file at any time the file folder is checked out.

The modified file writes over the previous version of the file.

Checking in a file folder increases the version number of the attachment.

When you check out a file folder and get an attachment file, a copy of the attachment file is stored in a specified directory. When you check the file folder in, the files remain in the directory until you delete them manually.

If you placed the file on the network or in a shared drive or directory (during the Get operation), you can check in the file from any computer that provides access to that drive or directory. If you place the file into a directory that is not a shared directory, it must be checked in from that same computer. See your Microsoft documentation for more information about shared directories.

Canceling Checkouts

When you wish to discard edits to files on a file folder that you checked out, you can cancel the checkout.

A checkout can be canceled only by the user who checked out the attachment, or by a user with necessary “file folder administration” privileges. If you have questions about your privileges, contact your Agile administrator.

When you cancel a checkout, copies of the attachment files remain in the checkout directory you selected, but the original files are once more available to be checked out from the **Files** tab. Any edits you make to the remaining copies of the files do *not* appear in the public versions of the file (the versions of the file stored in the file vault).

To cancel a file folder object checkout:

1. Display the file folder object.
2. Click the **Cancel Checkout** button .

Ad Hoc Redlining or Marking Up of Attachment Files from the File Folder

The other method to mark up or redline an attachment file is called “ad hoc redlining” in which the attachment is approached via the **Files** tab of the file folder.

To ad hoc redline or mark up an attachment file from a file folder object in the Java Client:

1. On the **Files** tab of the file folder object, select a file you want to redline.
2. Click the **View** button.
3. When AutoVue for Agile appears, click the **Markup** button. (This button is available only when markups are allowed.)
4. Use the tools described in the viewer online Help to redline the attachment. To view online Help, choose **Help > Content** in the AutoVue for Agile menu bar.

Note	Ad hoc markups are saved against and associated with the version of the file folder object.

To ad hoc redline or mark up an attachment file from a File Folder object in the Web Client:

1. On the **Files** tab of a file folder object, click the **Do Redlines** button (or **Has Redlines** button) on the row of the file you want to redline. (This button is available only when markups are allowed.)
2. Use the tools described in the viewer online Help to redline the attachment. To view online Help, choose **Help > Content** in the AutoVue for Agile menu bar.

Note	Ad hoc markups are saved against and associated with the version of the file folder object.

For more information about AutoVue for Agile, see *Viewer Supplement*.

Other File Folder Operations

Performing a Mass Update of a File Folder

You can remove or replace a file-folder attached to multiple objects at one time. For example, if File Folder 2 is created, and File Folder 1 becomes obsolete, you can replace the attachment of File Folder 1 with File Folder 2 on all of the objects that include a reference to File Folder 1.

- Remove a file folder reference from all or some of the objects that reference the file folder.
- Replace a file folder reference in all or some of the objects that reference the file folder.
- Add a file folder to the **Attachments** tab of multiple specified objects.

To perform a bulk file folder operation in Java Client:

1. Open the file folder that you want to remove, replace, or add.
2. Right-click and choose **Mass Update**.
3. Select the version of the file folder on which you want to perform the bulk operation.
4. Select the attachment files you want to include in the operation, and click **Next**.
5. Specify whether you want to add, remove, replace the file folder or replace the version of the file folder, and click **Next**.

6. Depending on which function you selected in step 5 above, use the wizard search tools to find and select the objects you want to be affected by this bulk operation or, select the objects you want to be affected from the displayed list.
7. Click **Finish**.

To perform a bulk file folder operation in Web Client:

1. Open the file folder that you want to remove, replace, or add.
2. Choose **Actions** > **Mass Update**.
3. Specify whether you want to add file, remove file, replace file, or replace version, and click **Next**.
4. Select the version of the file folder on which you want to perform the bulk operation.
5. Select the attachment files you want to include in the operation, and click **Next**.
6. Using the wizard search tools, find and select the objects you want to be affected by this bulk operation.
7. Click **Finish**.

Routing and Reviewing File Folders

The Default File Folders Workflow applies to all file folder objects that users create in the File Folders base class, which includes both the *File folders class* and the *Designs class*. This workflow is read only and, with only a single Review status, is a simple review-and-signoff system—although the signoff can still be an approval or a rejection.

Each file folder version has its own Routing Slip. Each version can have a different set of approvers and observers.

To add approvers or observers:

1. Open the file folder object.
2. Select the **Routing Slip** tab.
3. In the **Version** drop-down list, select the version you want.

   Note The selected version must be checked in. For example, you cannot add approvers to version [4] which has not yet been checked in.

4. Click the **Add Approvers/Observers** button. The Add Approvers and Observers dialog box opens.
5. Select the approvers and observers you want to add, and enter a comment, if desired. Click **OK**.

Similarly, you can use the Remove Approvers or Observers button to remove reviewers for a file folder.

Approving or Rejecting a file folder:

Approving or rejecting a file folder object uses the same process as approving or rejecting any routable object. For detailed information, see:

- Approving Routable Objects on page 230

- Rejecting Routable Objects on page 233

Important	Approvals and rejections are version-specific. Your approval or rejection applies only to the selected version of the file folder object.

File Folders and the Effects of CopyFilesToRev SmartRule

See Effects of CopyFilesToRev SmartRule on page 288.

File Folders and Viewing

For information about AutoVue for Agile, see *Viewer Supplement*.

File Validation (Handle File Checksum)

See Checksum File Validation on page 284.

Chapter 11

Working with Design Objects

This chapter includes the following:

- What are Design Objects? 329
- Design object Actions Menu 329
- Design Title Block Tab 331
- Design Object Files Tab 332
- Structure Tab of Design Objects 333
- Routing and Reviewing Design Objects 337
- Where Used Tab, Design Object 337

What are Design Objects?

Note	Design objects are available in your Agile PLM system only if your Agile administrator has enabled them for use. Design objects are available only in Web Client.

Design objects are an additional type of File Folder object. The File Folder base class includes two classes of objects:

- File folders
- Designs

A Design object is another type of file container object intended for use with CAD models. Design objects have all the capabilities of file folder objects described in the chapter Working with File Folders on page 303.

Design objects have additional features that allow you to create a parent-child structure of related design objects, and .to record and modify the version of each design object in the model structure.

Typically, Design objects are used with an Agile PLM Engineering Collaboration (EC) CAD integration. Most of the tasks related to the creation, modification, and maintenance of CAD data model structures associated with Agile Design objects are managed by the integration application. Although you can create and modify Design objects yourself, just like any other Agile object, an Agile PLM EC CAD integration will perform many of these tasks automatically.

Contact your Agile administrator if you have questions about how Design objects are used at your company. For additional information about Design objects, see *Agile Administrator Guide*.

Design object Actions Menu

For information about the Web Client Actions menu, see Actions Menu on page 85.

For information about Design object actions, see:

- Using the Design Object Version Browser
- Save As, Design Model Objects on page 330

Using the Design Object Version Browser

When a Design object is open, you can view information about all versions of the Design in the Version Browser.

Note The Version Browser is available only in Web Client.

To open the Version Browser:

1. In the **Actions** menu, choose **Version Browser**. The Version Browser opens.

The Version Browser displays the following information about each version:

Version Browser Column	Description
Approval	An **Awaiting Approval** icon in this column indicates that the version is awaiting approval; the Routing Slip for that version lists users who have not yet signed off.
Version	The version number.
Checkin Date **Checkin User**	The date the version was checked in and the user who performed the check in. When the version is checked out, these fields are blank.
Change Info	Indicates how the version was modified before it was checked in. **Files** indicates that the object's files were modified, for example, files were replaced, added, or deleted. For Design objects, **Structure** indicates that the Design's **Structure** tab was modified.
Label, **Revision**, **Revision Date**	These are version-specific editable fields used with Design data model objects.

Actions you can initiate in the Version Browser:

- **View Files**: Select any version row and click **View** to view the file or files in AutoVue for Agile.
- **Compare Files**: For single-file versions, select two version rows, and choose **Compare** in the **View** button drop-down list. The selected files are compared in AutoVue for Agile.

Save As, Design Objects

When you use **Save As** in the Design object **Actions** menu to create a new Design object, Save As copies the **Structure** tab of the latest checked-in version of the Design object.

Design Title Block Tab

By default, the Design object **Title Block** tab contains the fields listed in the following table. Agile administrators determine which fields are enabled and visible on the **Title Block** tab.

In Web Client, the **Title Block** can contain two additional sections, called **Page Two** and **Page Three** by default. (Design objects are not supported in Java Client). Agile administrators can add custom class fields to Page Two section and custom subclass fields to the Page Three section. The Agile administrator determines whether these sections are enabled, and what they are called.

The following table describes each Title Block tab field and how it is completed.

Field	Description
Number	The Design object's number, completed when the file object is created.
Type	The subclass of this Design object. Depending on Agile system settings, this field is automatically completed when the Design object is created.
Lifecycle Phase	Current lifecycle; selected from a list. For example, **Concept** or **Maintenance**.
Description	Text describing the Design object
Version	The currently selected version of the Design object; version-specific.
Label	Version-specific text field which indicates a label identifier for the version. Users with the appropriate privileges can modify this field on any checked in or checked out version.
Component Type	List field which indicates the type of component represented by the Design object.
Last Modified Date	Date the Design object was last modified. Completed automatically.
Checkout Status	Indicates whether the Design object is currently checked out or checked in. Completed automatically.
Checkout User	When the Design object is checked out, displays the user who checked out the object. Completed automatically.
Checkout Date	When the Design object is checked out, displays the checkout date. Completed automatically.
Checkout Location	When the checkout user's File Productivity Preference is set to Advanced, the checkout location is automatically filled in.
Create Date	The date the Design object was created.
Component Type	List field which indicates the type of component represented by the Design object.
Revision	Version-specific text field which indicates the targeted Revision for the Design

Field	Description
	version.
Revision Date	Version-specific date field which indicates a revision date for the Design version.
Checkin User	Indicates the user who checked in the currently selected version; completed automatically.

Design Object Files Tab

Fields on the Files Tab of Design Objects

The following table lists fields on the **Files** tab of Design objects.

Field	Description
!	If a file has been modified directly in the file server vault, this icon appears in the field to indicate that the file **Has checksum error**. Click the icon to get information about the checksum error. See File Validation (Handle File Checksum) on page 328.
	This icon appears in the field if the file **Has been redlined**. The **Do Redlining** icon will appear here from the file folder level for any file type that is listed in the Supported File Types and Valid Model File Type settings in Administrator. Both of these cases allow ad-hoc viewing and redlining.
File Name	The name of the file. In Web Client, click the filename to view the file in the Viewer.
File Path	Can be manually set.
File Type	The format of the file
File Size	The size of the file, in bytes
Last Viewed Date	Date when the file was last viewed (The **History** tab records detailed information about file viewing.)
Checkout Location	Records where checked out files were placed during the check out procedure. If you are using Web Client with Advanced File Productivity preference selected, **Checkout Location** is used to automatically locate and checkin the checked-out files.
File Category	Category selected from a list.
File Description	Description of the file
Document Text	If needed, this field will be filled in automatically by the Agile system.

Adding Files to the Design Object Files Tab

The Files tab of the Design class object has the same functions as the Files tab of the File Folder class object.

For information about working on the Files tab, see Adding Attachment Files and URLs to File Folders on page 313.

Note	Design objects are available in Web Client only. Any instructions related to Java Client do not apply to Design objects.

Structure Tab of Design Objects

Each row in the structure table includes information about the child Design object in each structure table row.

- Structure rows can reference checked in or checked out versions of child objects.
- A parent can be checked in while using a checked out version of a child.
- You cannot Cancel Checkout a version that is in use; an error message is displayed.

The following table describes the fields included in the structure table.

Structure Table Field	Description
	Icon indicates that the Design data model has a file attached to its Files tab.
	Icon indicates that the Design data model is linked to an Agile business object; that is, whether the Design object appears on the Attachments tab of an Agile object, for example, the Attachments tab of an item object.
	Icon indicates that the Design object is currently checked out.
Checkout User	When the Design object is checked out, this field displays the user who performed the checkout. Completed automatically.
Checkin User	When the Design object is checked out, displays the user who checked out the Design object. Completed automatically.

Structure Table Field	Description
Number	The number of the Design object. indicates a Design object with no children, that is, a leaf node. indicates a Design object with structure, that is, a Design object with children design objects listed on its **Structure** tab. Click the number to open the Design object. Click the **Show Details** icon next to the number to display details about the Design object. See Structure Tab Show Details Display on page 336.
Version	The version of the Design object included in the structure. The version included in the structure can be any version of the Design data model. A **Not Latest** icon indicates that the specified Design object version is not the latest version.
Label	Version-specific text field which indicates a label identifier for the version.
Component Type	List field which indicates the type of component represented by the Design object.
Last Modified Date	Date the Design object was last modified.
Checkout Status	Indicates whether the Design object is currently checked out or checked in.
Checkout User	When the specified version of the Design object is checked out, displays the user who checked out the object.
Checkout Date	When the specified version of the Design object is checked out, displays the checkout date.
Checkin Date	Date the specified version was checked in.
Create Date	Date the Design object was created.
Checkout Location	When the Design object is checked out and the checkout user's File Productivity Preference is set to Advanced, the checkout location is automatically completed.

Structure Tab Buttons

The following table explains the **Structure** tab buttons and the actions you can perform on the **Structure** tab.

Note You must select a checked out Design object version in order to **Add** or **Remove** rows, or to **Edit** rows. If all versions are checked in, you must checkout the object before adding, removing, or editing Structure table rows.

Button	Description
Edit	**Note** You must select a checked out version in order edit Structure table rows. Lets you edit Structure row details by displaying the selected rows on an Edit page. The editable fields are in the form of text boxes, list boxes, and so on.
Remove	**Note** You must select a checked-out version in order remove Structure table rows. Removes the selected rows from the Structure table.
Add Add Add	**Note** You must select a checked-out version in order add Structure table rows. **Add** — Adds a Design object to the Structure table. Depending on which option you choose, you can: Create a Design object while adding it. Search for an existing Design object. Type in Known Number(s) of one or more existing Design objects.
Multi-level... **Expand** **Collapse**	**Multi-level** > **Expand** expands all the sub-structures in the Structure table. All levels of the Structure are displayed. **Multi-level** > **Collapse** collapses all expanded structure levels. Only the top level of the structure is displayed.
Go To	Takes you to a specific Design object based on the criteria you enter in the Go To dialog box. The Go To search can be limited to a particular Design data model column and to the specified number of levels. For example, specifying level 3 searches through levels 1, 2, and 3.

Using Structure Go To

The Structure Go To feature allows you to search for a specific Design object in the parent/child design structure.

To use the Go To Design in Structure feature in Web Client:

1. On the **Structure** tab, click the **Go To** button.
2. In the Go To Design in Structure dialog box, define your search:
   a. Enter the text you want to find. The Go To search finds any Design object that includes (contains) the specified text in its attribute fields. You can use any type of character, including numerals and punctuation.
   b. In the drop-down list, choose which Structure table column you want to search. You can choose all columns or one specific column.
   c. Check **Match Case** if you want to perform a case-sensitive search where text capitalization matters.
   d. Choose how many Structure levels you want to search: Enter a number or check **All levels**.

3. To start the search, click **Find Next**. The fist Design object that matches the search criteria is highlighted in the Structure table.
4. Use the **Find Next** and **Find Previous** buttons to scroll up and down the Structure table, highlighting Design objects that match the search criteria.
5. When you have found the Design object you want, click **Close** in the Go To Design in Structure dialog box. The last Design object you highlighted in the Structure table remains highlighted.

Structure Tab Show Details Display

When viewing the **Structure** tab, you can click the **Show Details** icon next to the object number to see more details about that object.

When you click the icon, the details dialog is displayed, showing the following types of information:

Details dialog feature	Description
	Close button. Click the button to close the details dialog.
Number **Version**	At the top of the dialog, the Design data model object number and version are displayed.
Files table	This table lists all the files attached to the Design object on the Files tab. The information includes File Name, File Description, File Size, File Type, and File Category. Click the file name link to open the file in its native application. Select a row to highlight it, then click **View** to view the file in the Agile Viewer or click **Get** to download a copy of the file to your computer.
Where Used as an Attachment table	This table lists Agile business objects to which the Design is attached, that is, the Design data model object appears on the business object Attachments tab. Information includes Type, Number/Name, Rev, Description, and Lifecycle/Status. Click the business objects unique identifier link in the Number/Name column to open it.
Where Used on Designs table	This table lists the parent Design objects of the current object. The Design data model objects in this table include the current object on their Structure tabs as a child object. Information includes Number, Description, Version, Attachment icon , Link icon , Checked Out icon , Label, Component Type, and Checkin User. Click the number link to open the Design data model object.

Routing and Reviewing Design Objects

The Default File Folders Workflow applies to all file folder objects that users create in the File Folders base class, which includes both the *File folders class* and the *Designs class*. This workflow is read only and, with only a single Review status, is a simple review-and-signoff system—although the signoff can still be an approval or a rejection.

Each Design object version has its own Routing Slip. Each version can have a different set of approvers and observers.

To add approvers or observers:

1. Open the Design object.
2. Select the **Routing Slip** tab.
3. In the **Version** drop-down list, select the version you want.

   Note The selected version must be checked in. For example, you cannot add approvers to version [4] which has not yet been checked in.

4. Click the **Add Approvers/Observers** button. The Add Approvers and Observers dialog box opens.
5. Select the approvers and observers you want to add, and enter a comment, if desired. Click **OK**.

Similarly, you can use the Remove Approvers or Observers button to remove reviewers for a Design object.

Approving or Rejecting a Design object:

Approving or rejecting a Design object uses the same process as approving or rejecting any routable object. For detailed information, see:

- Approving Routable Objects on page 230
- Rejecting Routable Objects on page 233

Important Approvals and rejections are version-specific. Your approval or rejection applies only to the selected version of the Design object.

Where Used Tab, Design Object

Note The Design object **Where Used** tab is version-specific and displays the where-used status of the currently selected version.

When you select a different version in the Version drop-down list, the Where Used tables display information about the selected version only.

The Design object **Where Used** tab includes two tables:

- **Attachments**

  The Attachments table lists all the Agile business objects where the currently selected version of the Design object is attached, that is, all the Agile business objects that have the current version of the Design object listed on their **Attachments** tab.

- **Design**

  The Design table lists all the Design objects that are structure parent objects for the current Design object version. That is, the selected version of the Design object appears on the **Structure** tab of the listed Design objects as a child object. Only the direct (one level) parents of the current version of the Design object version are listed.