



TEAMCENTER

Teamcenter Basics

Teamcenter 2412

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1. What are Teamcenter basics?

Teamcenter basics focuses on the Teamcenter rich client, a platform-independent client implementation (Java application) for users who interact frequently with Teamcenter. The rich client runs on client hosts and serves as a gateway to your company's product information.

Teamcenter basics includes these common tasks that apply across all supported capabilities:

- Work with Teamcenter applications perspectives and views.
- Set options and preferences.
- Search for data in the Teamcenter.
- Create and manage data.
- Manage the properties on forms.
- Run reports on data.

After you master the Teamcenter basics, you are ready to take a closer look at other areas, for example, structure management or change management. Other Teamcenter clients, such as Active Workspace and the Client for Office, are available.

2. Exploring the Teamcenter interface

Launch the Teamcenter rich client

Logging on to Teamcenter

When you log on to a Teamcenter client, you establish a Teamcenter *session*.

After the session is established and Teamcenter is running, you open the application perspectives (rich client) used to perform your tasks, or you use an alternate client, such as Active Workspace or Teamcenter Client for Microsoft Office.

The initial Teamcenter logon window can vary, depending on the security configuration at your site.

Your administrator configures Teamcenter client communication system (TCCS) and Security Services to satisfy requirements in your installation.

Supported capabilities include:

- The ability to log on to Teamcenter using Security Services in an applet-free mode.
- Support for logon authentication to Teamcenter using the Kerberos protocol.
- Support for zero sign-on for Windows systems using Kerberos.
- Support for logon authentication using soft certificate and smart card authentication.

Note:

Smart card authentication is supported only on Windows systems.

Note:

Kerberos is a network authentication protocol set up as part Security Services to allow nodes communicating over a nonsecure client-server network to verify identities in a secure manner.

For example, Kerberos authentication and the *zero sign-on* functionality is enabled during installation by clearing the **Always prompt for user ID** check box. In this case, a system user on a Windows host who is already logged on to the system through Kerberos can launch a Teamcenter client without being prompted to log on to Teamcenter.

If your site uses proxy servers, multiple environments, or Security Services components such as single sign-on, you may be required to select an environment or respond to one or more additional authentication dialog boxes.


When a site requires both a soft certificate and a smart card authentication to log on, you are initially prompted to select which certificate to use for authentication of a two-way Secure Sockets Layer (SSL) configured environment.

In the rich client, when the soft certificate is selected the logon proceeds using the soft certificate, but if the smart card is not inserted in the reader the logon process may still prompt users to insert their smart card. Canceling this prompt causes it to display again, but canceling it a second time allows the logon to proceed successfully using the soft certificate.

Note:

Sites with more than one Teamcenter Security Services server configured in the **client_specific.properties** file display a logon dialog box that includes configured server name entries. You can select the server to which you want to connect and click **Connect** to connect to that server.

Start a Teamcenter rich client session

- Choose **Start**→**All Programs**→**Teamcenter**→**Teamcenter** or double-click the Teamcenter  icon on your desktop.

Note:

Your Teamcenter client may be installed so the menu items include a version number.

Tip:

If you do not have a Teamcenter shortcut icon:

1. Choose **Start**→**All Programs**→**Teamcenter**→**Teamcenter**, and right-click **Teamcenter**.
2. Choose **Send To**→**Desktop (create shortcut)**.

Logging on to the Teamcenter rich client

The rich client logon window has the following fields:

- **User ID**

This is a required value. User accounts are created by administrators in the Organization application.

You must provide a valid account ID to interact with Teamcenter.

- **Password**

This is a required value. Passwords are created by administrators in the Organization application.

- **Group**

This is an optional value. A group is an organizational collection of users who share data. A user account can belong to multiple groups and must be assigned to a default group. Groups are created by administrators in the Organization application. If you do not specify a group, the default group associated with the user account is used.

- **Role**

This is an optional value. Function-oriented cluster of users that models skills and/or responsibilities. The same roles are typically found in many groups. Roles are created by administrators in the Organization application. If you do not specify a role, the default role associated with the group is used.

- **Server**

Specify the server to provide database access for your rich client session. Servers are configured during installation.


Note:

Depending on whether your site uses proxy servers, multiple environments, or Security Services components such as single sign-on, you may be required to select an environment or respond to one or more additional authentication dialog boxes.

Use the **-nl** argument during rich client startup to specify a display language.

Tip:

After you have logged on, you can click the user information link in the client window application header to access the **User Settings** dialog box.



(Roberta Hope (rhope) - Engineering / Designer [S90119])

You must have administrative privileges to change some settings.

Caution:

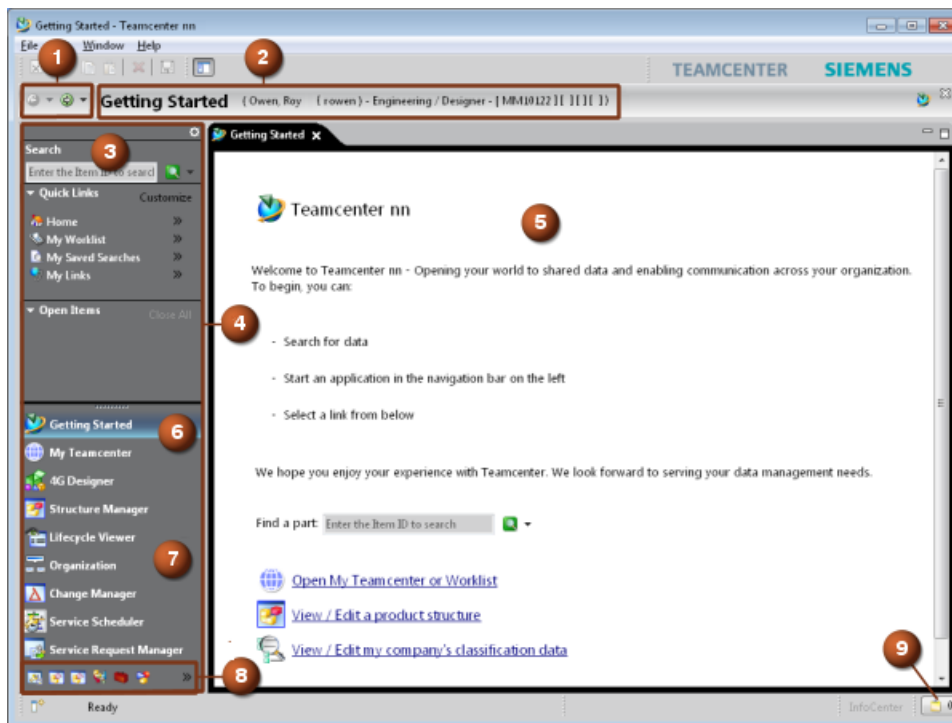
If you use the Lifecycle Visualization embedded viewer, do *not* launch the rich client using the **-nl** argument.

For the embedded viewer to work properly, the operating system locale and the rich client runtime locale must match. The **-nl** argument overrides the Java locale and can cause incorrect behavior in the embedded viewer.


Rich client interface

Rich client interface layout

The rich client interface has a standard menu bar and toolbar with options that vary depending on the currently active application perspective. You can place the cursor over a rich client toolbar button to display a tooltip description.



- 1 **Back and Forward** The **Back** and **Forward** buttons allow you to move between loaded Teamcenter applications. The small arrows next to the buttons let you select from the list of currently loaded applications.
- 2 **Application banner** The application banner shows the name of the active application and lists the current user and role. You can double-click the user and role to display the **User Settings** dialog box in which you can change your current role if multiple roles are available to your user.
- 3 **Search box** The **Search** box provides predefined quick searches using dataset, item ID, item name, and advanced search features.
- 4 **Navigation pane** The navigation pane provides quick access to the data you use most. In addition to finding, organizing, and accessing your data, you can configure the display of the Teamcenter perspective buttons in the navigation pane to display only those perspectives that you use regularly to perform your tasks.

Click the reorder button  above the **Search** box to display the **Navigation Section Ordering** dialog box that lets you hide sections or change the order of sections in navigation pane.

- 5 Application pane The application pane displays the application perspectives that are open in your Teamcenter session. By default, the Getting Started application perspective displays a single **Getting Started** view.

Note:

Application perspectives are composed of views that can be moved elsewhere in the Teamcenter window or can be dragged to the desktop. Such detached views remain connected to Teamcenter and continue to function in concert with other views.

- 6 **Getting Started** application button Provides access to the Getting Started application.
- 7 Application buttons Application buttons provide access to your most frequently used Teamcenter application perspectives.
- 8 Application button bar The application button bar provides access to Teamcenter application buttons that do not fit in the application button area of the navigation pane.
- 9 Clipboard button The clipboard button displays the **Clipboard Contents** dialog box, which contains references to objects that have been cut or copied from your workspace. The total number of objects on the clipboard is displayed to the right of the symbol.

Note:


The status message area on the lower-left side of the Teamcenter window is available to any application to indicate whether the client is ready for input or is working, so the user interface may not be accepting input at that time.

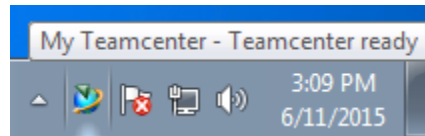
The status messages on the lower-right side of the Teamcenter window indicate the status or activity of background threads for any potentially long operations.

- The default message is **Working**, but other messages, such as **Loading children**, can be supplied by the application running the background thread.
- Information shown in this area can often be observed in more detail in the **Progress** view.

- In the **Progress** view, some operation messages have a **Cancel** button **X** that can be useful in cases where an operation was started but is not wanted at that time, such as when a user is loading thousands of nodes but determines that operation is not needed.







Note:

On Windows systems, operational status for the rich client interface and the Teamcenter server is provided by the Teamcenter icon  in the system tray.




To display the running status dialog box, click the Teamcenter icon in the system tray .

The server and user interface condition symbols show the current status of the rich client interface and the Teamcenter server.

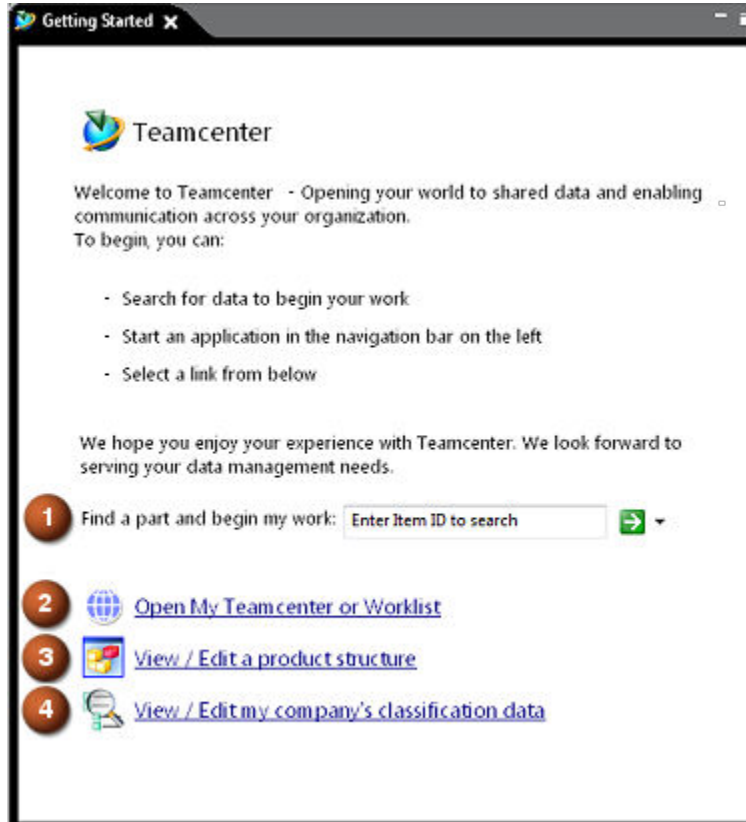
- The server status indicates the state of the Teamcenter server:
 -  The server is ready, but there is no current communication between the client and the server.
 -  The server is busy.
 -  The server is idle.
 -  The server is disconnected.
- The client status indicates the condition of the rich client:
 -  The user interface is responsive.
 -  The user interface is unresponsive.

Note:

When used, the Data Share Manager  icon is also displayed in the system tray. The Data Share Manager is a separate executable with its own user interface that lets you view large file uploads and downloads, and manage them by pausing, resuming, or canceling the processes.

Using the Getting Started application

The Getting Started application lets you begin work. You can search for a part, open your worklist, view or edit product structure, or view or edit classification data.



- | | | |
|---|---|---|
| 1 | Find a part and begin my work | This option is the same as the Search box in the navigation pane. |
| 2 | Open My Teamcenter or Worklist | Loads My Teamcenter with your worklist displayed, if it has any tasks to perform or track, or loads My Teamcenter with your Home folder displayed. |
| 3 | View/Edit a product structure | Loads and displays the Structure Manager application. |
| 4 | View/Edit my company's classification data | Loads and displays the Classification application. |

You can also use the navigation pane to start an application or search for data to begin your work.

Managing the Teamcenter client interface

You can make your Teamcenter client a more efficient tool to accomplish your work by:

- Changing the view layout in your applications
- Changing user settings
- Adjusting information center options
- Working with the navigation pane
- Configuring the toolbar
- Managing options and preferences
- Configuring data display in tables

Opening application perspectives in the rich client

Teamcenter rich client perspectives and views

Within the Teamcenter rich client user interface, functionality is provided in *perspectives* and *views*. Some applications use perspectives and views to rearrange how the functionality is presented. Other applications use a single perspective and view to present information.

- Perspectives

Are containers for a set of views and editors that exist within the perspective.

- A perspective exists in a window along with any number of other perspectives, but only one perspective can be displayed at a time.
 - In applications that use multiple views, you can add and rearrange views to display multiple sets of information simultaneously within a perspective.
 - You can save a rearranged perspective with the current name, or create a new perspective by saving the new arrangement of views with a new name.
- Views and view networks

In some Teamcenter applications, using rich client views and view networks, you can navigate to a hierarchy of information, display information about selected objects, open an editor, or display properties.

- Views that work with related information typically react to selection changes in other views.
- Changes to data made in a view can be saved immediately.
- Any view can be opened in any perspective, and any combination of views can be saved in a current perspective or in a new perspective.
- A view network consists of a primary view and one or more secondary views that are associated. View networks can be arranged in a single view folder or in multiple view folders.
- Objects selected in a view may provide context for a shortcut menu. The shortcut menu is usually displayed by right-clicking.

Note:

If your site has online help installed, you can access application and view help from the rich client **Help** menu or by pressing F1. Some views, such as **Communication Monitor**, **Print Object**, and **Performance Monitor**, are auxiliary views that may be used for debugging and that may not be displayed automatically by any particular perspective.

Using application perspectives and views in your rich client session

You can open, or load, one or more applications in your rich client session.

Note:

Your administrator can use the **HiddenPerspectives** preference to prevent the display of some Teamcenter perspectives in the rich client.

To view or edit preference information, use the rich client **Edit→Options** dialog box.

Each application perspective is displayed in the rich client window and each application perspective contains one or more views.

You can have any number of views open in any application perspective, and you can associate views so they operate as a network.

Note:

In the rich client, after retrieving product views in the Structure Manager or Manufacturing Process Planner, dialog boxes may be hidden behind the main rich client user interface, such as those accessed by choosing **Edit→Options** or **File→Exit**. The user is unable to close hidden dialog boxes.

When dialog boxes are hidden and the rich client is does not respond, do one of the following:

- Use the Alt+Tab keys to switch back to the Teamcenter application. The dialog box comes back to the front.
- Launch the task manager, and in the **Applications** tab, select the Teamcenter application and click the **Switch To** button to force the dialog box to the front.

Open a rich client perspective


You open an application perspective in the rich client in any of the following ways:



- Click the application button in the navigation pane.

Tip:

If the navigation pane is not visible, use the **Window→Navigation Pane** menu command to display it or click the **Navigation Pane** icon  in the toolbar.

- Select the perspective from the **Window→Open Perspective** menu.
- Select an object in a navigation view and use the **Send To** shortcut menu command to select an application.
- Double-click an object in a navigation view to open the perspective associated with that object type.

For example, to open My Teamcenter in the rich client, click **My Teamcenter**  in the navigation pane.

If you do not see My Teamcenter listed, check for the **My Teamcenter** button  in the application button bar at the bottom of the navigation pane. You can use **Configure Applications** () at the bottom of the navigation pane to find and place the **My Teamcenter** button in the navigation pane.


Note:

Not all perspectives may be installed or licensed at your site, and your site may have added or renamed perspectives after installation. Also, the order presented by the **Window→Open Perspective** menu command defaults to an automatic alphabetization that gives precedence to uppercase letters over lowercase letters. The order of presentation may vary at your site.

Switch between open perspectives

Use any of the following methods to change from the currently displayed open perspective to another open perspective:

- Use the **Back** button  in the toolbar, its associated menu, , or Ctrl+Shift+F8 to display an application opened before the current application.

- Use the **Forward** button  in the toolbar, its associated menu, ▼, or Ctrl+F8 to display an application opened before the current application.
- Hold down Ctrl+F8 to display a **Perspectives** menu, and then release F8 and use your mouse or your keyboard arrows to select the perspective to display.

Save, reset, or close a rich client perspective

To temporarily save the currently active perspective when you have arranged a useful layout of views and view networks:

1. Choose **Window**→**Save Perspective As**.
2. Enter a new name for the perspective.
3. Click **OK**.

Perspectives saved in this way cannot be used in other locales and will be cleared when the rich client cache is cleared. To restore a perspective to its default state, choose **Window**→**Reset Perspective**. This returns all default views to their original locations.

You close an application perspective in rich client in any of the following ways:

- Click the **X** in the application banner.

Note:

If you click the **X** in a view tab, only the selected view is closed and the application perspective remains active.

- Select the application, and then select **Window**→**Close Perspective**.

Rich client views

Default views

The Teamcenter rich client provides the **My Teamcenter** perspective consisting of multiple views designed to provide access to the latest Teamcenter features and functionality.

By default, the **My Teamcenter** perspective displays the **Home** component view beside the navigation pane, and the **Summary**, **Details**, **Impact Analysis**, **Viewer**, **JT Preview**, and **Process History** views. Additional views can be used in the **My Teamcenter** perspective, such as the **MS Word**, **Search**, and **Simple Search** views.

For a list of views provided with the **My Teamcenter** perspective, choose **Window**→**Show View**→**Other** to display the **Show View** dialog box, and then expand the **Teamcenter** folder.

Commonly used views

Views used in multiple perspectives

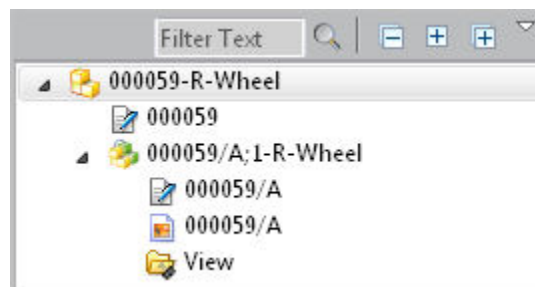
In the rich client, an application perspective can use views that are exclusive to a particular perspective and can also incorporate views that work with two or more perspectives.

- Views that are used in multiple perspectives are described as *commonly used views*.
- Commonly used views, such as the **Properties**, **Summary**, and **Details** views, work identically in each perspective and can be useful in a variety of situations.
- To provide online help for commonly used views, many of these are documented in this guide, with links provided to additional material relevant to the applications that may use these views.

Component views

The **Teamcenter Component** view is opened by default by several Teamcenter perspectives.

Component views support standard navigation functionality such as expand, expand-all, and double-click, as well as standard context-specific shortcut menus.



To manually open a component view:

1. Choose **Window**→**Show View**→**Other...**

The Show View dialog box is displayed.

2. Expand the **Other** folder.
3. Select **Teamcenter Component**.

The default component view is the **Home** view.

To open an object in a new component view, you can:

- Select an object in the navigation pane, right-click, and choose **Send to→My Teamcenter**.
- Select an object in a current component view and choose **File→Open**.
- Double-click an item or item revision in a current component view.

In the **My Teamcenter** perspective, the default component view is the **Home** view, and every object opened in My Teamcenter gets its own component view.

When you open an object in My Teamcenter, a new component view opens with the opened object as the root.

This view lets you navigate the content of the opened object. For example, opening **My Worklist** from the navigation pane opens an instance of the component view with your worklist as the root node. Similarly, opening the **Newstuff** folder opens a component view with your **Newstuff** as the root node and clicking **My Projects** opens a component view with your current project as the default node.


A component view includes the following elements:






- **Filter Text** box and **Find something locally** button 

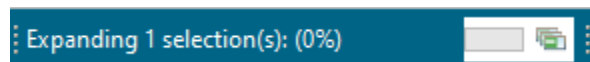
Finds objects currently or previously expanded and displayed in the current component view and whose display names match the filter text.

Note:

Click the **Find something locally** button  to display the filter text box, and then type text to begin the dynamic results filtering. You can expand returned objects to find matching values.

- **Collapse to the root object** button 
- **Expand the selected objects** button 
- **Expand the selected objects to all levels** button 

When you click this button, a dialog box is displayed to warn that this may take a long time. This operation runs in the background and its progress is displayed in a progress bar



Note:

If duplicate objects present underneath the parent, then only the first object expands.

- **View** menu

Contains:

- The **Move** menu, for moving selected objects to a different level in the tree display.
 - ▶ **Up** moves a selected folder up (for example, closer to the top-level folder) to the area of the tree that you specify.
 - ▶ **Down** moves a selected folder down to a location that you specify.
 - ▶ **Top** moves a selected folder to the top of the tree.
 - ▶ **Bottom** moves a selected folder to the bottom of the tree.

Enable response to selections button 

The selected object in the view can change when you select a different object in an associated view.

Details view

Details view table

Tables presented in separate views have their own menus for configuration.

The **Details** view presents a tabular display of properties of the children of the object currently selected in the component view.

- Individual columns can be moved left or right by clicking and dragging the column head to a new position.
- With objects selected in the table, you can right-click a column head to display the shortcut menu.
- The **Details** view supports inline editing for properties configured in the Business Modeler IDE to support that feature. To enable inline editing, select a row in details view and then select the property cell to edit. The property value can be changed.

Note:

When a property value is selected for editing, the shortcut menu is limited to text operations such as cut, copy, and paste.

Note:

The default display order for column contents in most views is specified by the Teamcenter server. In the rich client, you can click a column header to cycle through ascending, descending, and server default order. For rich client Teamcenter component (tree) views and for the **Search Results** view, use **Edit→Options** to display the **Options** dialog box, and then select **UI** and click the **General** tab to select a **Tree displaying order** option.

To allow sorting of the **EPMTask** and **EPMTaskTemplate** workflow types in the rich client using the **GeneralUitreeDisplayOrder** preference, set the **EPMTask_ignore_tree_display_order** and **EPMTaskTemplate_ignore_tree_display_order** preferences to **false**. The default value is **true**.

The **Details** view menu includes the following options:

- **Refresh**

Refreshes the display in the **Details** view.

- **Column**

Displays the **Column Management** dialog box. Use this dialog box to select properties to display and column order.

- **Save Column Configuration**

Displays the **Save Column Configuration** dialog box. Use this dialog box to save the current column configuration of the **Details** view table display. You can access saved column configurations using the **Apply Column Configuration** command.

Note:

In My Teamcenter, all column configurations are retained in the **SavedColumnConfigurations** preference.

In other applications, such as Structure Manager, column configurations are saved in preference information based on the type of object, using the model `type_SavedColumnConfigurations`, such as **BOMLINE_SavedColumnConfigurations** for item revisions and **Fnd0RequirementBOMLine_SavedColumnConfigurations** for requirement revisions.

- **Apply Column Configuration**

Displays the **Apply Column Configuration** dialog box.

- Select **Default** and click **Apply** to restore the default column configuration to the **Details** view table display. This restores columns removed by the right-click **Remove this column** command.
- Select and apply a previously saved column configuration to the **Details** view table display.

- **Sort**


Provides three levels of sorting.

- **Filter**

Displays the **Auto Filter** dialog box with available condition expressions.




- The **ALL** option displays properties for all the children of the object currently selected in the component view.
- You can use the **Filter Condition Editor** to create condition expressions for filtering the display.
- Expressions cannot be edited after they are listed in the **Auto Filter** dialog box, but they can be deleted.
- Teamcenter retains your filter condition expressions until you delete them.

To create conditions, click **Add a new search condition**  to display the **Filter Condition Editor**.

- To create an initial condition expression, select a property column value and a logical operator, and then enter an object value or select one from the list of objects displayed in the table, and then click **Add a new search condition** .

Note:

The == operator tests for an exact match. The = operator tests for a match but is not case sensitive.

- To expand the expression with additional conditions, use the **ADD** and **OR** operators.
- Click **Remove the selected condition(s)**  to delete the selected condition line.
- Click **Clean all the conditions**  to delete the entire expression.
- Click **...not meet the condition(s)**  to negate the selected condition.
- Click **OK** to add the condition expression to the **Auto Filter** dialog box.

- **Find In Display**

Displays the **Find In Display** dialog box that lets you find objects based on property names and search values.

- **Print Table**

Lets you print to either **HTML/Text** using the Teamcenter **Print** dialog box, or **Graphics**, using the system printers.

- **Copy Selected Data**

Lets you copy selected rows:

- **With Headers**
- **Without Headers**
- **For Query**

This option displays the **Select Columns For Query** dialog box in which you can select specific properties to copy.

- **Objects to Word**

Displays the **Export To Word** dialog box. You can specify:

- **Output: Static Snapshot, Live Integration with Word, Export for Markup**
- **Live options: Export for structure editing and work offline, Check out objects before export**

Note:

The checkout applies to all objects being exported. You should use this option carefully if you are exporting a large set of objects or perhaps an entire specification.

By default, the **Check out objects before export** check box is selected and unavailable. To enable the check box, you must change the value of the **REQ_checkout_objects_before_export** preference.

- **Template override**

To use a Word export template other than the default, select a template from the **Specification Templates** list or select an object type from the **Override Object Template for:** list. If you select an object type from the **Override Object Template for:** list, you then select a template from the **Available Object Templates** list to add to the table.

- **Copy URL**

The `URL Generated` message is displayed, confirming that the URL for the export document is in your Windows Clipboard and showing the URL details.

Note:

- The **Copy URL** button is unavailable if you select more than one object to export.
- The **Copy URL** button is unavailable if the **Check out objects before export** option is selected.

- **OK**

Generate the export Word file.

- **Objects to Excel**

Displays the **Export To Excel** dialog box. You can specify:

- **Object Selection**

Either **Export Selected Objects** or **Export All Objects in View**.

- **Output Template**

Either **Export All Visible Columns** or **Use Excel Template**.

When you export all visible columns to Excel, the relation column is not exported because the relation is not a property on the object.

The **Use Excel Template** option provides access to a list of templates.

- **Output**

Either **Static Snapshot**, **Live integration with Excel (Interactive)**, **Live integration with Excel (Bulk Mode)** or **Work Offline and Import**.

Note:

Export using work offline mode exports properties such as **item_id**, **object_name** and the real type name so that the data can be imported correctly to Teamcenter. These properties are exported even if they are not specifically selected.

Only numeric and string properties are supported for import from Excel. Read-only, reference, and relation properties should be marked as **Ignored** in the Excel control file sheet. Run-time properties also are not supported for work offline.

- To check out objects while exporting to live Excel, select **Check out objects before export**.

Note:

The checkout applies to all objects being exported. You should use this option carefully if you are exporting a large set of objects or perhaps an entire specification.

The **Check out objects before export** option is cleared by default. You can configure the object checkout option by setting the **Show_Checkout_option** preference in the **Options** dialog box.

- **Copy URL**

The **URL Generated** message is displayed, confirming that the URL for the export document is in your Windows Clipboard and showing the URL details.

Note:

- **Copy URL** is unavailable if you select more than one object to export.

- **Copy URL** becomes unavailable when you select any of the following dialog box options:

- ◇ **Export All Objects in View**

- ◇ **Export All Visible Columns**

- ◇ **Work Offline and Import**

- ◇ **Check out objects before export**

- **OK**

Generate the export Excel file.

- **Objects to CSV**

Displays the **Export To CSV** dialog box to export Teamcenter data in comma-separated value (CSV) format. You can specify:

- Export all Objects in View
- Export Selected Objects

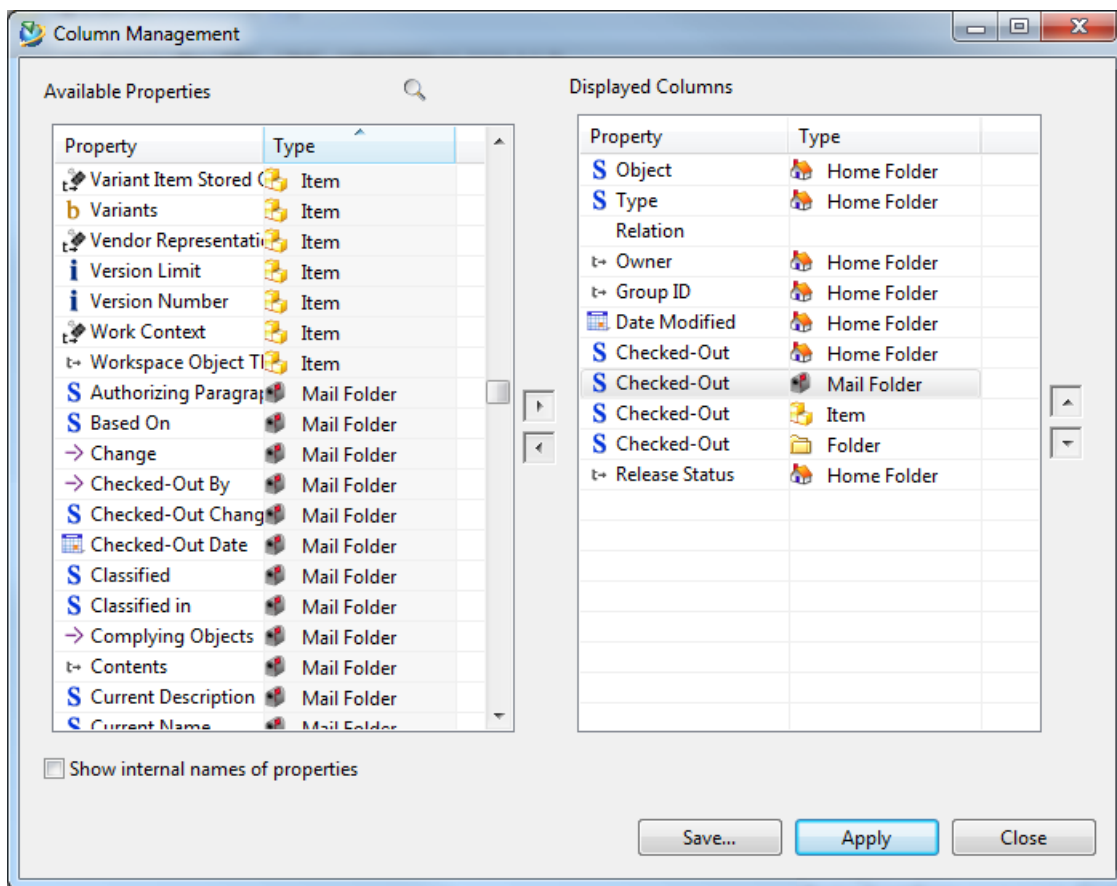
Note:

To export to alternate character set languages and have readable output in Microsoft Excel, you may need to set the proper language in Microsoft Excel. For example, for Chinese PRC in Microsoft Excel 2010, choose **File**→**Options**→**Language**→**Editing Language : Chinese PRC**.

Configure the Details view table

1. In the **Details** view, click **View Menu** ▼ and then choose **Column** from the view menu.

The **Column Management** dialog box appears.



2. Add or remove columns from the **Details** view table.
 - a. To add a column, select a property from the **Available Properties** list and click **Add to Displayed Columns** ►.

- b. To remove a column, select a property in the **Displayed Columns** list and click **Remove from Displayed Columns** ◀.
3. (Optional) Click **Move Up** ▲ and **Move Down** ▼, to the right of the **Displayed Columns** list, to adjust the order of the displayed columns.
4. Click **Apply** to apply the configuration to the current view, or click **Save** to save the configuration for later use.

Note:

You can use the **Apply Column Configuration** command on the view menu to:

- Apply a saved configuration.
- Restore the default configuration. This is the only way to restore columns removed using the right-click **Remove this column** command.

You can use the **Save Column Configuration** command on the view menu to save the current configuration of the table display.

5. Click **Close** to close the **Column Management** dialog box.

Graph Overview view

When you select an object in the navigation pane in an application that uses the **Graph Overview**, such as the **Relation Browser** perspective, the **Graph Overview** view displays the newly selected object as the root object.

If you zoom in on a complicated graph, the **Graph Overview** view shows your display location within the graph. You can pan around the display in the **Graph Overview** view to examine other objects.

The **Graph Overview** view is available by default in the Relation Browser application.

Graphics view

Display images in the Graphics view

Note:

The **Graphics** view is available for use in multiple applications. Not all applications use all the functionality listed here and may add other functionality as needed.

For additional information, see the documentation for your application.

If an image is associated with the object selected in a structure view, opening the associated **Graphics** view displays that image.

The following image types are available in this view:

- **DirectModel**

Imported **.jt** files or **.jt** files created by the translators. These datasets containing these files must be attached to the item or item revision with a **Rendering** relation.

- **DirectModelMarkup**

Captured image of a DirectModel dataset.

- **DrawingSheets** and **Markup**

Imported **.cgm** files.


- **Image**

Imported **.tif**, **.gif**, **.jpeg** and similar file types.

Note:

If the images that are attached to the BOM line are 2D snapshots, Teamcenter displays them in the **2D Viewer** view.

When you open an image in the **Graphics** view, the **Graphics** menu is displayed in the menu bar.

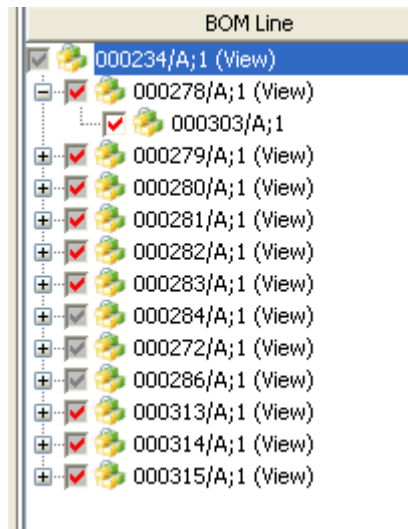
1. Right-click a line in the structure view and click  in the view toolbar.

Teamcenter opens the **Graphics** view associated with the structure view from which you open it.

Note:

Do not confuse this assembly viewer with the viewers that you can open using the **Open With** shortcut menu command. The assembly viewer has more features that you can use to view and manipulate 3D assemblies.

2. Select the check boxes next to the components in the tree that you want to display in the **Graphics** view. If you select the root item, the entire structure is displayed.



The following states exist for the check boxes.

Check box	State
<input checked="" type="checkbox"/>	The part or assembly is fully loaded and visible.
<input checked="" type="checkbox"/>	The assembly component is fully loaded but only partly visible. This can be because a part is turned off or because geometry does not exist for one or more parts.
<input checked="" type="checkbox"/>	The assembly component is partially loaded and only partially visible.
<input checked="" type="checkbox"/>	All available geometry is visible, but geometry does not exist for every part.
<input type="checkbox"/>	The part or assembly is loaded but not visible.
<input type="checkbox"/>	No geometry exists for the selected part, or if this is a parent structure, it is not fully loaded and not visible.

Tip:

If you want to display a single component in a large structure, additionally use the **Viewer** view that you open using the **Open With** shortcut menu command.

Toolbars available in the Graphics view

Note:

The **Graphics** view is available for use in multiple applications. Not all applications use all the tools listed here and may add other tools as needed.

For additional information, see the documentation for your application.

Use this toolbar	To
3D Alignment	Move individual parts or groups of parts and align them to other parts in the viewer.
3D Appearance	Work with advanced appearance attributes.
3D CAE Viewing	View Computer Aided Engineering (CAE) Finite Element Analysis (FEA) results.
3D Clearance	Check the clearance of parts in your model.
3D Comparison	Compare the geometry of two sets of parts.
3D Coordinate System	Create and manage coordinate systems. You can also align parts or your view to a coordinate system.
3D Display Modes	Control the display mode of geometry in the viewer. You can display geometry as shaded, tessellated lines, feature lines, or any combination of these. Tessellation or feature lines hidden by other geometry can be viewed as normal, semi-transparent, or invisible.
3D GDT Markup	Insert GD&T markups on your 3D models.
3D Markup	Add text or graphical elements on your 3D model in the viewer.
3D Measurement	Measure your 3D model.
3D Movie Capture	Capture the contents of the viewer as you move the camera around, show or hide parts, transform parts, play animation sequences, and play VFM motion files associated with your model.
3D Navigation	Manipulate the 3D view.
3D PMI	Display and control Product and Manufacturing Information (PMI) in your model.

Note:

PMI functionality is available only when PMI is enabled on your system. If PMI is enabled, you can right-click a part and choose one of the following commands:

- **Show PMI**

Shows all effective PMI on the selected part or subassembly and its children.

- **Toggle in PMI Tree**

Use this toolbar	To
	<p>Adds PMI from the selected part or subassembly and its children to the PMI tree. Alternatively, if the part or subassembly is already in the PMI tree, Teamcenter removes it.</p>
3D Part Manipulation	Manipulate parts by dragging.
3D Part Transformation	Translate, rotate, and scale parts in your model.
3D Section	Work with cross sections of your 3D model.
3D Selection	Pick part entities.
3D Standard Views	Examine your model from different views.
3D Thrustline Editor	Create and manipulate thrustlines.
3D Visibility	Hide obscuring parts and clip areas of your model.
Create Markup	Create product views, capture an image of the current geometry or show or hide the 3D PMI tree.
Print	Print an image or display a print preview.

Image Preview view

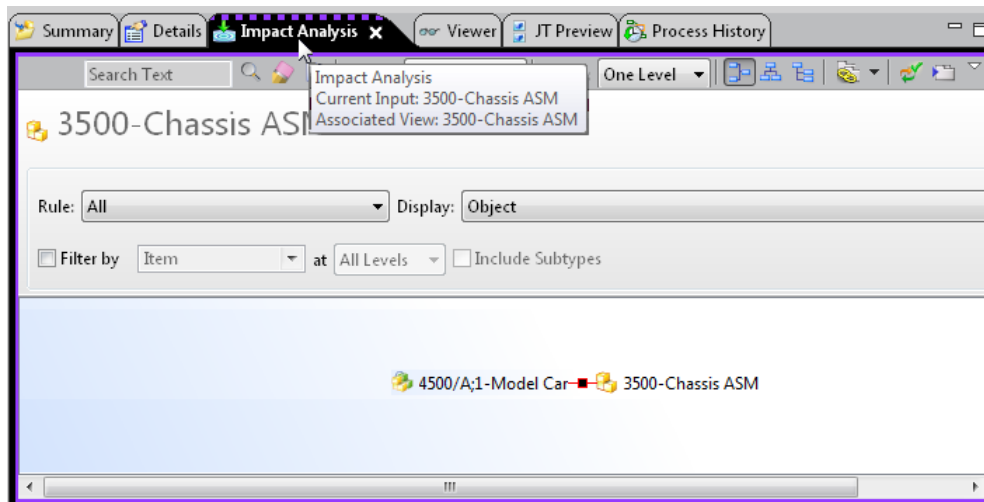
When a selected node has an associated 2D preview image, the preview image is displayed in the **Image Preview** view.

Note:


Display of thumbnail images in the graph view is controlled by the **TC_Graph_Node_Thumbnail_Shown** preference.

To view or edit preference information, use the rich client **Edit**→**Options** dialog box.

Impact Analysis view



The **Impact Analysis** view responds to the current selection in the active component view and provides the following functionality:

- **Search Text** box and **Find** button. Search supports the following actions:
 - Press Enter or click the **Find** button to start a search.
 - Press F3, Page Down, or Down to find the next matching object.
 - Press Page Up, or Up to find the previous matching object.
 - Press Home to find the first matching object.
 - Press End to find the last matching object.
- **Clear** button to clear the **Search Text** box.
- **Open** button  to display the **Open by Name** dialog box that lets you use names, wildcard characters, and revision level to find objects. You can copy found objects to the clipboard, load all found components into the table, and step through found components in groups.
- **Where**

Select either **Referenced** or **Used**.




Note:

The **TC_ImpactAnalysis_Display_Limit** preference value specifies the maximum number of objects that can be displayed in the **Impact Analysis** view when you perform a where-referenced all level search.

To view or edit preference information, use the rich client **Edit**→**Options** dialog box.



- **Depth**

Select **One Level**, **All Levels**, or **Top Level**.

-  Reverse horizontal layout style.
-  Vertical layout style.
-  Tree layout style.

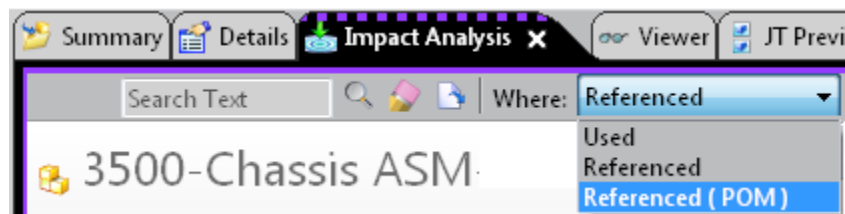
- **Where-Used/Referenced Report**

Note:

The **Impact Analysis** view lets you disable  and enable  responsiveness to selections in other views, so you can keep the currently selected root object in the view while you investigate other objects in other views.

Note:

Administrators can set the **WhereReferencePOMPref** preference to display the **Referenced (POM)** search option in the **Impact Analysis** view.



This option returns all instances and classes found in the database that contain references to the selected instance.

JT Preview view

When a selected node has an associated .jt part, the .jt part is displayed in the **JT Preview** view.

Properties view

When you select an object in the navigation pane and send it to Relation Browser:

- The **Relation Browser** view displays the newly selected object as the root object.
- The **Properties** view displays properties of the object.

When you select a different node in the **Relation Browser** view, the **Properties** view displays properties of the newly selected object.

Note:

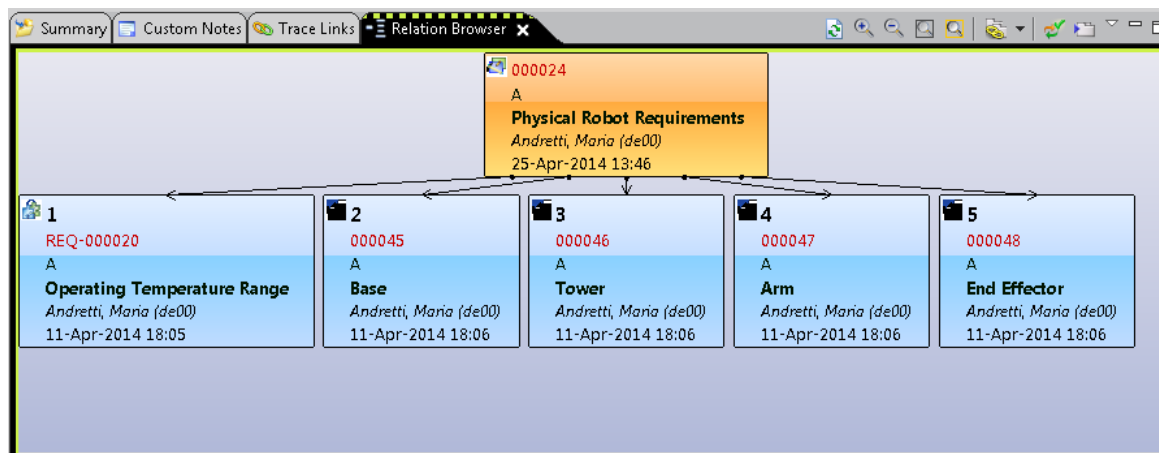
The **Properties** view is intended primarily for diagnostic purposes. Use the **Summary** view, the **Viewer** view, and the **Properties** dialog box to view and edit properties.





Relation Browser view

The **Relation Browser** view provides the following features and functionality:

- When you select an object in the navigation pane, the **Relation Browser** view displays the newly selected object as the root object, and the **Properties** view displays properties of the object.
- When you open an object in Systems Engineering, and activate the **Relation Browser** view, the object you select appears in the **Relation Browser** view as the root object.

You can select any node to browse further related objects one level at a time.



- Zoom in , zoom out , and fit content  buttons are available.
- Choose a context from the **Relation Browser** view menu .

Menu command	Description
Contexts→Default	<p>View structure relations in the Relation Browser view. In this context, defined structure relations display when you show successors or predecessors.</p> <p>This is the default view context.</p>
Contexts→Traceability	<p>View trace links in the Relation Browser view. In this context, defined trace links appear when you show successors.</p>
Contexts→Genealogy	<p>When a requirement object is duplicated, Teamcenter remembers its source. In this context, you can view the source or duplicate objects, if any, related to a requirement object selected in the Relation Browser view.</p> <p>To view the source of the selected object, right-click and choose Hide/Show Predecessors. To view the duplicate or duplicates of the selected object, right-click and choose Hide/Show Successors.</p>

Note:

This feature is enabled by setting **IMAN_based_on** as a shown relation for the requirement revision item type.

1. In the toolbar, choose **Edit→Options→General→Item Revision**.
2. In the **Options** dialog box, **General** tab:
 - a. Select **Requirement Revision** in the **Item Revision type selected** box.
 - b. Select **Specifications** in the **Default paste relation** box.
 - c. Add the **IMAN_based_on** relation type to the **Shown Relations** list.









Menu command	Description
	d. Click OK .


Note:

Context display is controlled by the **TC_RelationBrowser_Context** preference.

To view or edit preference information, use the rich client **Edit**→**Options** dialog box.

- Choose a layout orientation from the **Relation Browser** view menu ▼.

Menu command	Description
Hierarchical →  Top-to-Bottom	Creates a graph beginning with a top node and flowing to the bottom.
	<p>Note:</p> <p>The structure in the preceding example graphic uses the Top-to-Bottom orientation. The requirement specification appears at the top-level and the associated requirements appear at a lower level of the structure.</p>
Hierarchical →  Right-to-Left	Creates a graph beginning with node at the right and flowing to the left.
Hierarchical →  Left-to-Right	Creates a graph beginning with a node at the left and flowing to the right.
Hierarchical →  Bottom-to-Top	Creates a graph beginning with a node at the bottom and flowing to the top.
Hierarchical →  Incremental	Creates a graph beginning with a top node in the upper-left corner and flowing to the bottom and to the right.
 Circular	Displays group and tree structures within a network in a ring and star pattern.
 Orthographic	Creates compact graphs with no overlaps, few crossings, and few bends. It is most appropriate for medium-sized sparse graphs.
 Organic	Creates a layout with the nodes spaced as far away from each other as possible, still while

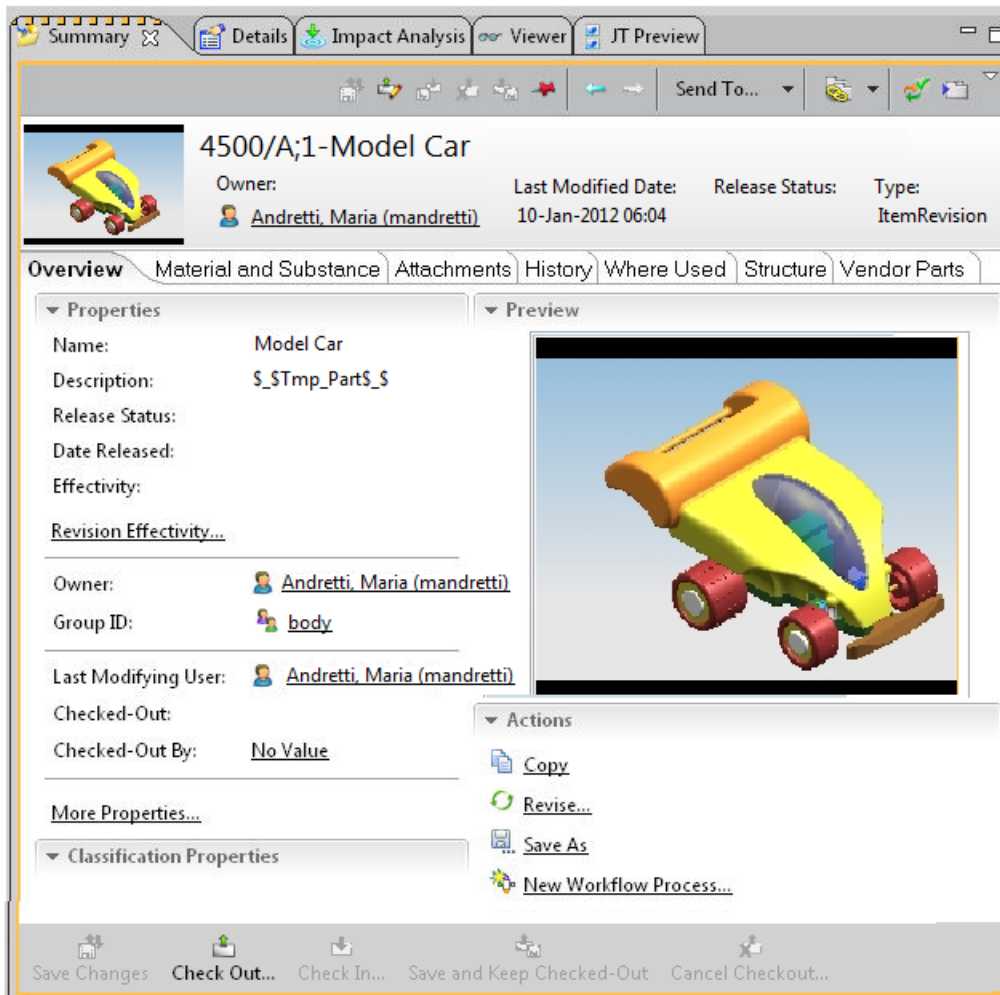
Menu command	Description
 Balloon	<p>minimizing this distance. It is most appropriate for undirected, complex graphs.</p> <p>Creates a layout with a central node and child nodes extending from this in a radial fashion. It is most appropriate for large, hierarchical structures.</p>

- You can select any node to browse further related objects one level at a time.
- Each node has a type symbol and object string to represent the component on the graph. If any node has an associated 2D preview image, the preview image can be displayed as a thumbnail image along with the text string in the **Relation Browser** layout and is also displayed in the **Image Preview** view.
- When you right-click a node in the graph, the shortcut menu displays the same commands as when you select a node on the navigation pane tree, based on the type of object.
- Each node can have predecessors and successors, based on the application with which the object is associated. You can select an object and use the shortcut menu to expand or collapse predecessors and successors. For example, an application can show predecessors as where-referenced objects and can show successors by showing default children context.

The **Relation Browser** view is available by default in the Relation Browser and My Teamcenter applications.

Summary view

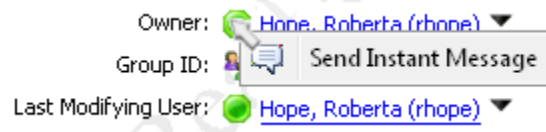
The **Summary** view lets you see properties for a selected object and edit attributes such as name or description for supported items for which you have appropriate permissions.



The configuration and contents of the **Summary** view vary according to the information display configured for type of object selected.

- The **Summary** view toolbar includes buttons to let you check out and edit the properties of objects, check in and save edited properties, cancel checkout, or save changes and keep checked out.
- The area at the top of the view displays basic information about the selected object.
- The **Summary** view may include the following expandable and collapsible areas:
 - One or more **Properties** areas
 - A **Preview** if a 2D dataset is selected or is attached to the selected item or item revision
 - An **Actions** area listing actions appropriate to the selected object
- Tabs, such as **Overview**, **Attachments**, and **History** are displayed, as needed and as configured, to organize information about the selected object.

- Action buttons, such as **Copy**, **Save As**, **Revise**, and **Submit for Review** are displayed. The location of these buttons vary based on the objects selected.
- List, table or tree view selection buttons for objects.
- When the functionality is enabled, you can see when other users are available for instant messaging with Microsoft Office Communicator. You can view the current status of the owning and last modified users, and you can click the Microsoft Office Communicator symbol in Teamcenter to initiate communication.



- Within a specified area, the groups of objects within each tab (object sets) are configured in the XRT style sheet. Each group of information can be configured to display in table, list, tree, or thumbnail format. Each can also be supported by action command buttons such as **Cut** and **Copy**.

Note:

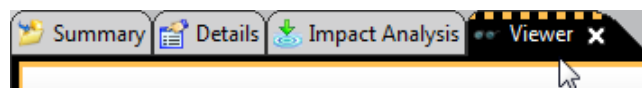
If the **TC_Use_ActiveWorkspace_Summary** preference is configured and set to **true**, the Active Workspace summary is displayed instead of the **Summary** view when you click the **Summary** view tab in the rich client. By default, this preference can be set for site, group, role, and user.

To view or edit preference information, use the rich client **Edit**→**Options** dialog box.


For detailed information on using Active Workspace, see the Active Workspace documentation.

Viewer view

Viewer view content



The content displayed in the **Viewer** view depends on the type of the object selected in the current component view or in the **Details** view.

- To display the form attributes, select a form object  in a component view or in the **Details** view.
- To display Microsoft Office datasets in the **Viewer** view, display the **Viewer** view and then click the dataset in the component view.

Caution:

The **Viewer** view does not support some macro-enabled Microsoft Office files. To view these files, open them in the external stand-alone application. If you need to update such files, you can check out the object and replace the file with a local updated version.

When you double-click a dataset, the stand-alone Microsoft Office application is launched with the dataset. If you then click the dataset in the component view to display the contents of the dataset in the **Viewer** view, you cannot save changes to the dataset from the stand-alone application.

Unexpected issues occur when saving or checking in modified Excel datasets in viewer view. It is recommended to install the Microsoft Office client and use the Office client Edit/Save/Check-in feature to edit the Microsoft Office dataset. If this client is installed, do not open, edit, save, or check in the Microsoft Office dataset in Teamcenter's Viewer view.

- To display Microsoft Office datasets on Microsoft Windows 7 systems in the **Viewer** view rather than externally, you must initiate an action provided by Microsoft Support.

Note:

The patches are designed for systems using Internet Explorer 7 and Internet Explorer 8.

If the patch installer displays a message indicating the fix does not apply to your operating system or application version, use the **Let me fix it myself** method described on the link pages to create the registry file manually and apply the patch.

Embedded Word is not supported when running the 32-bit version of Microsoft Word with the 64-bit Teamcenter rich client.

- You can view Microsoft PowerPoint datasets in the **Viewer** view.

If you open a PowerPoint dataset in the **Viewer** view and then open it in the PowerPoint application by double-clicking the dataset while it is still open in the **Viewer** view, changes made and saved in the application are not saved to the dataset.

To save changes, do one of the following:

- Make changes in the **Viewer** view.
- Manually terminate the **POWERPNT** process.
- To display 2D or 3D data, select an item or item revision with attached 2D or 3D data, or select an object such as a snapshot or associated image or direct model (JT) data in a component view or in the **Details** view.

Note:

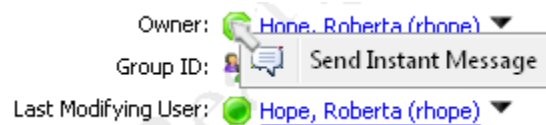
When a supported 2D or 3D dataset is modified by an external application, such as a CAD tool, you can view the changes in the **Viewer** view by using either of these methods:

- Right-click the dataset and choose **Refresh**.
- Select the dataset and choose **View→Refresh Window**.

- To display the object properties for the item or item revision with no associated displayable datasets, select the item or item revision.

Note:

When the functionality is enabled, you can see when other users are available for instant messaging with Microsoft Office Communicator. You can view the current status of the owning and last modified users, and you can click the Microsoft Office Communicator symbol in Teamcenter to initiate communication.



- To display tiled thumbnail views of several objects, use Shift+click or Ctrl+click to select two or more objects.
- To display users assigned to perform a signoff task, select a task to perform in the **My Worklist** component view, and then use the **Viewer** view with **Task View** selected.

When the functionality is enabled, you can see when other users are available for instant messaging with Microsoft Office Communicator. You can view the current status of other users on the signoff list, and you can click the Microsoft Office Communicator symbol to initiate communication.

- To display **Web Link** object properties in the **Viewer** view, select a URL link object in a component view.

Note:

When you select a URL link object, Teamcenter automatically opens a **Web Browser** view to display the Web page associated with the object.

Double-click a **Web Link** object to open it in your default browser.

- To display the content of a text file or PDF file in the **Viewer** view, or to display or edit standard office files such as Microsoft Word or Excel files in the **Viewer** view, click on the dataset object in a component view or a **Details** view.

Note:

This functionality depends on your system settings for browsing documents in the same window.

For example, to enable editing of a Microsoft Word document in the **Viewer** view in a Teamcenter client on a Windows system, open a **My Computer** window and choose **Tools**→**Folder Options**. In the **Folder Options** dialog box, select the **DOC** extension for the registered file type, and then click **Advanced** to display the **Edit File Type** dialog box. For the **Open** action, select **Browse in same window**.

Caution:

Changes may be lost if you select another object in a Teamcenter component view while editing cell content in an Excel file displayed in the **Viewer** view.

To avoid losing your changes when you edit content in an Excel file displayed in the **Viewer** view, you must either change the focus to a different cell or save the file prior to selecting another object in Teamcenter component view.

Working with visualization data in the My Teamcenter viewer

The **Viewer** view in My Teamcenter displays content dependent on the type of object selected in the current component view or in the **Details** view. Support for visualization data includes:

- If an item or item revision is selected, the viewer displays the associated image, printed circuit board, schematic, or JT data.
- If an image, ECAD PCB, ECAD Schematic, or JT dataset is selected, the viewer displays the image, printed circuit board, schematic, or model.

Visualization use cases

- View and markup of parts, printed circuit boards, schematics, drawings and images, without having to launch the stand-alone viewer or the Lifecycle Viewer.

Visualization tools available

- **2D GDT Markup**

Create 2D GD&T markups.

- **2D Markup**

Create 2D markups.

- **2D Measurement**

Perform 2D measurements.

- **2D Multipage**

Navigate among pages in multiple-page 2D images or documents.

- **2D Viewing**

Pan, zoom, rotate, and flip 2D images.

- **3D Markup**

Create 3D markups.

- **3D Measurement**

Perform 3D measurements.

- **3D Navigation**

Pan, rotate, and zoom 3D models.

- **3D PMI**

View and manipulate PMI in your model.

- **3D Section**

Create 3D cross sections.

- **3D Selection**

Select parts and pick part entities.

- **3D Standard Views**

Examine your model from preset viewing angles.

- **ECAD Base**

Manipulate the view of ECAD document layers, control layer color and visibility, search, and create reports.

- **ECAD Markup**

Create ECAD markups.

- **ECAD Multipage**

Navigate among pages in multiple-page schematic documents.

- **ECAD Viewing**

Pan, zoom, rotate, and flip image.

- **Print**

Print documents.

Open visualization data in My Teamcenter

1. In My Teamcenter, select an item, item revision, dataset, or other object associated with a 2D or 3D file.
2. Select the **Viewer** view.

The visualization components load and the My Teamcenter embedded viewer opens.

Tip:

Right-click the embedded viewer toolbar area to turn on additional visualization toolbars.

Display the Teamcenter web client view in the rich client

You can display the Teamcenter web client in a view in the rich client. This view behaves like other rich client views.

- Context menu commands are available and view contents change in response to selections made in other views.
- When embedded in the Teamcenter rich client, some web client functionality may not be available.
- Embedding the web client in a rich client view is supported only for four-tier configurations.

Teamcenter web client functionality is available in the rich client as a separate view and as an alternative to the traditional inbox when **My Worklist** is selected. You can perform copy-and-paste operations between rich client views and embedded Teamcenter web client views, search results, and the inbox. Teamcenter web client search is available under the rich client search box.

To display the Teamcenter web client view in the rich client, set one of the following preferences in **Edit→Options**.

- **ActiveWorkspaceHosting.RAC.URL**

Specifies the URL used by the rich client to communicate with Teamcenter web client for hosted operations.

- **ActiveWorkspaceHosting.URL**

Specifies the URL used by Teamcenter to communicate with the Teamcenter web client for hosted operations such as search, open item, and others.

This preference is read by the system after the host-specific preferences are read. If it specifies a URL, this URL takes precedence over host-specific preferences.

Access Teamcenter web client in rich client

Use **Open With** or **Show View** commands. The Teamcenter web client view displays information related to the selected object in the primary view.

You may access the Teamcenter web client view in a couple of ways.

- **Open With**

In rich client, select an item and choose **Open With Active Workspace**.

- **Show View**

1. In rich client, choose **Window→Show View→Other**.
2. In **Show View**, click **Active Workspace View** in the **General** category.

The Teamcenter web client **Home** page is displayed in the view.

Using auxiliary views in the rich client

Auxiliary views are rich client views that are not present by default in any perspective.

- Some auxiliary views, such as the **Communication Monitor** view, are primarily for use by an administrator. Such views are described in relevant administration documentation.
- Some auxiliary views, such as the **Progress** view or the **Search** view, can be useful in one or more application perspectives.
 - The **Search** view, useful in almost every application, is described in the rich client documentation.

- The **Progress** view lets you monitor the progress of data exchanges between sites.

Show View command

Relevant views are displayed automatically when you select an application. To display a view in an application, you can use the **Window→Show View** menu command.

- Choose the **Window→Show View** menu command to display a list of common and recently-used views.
- Choose **Window→Show View→Other** to display the **Show View** dialog box.

The **Show View** dialog box organizes views in categories such as **General, Admin, Application, Diagnostic, Inspector Category, Manufacturing, Projects, Teamcenter, Utilities, Visualization,** and **Other**.

Note:

Available views and categories may be different at your site.

When online help is configured for your site, you can display online help in your default Web browser for most rich client views.

Most versions of Teamcenter introduce new views and rename or make obsolete other views. Online help is usually available immediately from the **Help** menu, but in some cases, you must access help by using the help library table of contents or the search capability.

- To access help for the current active view in the rich client, press the F1 key or choose **Help→Current Application**.
- To open the help library, press Ctrl+F1 or choose **Help→Help Library**.

Display and move a view in the rich client

This procedure uses the example of opening and moving the **Image Thumbnail Preview** view in the **My Teamcenter** perspective.


1. With the My Teamcenter application open, choose **Window→Show View→Image Thumbnail Preview**.

The **Image Thumbnail Preview** view appears in the **My Teamcenter** perspective.

2. Click the **Image Thumbnail Preview** tab. Do not release the mouse button.

3. Move the mouse to drag the tab to another area in the perspective or outside the Teamcenter window entirely.

Note:

The stack cursor  appears as you drag the view across other view tabs.

4. Release the mouse button to drop the view in the desired location.








As you move the view around the current perspective, the mouse pointer changes to the appropriate drop cursor to indicate where the view is docked when you release the mouse button.

You can resize views in a perspective by dragging the border between the views.

If you select a location where there is no view folder yet, a new view folder is created.

Note:

If a view is moved outside the Teamcenter window, you can click and drag the view tab into the application perspective to return it to the Teamcenter window.

Drop cursor	Description
	The view is placed at the top of the window.
	The view is placed at the bottom of the window.
	The view is placed on the left side of the window.
	The view is placed on the right side of the window.
	The view is placed in the stack of views in the current area.
	The view is detached and moved outside the Teamcenter window.
	The view cannot be placed in the current area.

Note:

On most systems, you can use the **Move** shortcut menu command to move a view, or the **Detached** shortcut menu command to open a view in its own window.


Finding information about views

The Teamcenter rich client displays views when you select an application and when you use the **Window→Show View→Other** command to display the **Show View** dialog box.

If the Teamcenter HTML Help is installed, you can display documentation for most rich client views by selecting an active view using either of the following methods:

- Press F1.
- Choose **Help→Current Application**.

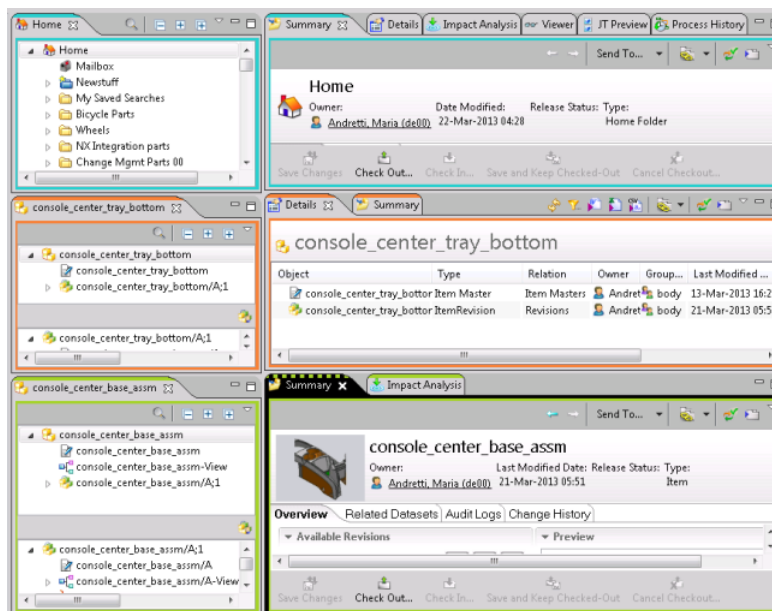
Some views may not respond to requests for online help. In most cases, these views are described in the Teamcenter HTML Help, and most descriptions include links to additional information.

To display information about a view when the Teamcenter HTML Help is installed, but help is not displayed for the current rich client view, use the online help **Search**  capability.

Managing views, layouts, and view networks

Basic concepts of views, layouts, and view networks

In the rich client, a view is always displayed in the context of an application perspective. Each application perspective always displays one or more views.



By default, the My Teamcenter application displays the **Home** component view in a view folder to the right of the navigation pane. The **Summary**, **Details**, **Impact Analysis**, and **Viewer** views are displayed in a view folder to the right of the **Home** component view.

- A *layout* is the arrangement of the views and view folders in an application perspective. Each application perspective has a default layout.
 - You can rearrange the views in an application perspective, and add or remove views, to create new layouts.
 - You can save new layouts and redisplay them later.

Each layout has a current state and a saved state.

- A *view folder* is set of one or more views displayed in a specific area in the Teamcenter window.

For example, by default, the My Teamcenter application displays component views in a view folder immediately to the right of the navigation pane. A second view folder contains the **Summary**, **Details**, **Impact Analysis**, and **Viewer** views.

Moving a view to a new area, such as the bottom of the window, creates a new view folder in that location. You can move views between view folders.

- A *view network* consists of a primary view and one or more secondary views that are *associated*. View networks can be arranged in a single view folder or in multiple view folders.
- You *associate* a secondary view with a primary view by choosing **Associate** from the view menu and choosing a primary view.

Note:

An administrator can set the **TCViewEnableResponseOnSelection** preference to enable response to selection in specified primary views when an object is selected in a secondary view in the current view network.

- A *primary* view, such as a component view, lets you make selections that cause other views to react.

For example, a Teamcenter component view displays a hierarchical view of lists of objects and their attachments. When you select an object, such as an item revision, a secondary view reacts by displaying information relevant to the selection in the primary view. Secondary views can be associated with a primary views.

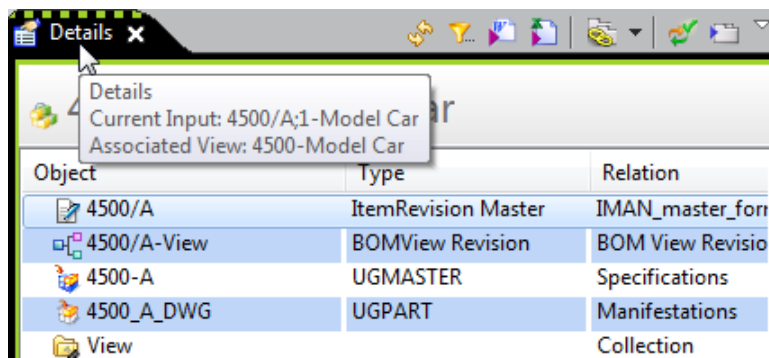
- A *secondary* view, such as a **Details** or **Summary** view, displays information relevant to the selection in a primary view.
 - An *associated* secondary view reacts to a single, specific primary view in a *view network*. You can change a view association by choosing **Associate** from the view menu and choosing **None** or a different primary view.
 - A secondary view associated with a specific primary view reacts to the current selection in that primary view. The associated view closes automatically when its primary view is closed.

- Depending on the particular views involved, a secondary view can also react to other secondary views in its network.
- A secondary view not associated with a specific primary view reacts to the selection in the most recently selected primary view.

Note:

View tab tooltips indicate:

- The root selection in a primary view.
- The source primary view for a secondary view.

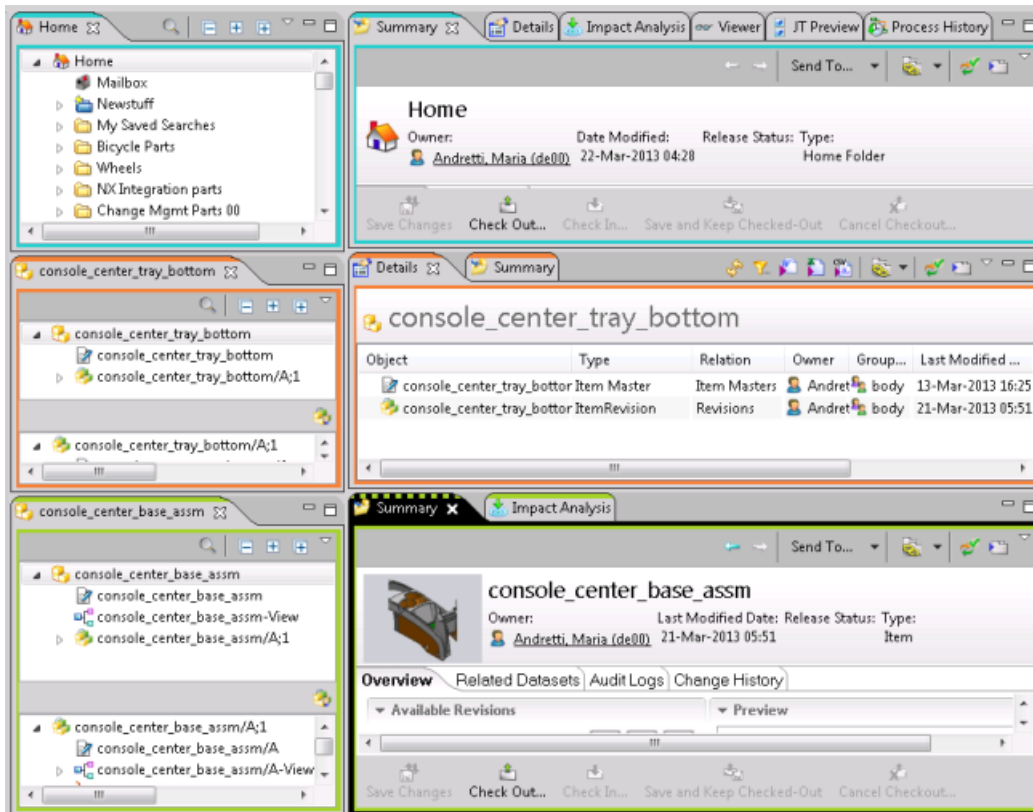


Recognizing primary and secondary views

A primary view has a distinctive border color. This border color is also displayed by all secondary views that display content based on the primary view.

Note:

To open an additional view, such as a second or third **Summary** view to use in a view network, select an object in a component view and then use the shortcut menu **Open with** command.



A currently selected view has a dark background tab and a distinctive color border.

- When a secondary view is not associated with a specific primary view, that secondary view:
 - Displays content based on the currently selected primary view.
 - Has a border the same color as the primary view to which it is reacting.
 - Has a dashed-line border at the top of the view tab.
- When a secondary view is associated with a specific primary view, that secondary view:
 - Displays content based only on the primary view with which it is associated.
 - Has a solid-line border at the top of the view tab.

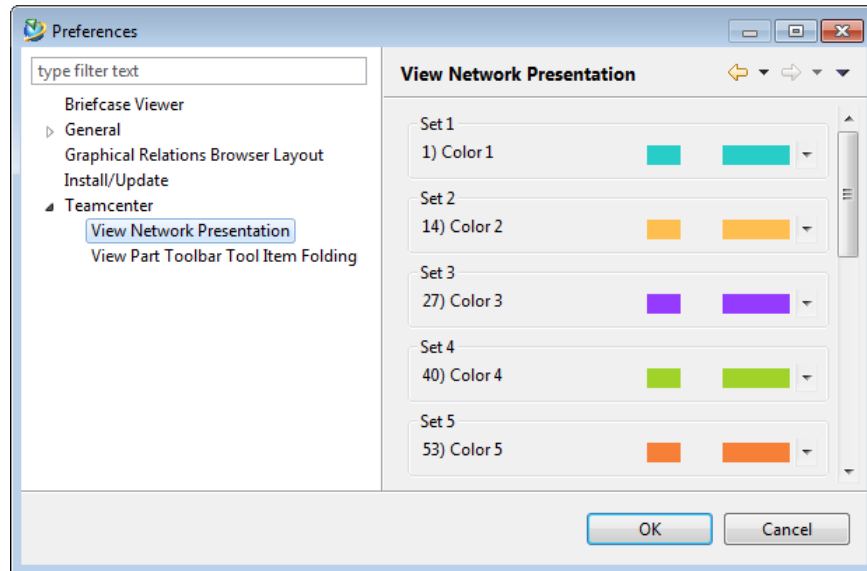
Object selection in one view can change the selection in another view.

- Selecting an object in a primary view changes the displayed information in currently related secondary views.
- Selecting an object in a secondary view may change the selection in a related primary view, if the object selected in the secondary view is currently visible in the primary view.

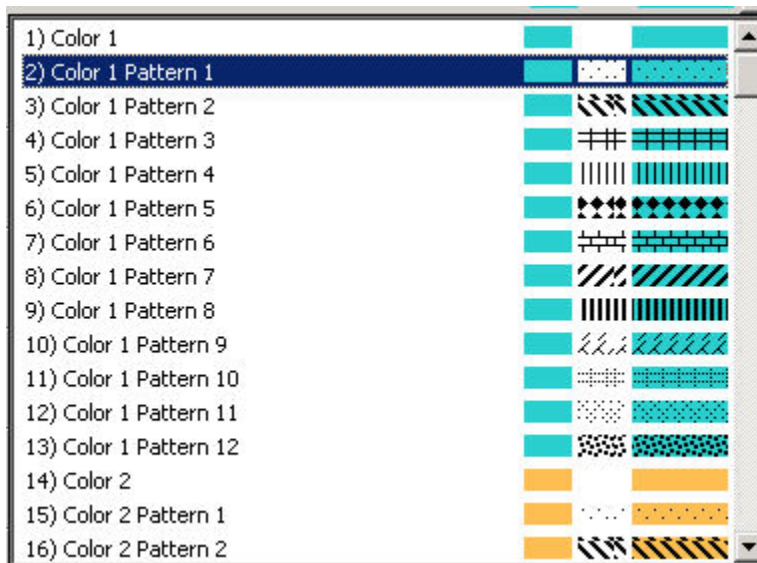
- Selecting an object in a primary view may change the selection in other primary views, if the object selected in the first primary view is also already displayed in the other primary views.

Changing view network color presentation

Choose **Window**→**Preferences**→**View Network Presentation**→**Teamcenter** to display the color control options for view networks.






You can specify 12 sets from 156 color and pattern options.



Each set is used in turn as you create new view networks.

Change the view association

Do one of the following:

- In the secondary view, click the **Associate** button  and select the view to which you want to associate the secondary view from a list of all primary views currently open.
- If you activate the **Disable response to selections** button , the **Associate** button is not available.
- If the **Disable response to selections** button is not available (if the secondary view is responding to selections), when you change selection, the secondary view changes its content based on that new selection in these cases:
 - The secondary view is not associated to any view.
 - The secondary view is associated to the active view (where the selection change occurred).
 - The secondary view and the active view (where the selection change occurred) are both associated to the same primary view.
- Select the line in the primary view to which you want to associate the secondary view, and click the **Set input to recent selection** button  to set the scope for a secondary view.


You can use the **Set input to recent selection** button from any view, regardless of the association state.


- If you set the scope from the primary view to which the secondary view is associated, the secondary view is still associated to that primary view.
- If the secondary view is not associated to any primary view when you set the scope, Teamcenter performs no association.
- If the secondary view is associated to primary view A and you set the scope from primary view B, the secondary view is associated to primary view B.

Teamcenter associates the secondary view with the selected primary view.

Disable and enable response to selection

In the secondary view, you can:

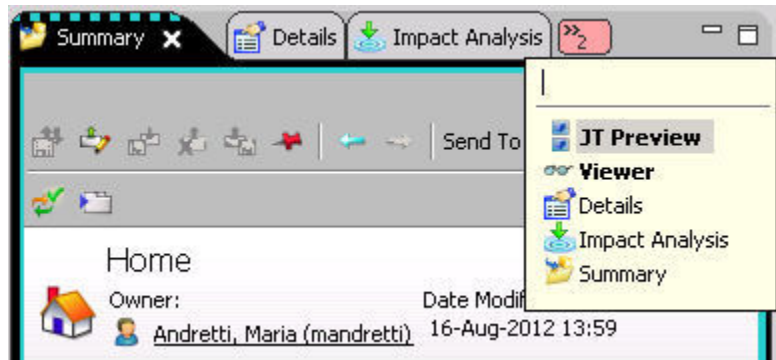
- Click **Disable response to selection** . The secondary view does not change when you select a different object in the primary view.

- Click **Enable response to selection** . The secondary view changes when you select a different object in the primary view.

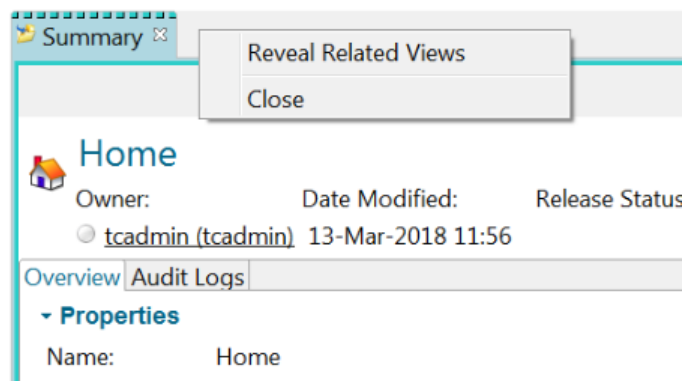
Hide and display views and view folders

You can manage visibility of views and view folders.

- Click the view folder menu **Show List** to display all the views in a view folder. Currently hidden views are indicated by bold text.



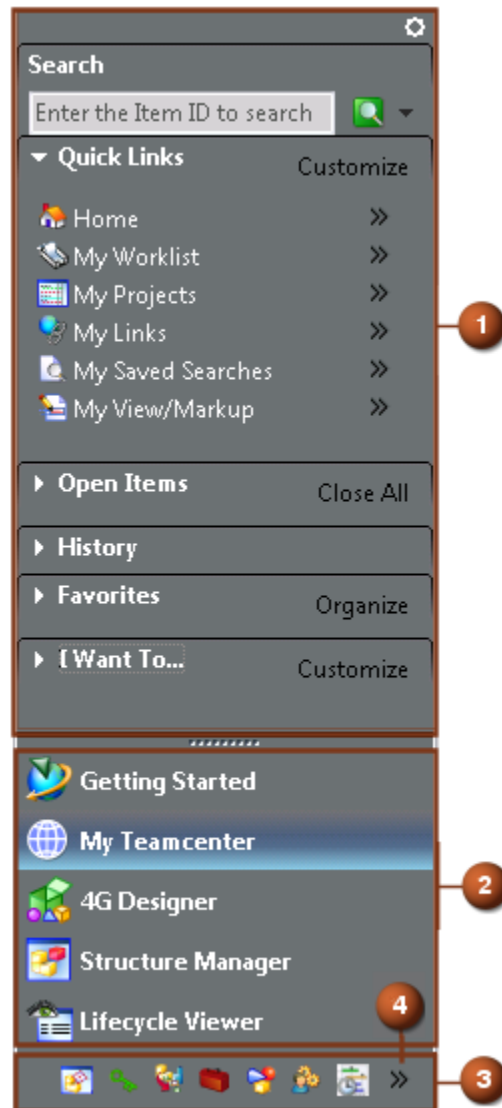
- Right-click the primary view and choose **Reveal Related Views** to display views when you have minimized a view folder containing associated secondary views and do not see icons for the view folder and views in the right-side border of the Teamcenter window.




Working with the rich client navigation pane

Rich client navigation pane layout

The rich client navigation pane provides quick access to the data you use most. You can use the rich client navigation pane to find and organize your data and to help you perform common tasks, such as creating a part, creating a dataset, or applying a status to a part.



- 1 Top of the navigation pane
- The reorder button  above the **Search** box lets you display the **Navigation Section Ordering** dialog box to hide sections or change the order of sections in navigation pane.
 - Quick-open **Search** provides predefined searches using dataset, item ID, item name, and advanced search features.
 - **Quick Links** provide access to your **Home** folder, worklist, saved searches, and web links.
 - **Open Items** displays links to items that are open in an active perspective.



Note:

If you open several objects in My Teamcenter, and then exit Teamcenter, only one item appears in the **Open Items** list the next time you launch Teamcenter.

Teamcenter opens only one active view from the previous session. The other tabs are unopened view references. You must explicitly open view references by clicking each item or **View** tab.

- **History** displays links to Teamcenter objects that you opened in the past. Links are displayed with the most recently closed object displayed at the top of the **History** list.
- **Favorites** displays links to Teamcenter objects that you have designated as favorites.
- **I Want To** provides links to the tools used to complete tasks that you perform repeatedly, such as initiating a process or change.

2	Application buttons	Provide access to Teamcenter applications.
3	Application button bar	Provides access to the Teamcenter applications that do not fit in the application button area of the navigation pane.
4	Configure Applications button	The Configure Applications button provides access to the tools you can use to configure the display applications.

You can also show or hide the navigation pane. Click **Navigation Pane**  in the toolbar, or choose **Window** → **Navigation Pane**. A check mark  on the left of the **Navigation Pane** menu command indicates the navigation pane is displayed.

Rich client navigation pane section order


You can reorder sections in the left-hand navigation pane using the **Navigation Section Ordering** dialog box or by dragging a section to a new location above or below the current location.

Note:

This feature is supported by the **LHN_Nav_Items_List** preference, which tracks and maintains the navigation pane section order and the expansion state of each section, based on section IDs and a Boolean value that indicates the expansion state.

To view or edit preference information, use the rich client **Edit→Options** dialog box.

To use the **Navigation Section Ordering** dialog box to order and set visibility for sections:

1. Click the reorder button  to display the **Navigation Section Ordering** dialog box.
Use the left and right arrows to move one or more selection to or from the **Hidden Sections** box.
2. Select one or more section titles and then use the up and down arrows or click-and-drag to move the selection up or down the list.

To drag a section to a new location in the navigation pane:

1. Click in the section title bar to the right of the section title.
2. Drag the section up or down to a new location in the navigation pane.

Selections are applied in the current session. Those selections, as well as the expanded or collapsed state for sections, persist in subsequent sessions.

Note:

You or your administrator can use the **LHN_Applications_List** preference to specify which applications to show as primary applications in the navigation pane application list or as secondary applications in the application bar at the bottom of the navigation pane.

Quick Links section

Configuring the Quick Links section

You can configure your **Quick Links** section by:

- Adding or removing containers (folders).
- Renaming containers.
- Organizing the display order of quick links containers.

Note:

You cannot delete or rename the **Home, My Worklist, My Projects, My Links, My Saved Searches** or **My View/Markup** containers.

Several preferences are available so you can see different **Quick Links** for different applications.

QuickLinksSection_navigationPerspective

This preference is used by the My Teamcenter application to manage My Teamcenter **QuickLinksSection** components.

QuickLinksSection_caeperspective

This preference is used by the CAE Manager application to manage CAE Manager **QuickLinksSection** components.

QuickLinksSection_ProjectPerspective

This preference is used by the Project application to manage Project **QuickLinksSection** components.


QuickLinksSection_Authorization

This preference is used by the Authorization application to manage Authorization **QuickLinksSection** components.

QuickLinksSection

This preference is the default **QuickLinksSection** preference used by applications other than those listed above.

Add a folder to your rich client quick links


1. In My Teamcenter, select a folder from the tree and click the **Customize** link in the **Quick Links** section of the navigation pane.
2. In the **Customize Quick Links** dialog box, click the **Paste** button .
3. Click **OK**.

The folder is added to the **Quick Links** section of the navigation pane.


Note:

If there is not enough space to display all your **Quick Links** in the navigation pane, click **View All** to display the full list.



Remove a folder from your rich client quick links

1. Click the **Customize** link in the **Quick Links** section of the navigation pane.
2. In the **Customize Quick Links** dialog box, select the folder that you want to remove from the list.
3. Click **Delete** .
4. Click **OK**.

Rename a rich client quick links folder

1. Click the **Customize** link in the **Quick Links** section of the navigation pane.
2. In the **Customize Quick Links** dialog box, select the folder that you want to rename and click the **Edit** button .
3. In the **Rename quick links** dialog box, type the new name for the folder and click **OK**.

Organize your rich client quick links


1. Click the **Customize** link in the **Quick Links** section of the navigation pane.
2. In the **Customize Quick Links** dialog box, select a folder from the list and click the **Move Up** button  or the **Move Down** button  to change the position of the folder in the list.

Manage rich client saved searches

Add a saved search to your saved searches list (rich client)

Note:

This example procedure assumes you have run a search from the **Search** view in any perspective and have results displayed in the **Search Results** view.

1. In the **Search** view, click the **Add Search to My Saved Searches** button .
2. In the **Add Search to My Saved Searches** dialog box, provide a name for the saved search.


Tip:

Click the **Create In** dialog box to expand the dialog. You can specify a folder or create a new folder in which to put the saved search.


3. Click **OK**.

A link to the search is added to your **My Saved Searches** list.



Remove a saved search from the list in the rich client

1. Click the **My Saved Searches** link in the **Quick Links** section of the navigation pane.
2. In the **Customize My Saved Searches** dialog box, select the search that you want to remove.
3. Click **Delete** .

Rename a saved search in the rich client

1. Click the **My Saved Searches** link in the **Quick Links** section of the navigation pane.
2. In the **Customize My Saved Searches** dialog box, select the search that you want to rename and click the **Edit** button .
3. In the **Rename saved search** dialog box, type the new name for the search, and click **OK**.

Organize your saved searches list in the rich client

1. Click the **My Saved Searches** link in the **Quick Links** section of the navigation pane.
2. In the **Customize My Saved Searches** dialog box, select a search name from the list and click the **Move Up** button  or the **Move Down** button  to change the position of the search in the list.


Manage your links in the rich client

Using the My Links section

The **My Links** section of the navigation pane provides quick access to the Web sites that you visit most. When you click a link in the list, the Web page opens in a separate browser window.

You can add links to the list, remove links from the list, and change the order in which links appear in the list.


Add a link to your list of links in the rich client

1. Click the **My Links** link in the **Quick Links** section of the navigation pane.
2. In the **Customize My Links** dialog box, click the **Create a new Web link** button .
3. In the **New URL** dialog box, enter the following information:


- a. In the **Name** box, type the name that will be displayed for the link in your **My Links** list.
 - b. Type the URL for the link in the **URL** box.
 - c. Click **OK**.
4. Click **OK** to close the **Customize My Links** dialog box.

The link is added to your **My Links** list.

Remove a link from the rich client My Links list



1. Click the **My Links** link in the **Quick Links** section of the navigation pane.
2. In the **Customize My Links** dialog box, select the link that you want to remove from the list.
3. Click the **Remove** button .
4. Click **OK**.

Rename a link in the rich client

1. Click the **My Links** link in the **Quick Links** section of the navigation pane.
2. In the **Customize My Links** dialog box, select the link that you want to rename and click the **Rename** button .
3. In the **Rename link** dialog box, type the new name for the link, and click **OK**.

The new name of the link is displayed in your **My Links** list.

Organize your rich client My Links list

1. Click the **My Links** link in the **Quick Links** section of the navigation pane.
2. In the **Customize My Links** dialog box, select a link name from the list and click the **Move Up** button  or the **Move Down** button  to change the position of the link in the list.

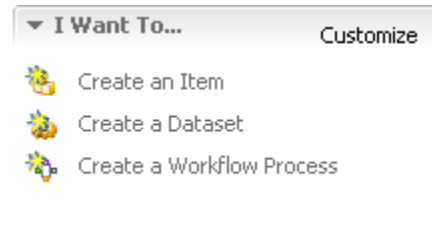
Managing your I Want To links in the rich client

Customizing links in the I Want To section

The **I Want To** links, which are both user-specific and application-specific, can provide quick access to the tools you use to perform common tasks.


- When you create an **I Want To** action, you do so in the context of the currently active application.
- To create the same action in a different application, you must repeat the process.

The **Create an Item**, **Create a Dataset**, and **Create a Workflow Process** links are provided in your Teamcenter installation.




You can add links to other tasks, remove links to tasks, and organize the display order of tasks.

Add a task to the rich client I Want To list

1. Click the **Customize** link in the **I Want To** section of the navigation pane.
2. In the **Customize I Want To** dialog box, select an action from the **Available Entries** tree.
3. Click the **Add** button  to add the action to the **Selected Entries** list.
4. Click **OK**.

The task is added to your **I Want To** list.

Remove a task from the rich client I Want To list

1. Click the **Customize** link in the **I Want To** section of the navigation pane.
2. In the **Customize I Want To** dialog box, select the task from the **Selected Entries** tree.
3. Click the **Remove** button .
4. Click **OK**.

The task is removed from your **I Want To** list.

Organize your rich client I Want To list

1. Click the **Customize** link in the **I Want To** section of the navigation pane.

2. In the **Customize I Want To** dialog box, select a task from the list and click the **Move Up** button ▲ or the **Move Down** button ▼ to change the position of the task in the list.
3. Click **OK**.

Displaying applications

Configuring the display of applications

You can configure the display of applications in the navigation pane by choosing a command from the **Configure Applications** menu » at the bottom of the navigation pane. Menu commands include the following:

- **Show More Applications**

Shows more applications in the navigation pane.

- **Show Fewer Applications**

Shows fewer applications in the navigation pane.

- **Navigation Pane Options**

Specifies and organizes applications in the navigation pane.

- **Add +** or **Remove -** buttons in the **Navigation Pane Options** dialog box

Moves applications between the **Available Applications** list and **Selected Applications** list.

Note:

You can drag the sash up or down in the navigation pane to adjust the number of application buttons that appear in the list. If the navigation pane cannot contain all the applications, the applications that do not fit are displayed at the bottom of the **Configure Applications** menu ».

Select available applications for display

1. Click **Configure Applications** » at the bottom of the navigation pane.
2. Select **Show More Applications** ↑ or **Show Fewer Applications** ↓.

Application buttons are added to the navigation pane or application icons are displayed at the bottom of the navigation pane.

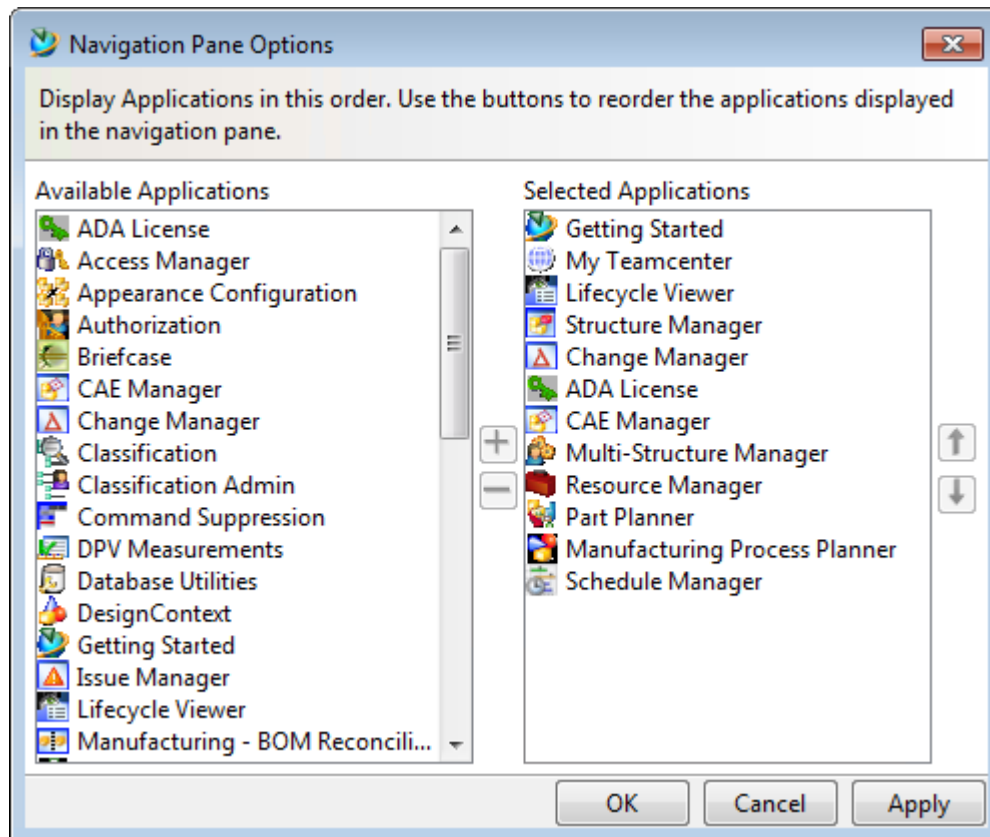
Note:

If space is not available in the navigation pane or the bar at the bottom of the navigation pane, additional applications are listed at the bottom of the **Configure Applications** >> menu.

Display applications in the navigation pane

For each application you want to display in the navigation pane, follow these steps:

1. Click >> at the bottom of the navigation pane and choose **Navigation Pane Options**.
2. In the **Navigation Pane Options** dialog box, select applications from the **Available Applications** list and move them to the **Selected Applications** list using the + button.



Tip:

You can change the display order of the applications using the up arrow and down arrow buttons located next to the **Selected Applications** list.


3. Click **OK**.

Tracking frequently accessed objects

Add favorites to organize your data

You can use favorites to track objects you access frequently, such as parts, forms, or processes.

In the rich client, use either of the following methods to add the objects to your **Favorites** list in the navigation pane:


- Right-click the object and choose **Add to Favorites** .
- Select the object in any hierarchy or detail view and drag it to a folder in the **Favorites** list in the navigation pane.

To display the object, click the link in the **Favorites** list. The file is opened in the application associated with the object or data type. For example, clicking a link to a Word document opens the file in Microsoft Word. Clicking a link to an item revision opens the item revision in My Teamcenter.


Note:

You can organize your favorites into folders using the **Organize Favorites** dialog box. Click **Organize** in the **Favorites** section to access the **Organize Favorites** dialog box.

Add a link to your Favorites list


1. Right-click the object you want to add to your **Favorites** list.
2. Choose **Add to Favorites** .
3. In the **Add Favorites** dialog box, select a folder for the new favorites link and click **OK**.

Add a subfolder to your Favorites list

1. Click the **Organize** link in the **Favorites** section.
2. In the **Organize Favorites** dialog box, click **Create New Folder** .

3. Type a name for the new folder and click **OK**.
4. Click **Close**.


Rename a folder in the Favorites list

1. Click the **Organize** link in **Favorites** section.
2. In the **Organize Favorites** dialog box, select the folder to rename.
3. Click **Rename** .

The **Rename favorites folder** dialog box appears.

4. Type the new folder name in the **New name** box.
5. Click **OK**.
6. Click **Close**.

Remove a link or folder from the Favorites list

1. Click the **Organize** link in the **Favorites** section.
2. In the **Organize Favorites** dialog box, select the link or folder from the list.
3. Click **Delete** .
4. Click **Close**.

Teamcenter menus

My Teamcenter menu bar in the rich client

Menu commands are available in an initial installation of the Teamcenter software.

Each rich client application provides some common menu commands, and other menu commands specific to the application.






Note:






The My Teamcenter menu commands available at your site may differ based on site-specific configuration, customization, and application integration.

File menu

File menu commands


Use **File** menu commands to create and manage your data objects, close an application, and exit the rich client.








Command	Purpose
New	Creates a wide range of Teamcenter objects.
Open 	Opens for viewing and editing a selected data object—folder, item, item revision, or dataset—in the default application for that object or file type.
Open With	Opens a dialog box to let you select an application for viewing a selected data object or file.
View	Opens for viewing a selected data object—folder, item, item revision, or dataset—in the default application.
View With	Opens a dialog box to let you select an application for viewing a selected data object.
<div style="border: 1px solid black; padding: 10px;"> <p>Note:</p> <p>The View With command with integrations is subject to the current Check-out/Check-in Policy settings for the session.</p> <p>For example, if the selected policy for a Teamcenter Integration for NX session is Automatic Check-out/Check-in on Save, the View With command behaves the same as the Open With command for UGMASTER datasets.</p> </div>	
View/Markup 	<p>Lets you work with:</p> <ul style="list-style-type: none"> • Microsoft Word files to view, create, or update markups using Microsoft Word. • PDF files to view, create, or update markups using Adobe Acrobat or Acrobat Reader.
Sign 	Lets you digitally sign a PDF file stored as a dataset named reference file with Adobe Acrobat and Acrobat Reader.











Command	Purpose
Cancel Signing 	Lets you cancel a digital signature on a PDF file stored as a dataset named reference file with Adobe Acrobat and Acrobat Reader.
Save 	Saves the information entered for a selected data object.
Save As 	Duplicates a selected item, form, dataset, or item revision and saves it under a different name.
Revise	Creates a new revision of the selected item.
Diagramming	Lets you create or edit diagram templates used in functional and logical decompositions in Systems Engineering.
Close	Closes the application that is currently active in your Teamcenter window.
Print 	Prints selected data types (folders, forms, items/item revisions, BOM lines, datasets, and object properties) and interface components (tables, tree tables, where-referenced reports, and component properties).
<p>Note:</p> <p>If you have difficulty printing from the My Teamcenter viewer on a Linux system with Teamcenter lifecycle visualization installed, check with your system administrator to ensure the PrinterDefs.conf file content is correct for your printer. This file is located by default in the .../Visualization/etc/ directory.</p>	
Print...	Prints selected data types (folders, forms, items/item revisions, BOM lines, datasets, and object properties). The object properties are printed for all other object types.
	When you choose the Print... menu command in Structure Manager, the bill of material prints, regardless of your selection.
Exit 	Exits the rich client and all of the applications that are running in the work session.












File New menu

Use the **File**→**New** menu commands to create new objects.

Command	Purpose
Item 	Creates Teamcenter objects such as items, folders, forms, datasets, URL links, IDs, item elements, BOM view revisions, structure contexts, collaboration contexts, and work contexts, as

Command	Purpose
	well as interface definition, process variable, connection, signal, process, change, envelope, CAE item, and schedule objects.
Folder 	Creates a graphical representation of an aggregation of objects.
Form 	Creates a data object used to display product information (properties) in a predefined template. Forms can be used to create an electronic facsimile of a hardcopy form.
Dataset 	Creates a Teamcenter data object used to manage data files created by other software applications. Each dataset can manage multiple operating system files, and each dataset references a dataset tool object and a dataset business object.
URL 	Creates a data object used to access a Web resource. The URL (uniform resource locator) is an address that is used as a link to access a Web resource within Teamcenter or in a separate browser.
ID 	<p>Creates alternate identifiers and alias identifiers used to communicate information about items and item revisions.</p> <p>Alias identifiers store part numbers and other attribute information for similar parts, and they can be associated with many items or item revisions. Alias IDs can store information about external entities and can also be used to maintain a cross reference of the relationships between other manufacturer's part numbers and the part numbers used by your organization.</p> <p>Alternate identifiers store information about part numbers and attributes of the same part from different perspectives. Alternate IDs let different user communities identify and display an item or item revision according to their own rules rather than according to the rules of the user who created the object. Assigning alternate identifiers to a part at different stages of development and production allows you to maintain a history of the life cycle of the part.</p>
Item Element 	Creates objects to represent design or manufacturing features that are not defined as part of the physical structure in the BOM. Features are implemented as item elements, sometimes called general design elements (GDEs). For information about specific item element feature types, see the appropriate application documentation. For example, HRN_ objects correspond to wiring harness design objects in Teamcenter.
BOMView Revision 	<p>Creates a revision of a BOM view.</p> <p>When an item is an assembly of other items, its assembly structure is represented by a BOM view, which is a data object distinct from the item in order to support multiple views</p>

Command	Purpose
	functionality. The structure of the assembly item may change between successive revisions of the item. Therefore, the actual structure information of an item revision is stored in a BOM view revision referenced by that item revision.
Structure Context 	Creates a configurable structure data object that consists of one or more root objects sharing the same configuration. For example, it may be one or more BOMs or assembly structures and their configurations. The configuration of the structure context is defined by a configuration context. The structure objects may have occurrence groups, items, and item revisions.
Configuration Context 	Saves a configuration consisting of revision rules or variant rules that you can retrieve and assign to a structure context.
Collaboration Context 	Creates a data object containing one or more structure and configuration contexts.
Work Context 	Creates a profile that a user assumes to complete a specific assignment. Work contexts are created from a combination of user name, group, role, and project; however, it is not necessary to include all four of these elements in the definition of a work context. For example, if a task can be performed by anyone, regardless of their group and role, the work context specifies only the project to which the context applies. If a task can be performed only by a user with a specific role within a group, the work context definition specifies the project, group, and role, but not a specific user.
Service Request 	Creates new objects for use in the Service Manager application.
Service Catalog 	Creates new objects for use in the Service Request Manager application.
Connection 	Creates the object that defines the connectivity between two or more terminals in a physical model.
Interface Definition 	Creates electronic control unit ports for ECU networks.
Process Variable 	May serve as inputs, outputs, or controls of systems; process variables are a type of item element used as parameters to control or monitor a process.
Signal 	Carries a message between functions or electrical components. You can model the nature of the message carried by a signal by associating a process variable to the signal in the context of an electrical structure. The signal object can be managed, revised, released and configured.





Command	Purpose
Workflow Process 	Creates a new workflow process object with attachments, an associated process template and the ability to assign tasks.
Workflow Sub-Process 	Creates a new workflow subprocess object dependent on the parent process, with an associated process template and the ability to assign tasks.
<p>Note:</p> <p>This menu command is displayed only when a task is selected in the Tasks to Perform list in My Worklist.</p>	
Issue Report 	Used to track and fix problems with a product. An issue report object contains information about the problem, including relevant parts, snapshots, and reference data.
Change 	Creates a new change object in the Change Manager application and lets you specify attributes, assign to a project, and set effectivity.
Envelope 	Creates a mail object for use with Teamcenter mail.
Vendor Management	Lets you create new Vendor and Bid Package objects.
Part 	Creates a new Teamcenter part and lets you assign a part number, revision, and name.
Design 	Creates a new Teamcenter design and lets you assign a design ID, revision, and name.
CAE Item 	Creates a CAE data item for use with simulation applications.
Schedule 	Creates a Schedule Management — Deployment and Rich Client Usage object for use with calendar applications.
Parameter Management, Product Variant, and Product Variant Intent	These three commands let you use the Calibration and Configuration Data Management (CCDM) solution to create and manage embedded software calibration and configuration parameter data. CCDM is a separately licensed solution that must be installed to activate these commands.
Software Design Component 	Opens the New Software Design Component wizard. This command is displayed in My Teamcenter and Structure Manager and when you have installed the Embedded Software Design Data Management solution.
Other 	Create any available business objects, including custom business objects created using the Business Modeler IDE.

File New Item dialog box

Use the **File**→**New**→**Item** menu command to display a dialog box with options to create new objects.

Note:

The available new item options vary according to preference settings and the applications installed and enabled at your site. The following table lists descriptions of typical items.



Command	Purpose
DMTemplate 	Creates objects that can have attached starting files for creating objects of other item types. These template objects are application specific and can include any kind of starting files and preview or thumbnail image files, useful for engineering applications such as NX.
Document 	Creates items with relations to Microsoft Office applications such as Microsoft Word, Microsoft Excel, and so on.
Functionality 	Represents a functional breakdown of a product. In this case, you can use an item to represent a function.
Item 	Creates any sort of standard item object in Teamcenter.
Paragraph, Requirement, and RequirementSpec	Create paragraph, requirement, and requirement specification objects for use with Systems Engineering — Deployment and Rich Client Usage.




Edit menu






Use the **Edit** menu commands to perform basic editing tasks on selected objects, view and/or change user settings and preferences, and to move selected objects around in the tree structure.






Note:

You must have read and write privileges to the objects you want to cut, copy, or paste.

Command	Purpose
Cut 	Removes a selected data object reference from the current location and places it on the clipboard. You must have read privileges on the object and write privileges on its container to move or remove an object.
Copy 	Replicates a data object reference in another application. You must have read privileges for the selected object that you want to copy. You can also create a copy by dragging the object to another Teamcenter application.

Command	Purpose
Copy Workflow Process	<p>Copies a selected workflow process to your Teamcenter clipboard.</p> <div style="border: 1px solid black; padding: 10px;"> <p>Note:</p> <p>Choose Copy or Copy Workflow Process to accomplish your goal with a selected task. If you choose Copy, just that task is copied to the clipboard. If you choose Copy Workflow Process, the root process is copied to the clipboard.</p> </div>
Copy Append (Ctrl+Shift+C)	Copies the selected object to the Teamcenter clipboard with the intention of appending the copied object to the destination object, and retaining the current contents of clipboard.
Paste 	<p>Moves a data object reference from the clipboard to the current location in the data object area. It is important to select the proper destination for the data object reference before choosing the Paste menu command. You must have read and write privileges to the destination object.</p> <div style="border: 1px solid black; padding: 10px;"> <p>Note:</p> <p>If your administrator has defined mandatory properties for the type of relation by which the pasted object reference (secondary object) is associated to the primary object, a dialog box lets you define attribute values for the objects.</p> </div>
Paste Special	<p>Allows you to specify a relation type rather than using the default paste relation when pasting an object reference into an item or item revision.</p> <div style="border: 1px solid black; padding: 10px;"> <p>Note:</p> <p>If your administrator has defined mandatory properties for the type of relation by which the pasted object reference (secondary object) is associated to the primary object, a dialog box lets you define attribute values for the objects.</p> </div>
Properties 	<p>For selected single editable objects, displays the Check-Out dialog box, and then displays the Edit Properties dialog box for the selected object.</p> <p>For selected multiple editable objects, displays the Check-Out dialog box, and then displays the Common modifiable properties dialog box for the selected objects.</p>
Mass Update 	Allows you to replace parts in an assembly in one phase using My Teamcenter or in two-phase process using change management.





Command	Purpose
Mass Update Realization 	Allows you to replace the source object of design elements in a single phase using My Teamcenter or in a two-phase process using change management.
Delete 	Deletes a selected data object from the database. You must have delete permission for the object to use this command. You can also use the Explore Selected Components option (available in the Delete dialog box) to select related objects for deletion by either selecting them from the tree or applying type/relation rules.
	<div style="border: 1px solid black; padding: 10px;"> <p>Note:</p> <p>You cannot delete from the database an object that is referenced in multiple locations. Therefore, to delete an object from the database, you may need to perform a where-referenced search to locate all references to the object, then contact all the owners of the references and ask them to delete their references to the object. When there are no remaining references, you can delete an object for which you have delete permission.</p> </div>
Properties on Relation	<p>Lets you edit and save properties on custom relations.</p> <ul style="list-style-type: none"> • When one secondary object is selected, this command displays the Properties dialog box showing the relation between the selected secondary object and the related primary object. • When multiple secondary objects are selected, this command displays the Common modifiable properties dialog box.
Purge 	<p>Permanently removes old versions of a dataset from the database. You can select whether to purge all old versions or specific versions of a dataset.</p> <p>If sequence functionality is enabled and the latest sequence is selected, the system removes all non-immune sequences of an item except for the latest sequence. If a sequence other than the latest sequence is selected, only the selected sequence is purged.</p>
Make Immune 	<p>Specifies an item revision sequence cannot be deleted from the system by a purge or checkin action.</p> <p>The Make Immune command is not available for the latest sequence. The system displays an error message dialog if you try to make the latest sequence immune.</p>
Remove Immunity 	Removes immunity from an item sequence. The item can then be deleted from the system during a purge or checkin operation.



Command	Purpose
	<p>The Remove Immunity command is not available for the latest sequence. The system displays an error message dialog if you try to remove the latest sequence.</p>
Latest 	<p>Displays the latest versions of all datasets in a selected folder.</p> <p>The Latest menu command updates all version-0 datasets to reference the latest saved version in the database. This feature is useful in a network environment when multiple users are working on the same dataset.</p> <div style="border: 1px solid black; padding: 10px;"> <p>Note:</p> <p>By default, the Edit→Latest menu command is not displayed. To enable site-wide display of this command, the administrator must set the TC_suppress_Edit_Latest_Menu site preference to True.</p> </div>
User Setting 	<p>Provides access to the User Setting dialog box used to:</p> <ul style="list-style-type: none"> • View, define, or change company and group profile information for a user. • View, define, or change settings for a group, role, and/or volume. • View or change logging privileges for a user with dba privileges. • Define or change company location codes.
Options 	<p>Lets you set preferences for a wide variety of user interface and application display and processing attributes.</p>
Change Ownership 	<p>Lets you to change ownership of one or more objects. Using the Explore feature, you can select component objects and attachments, such as datasets, forms, and part files for ownership change.</p>
Calendar 	<p>Displays the Edit Resource Calendar dialog box to let you edit your resource calendar.</p> <p>If you do not have a resource calendar, this command lets you create one.</p> <div style="border: 1px solid black; padding: 10px;"> <p>Note:</p> <p>Administrators can create calendars for other users in the Teamcenter Organization application.</p> </div>

Command	Purpose
Replace Parametric-Requirement Revision	Substitutes an existing note or requirement with a new revision of the note or requirement.
Attach Requirements/-Notes	Attaches a parametric requirement or a custom note to an item or item revision.

View menu

View menu commands let you refresh your display, with hierarchical information, and see object access and user information.






Command	Purpose
Refresh 	<p>Reads information from the database and updates the information displayed in the workspace area.</p> <p>Using Refresh when many objects are selected can impact performance. The system uses the TC_Refresh_Warning_Threshold preference value to display a warning when the specified number of objects is exceeded.</p>
Refresh Window	Refreshes the information displayed in the workspace area.
Access 	Allows you to view, change, and/or apply access permissions for a selected object.
Named References 	<p>Allows you to view, upload, or download the name references of a selected dataset.</p> <p>You can use the function buttons in the dialog box to cut or copy a selected reference to the clipboard and paste references from the clipboard.</p>
Current Users 	<p>Displays a table containing information relating to all currently logged-on user sessions.</p> <p>Users with dba privileges can:</p> <ul style="list-style-type: none"> • Create and manage user accounts in the Organization application. • Use this command to purge inactive user sessions.

Command	Purpose
	<p>Note:</p> <p>Purging does not clear sessions with an active TcServer. If a client terminates abnormally (not through logout), the user session may still be active.</p> <p>If necessary, you can use the clearlocks utility to terminate an active session, as described in <i>Terminate Teamcenter sessions</i> in Teamcenter server installation documentation.</p>
Properties 	Allows you to view, update, or print the properties of a selected data object.
Audit	Allows you to view audit logs based on site-defined audit definition objects.
Organization 	<p>Displays your Teamcenter organizational structure including the groups in your enterprise, the roles in each group, and the users assigned to each role.</p> <p>Users with dba privileges create and manage the information displayed in the organization chart.</p>
Effectivity	Lets you display the Effectivity dialog box to let you create, edit, copy, and delete effectivities for an item. Also lets you view effectivity mappings of revisions for configuration items.





Tools menu


Use the **Tools** menu commands to perform actions on objects, such as checking them in and out, and to create and manage address lists and generate reports.

Command	Purpose
Check-In/Out	Reserve exclusive access to one or more objects and/or their attachments by locking the objects in the database upon checkout. You restore access to the objects using check-in. Only your administrator is allowed to circumvent the security that these menu commands provide.
ID Display Rule	Sets the display rule for items and item revisions based on alternate identifier context.
Process Change Selector	Attach the selected structure to a Workflow process or change.
Project	Assigns or removes objects from projects.

Command	Purpose
Validation	Lets you run validation agents and view results. Agents validate the attributes of relevant targets under a selected data object, using third-party software applications, based on criteria established by your local administrator.
Review Issue	Lets you investigate issues to determine whether they must be fixed immediately, can be rejected, or can be deferred.
Assign Work Context 	Lets you assign a profile that a user assumes to complete a specific assignment. Work contexts are created from a combination of user name, group, role, and project.
Manage Global Alternates 	Lets you work with global alternates. A global alternate part is interchangeable with another part, regardless of where the part is being used in the product structure.
Baseline 	Creates a new dataset based on your work-in-progress (WIP) design and attaches a copy of the currently configured structure to that dataset.
Resource Pool Subscription	Allows you to subscribe to a resource pool.
Remote Inbox Subscription	Allows you to subscribe to inboxes based on the Teamcenter registry.
Subscribe	Allows you to create subscriptions. You can also access this menu command from a shortcut menu by right-clicking a data object.
<p>Note:</p> <p>This menu command must be enabled by your Teamcenter administrator.</p>	
Subscription Manager	Allows you to manage (query, edit, and delete) persistent subscriptions. You can also access this menu command from a shortcut menu by right-clicking a data object.
Add Design to Product 	Opens the Add Design to Product wizard that guides you through adding your CAD design to an installation assembly attached to an architecture breakdown element.
Add Part to Product 	Opens the Add Part to Product wizard that guides you through adding an enterprise resource planning (ERP) part to an architecture breakdown element.
Multi-Site Collaboration	Controls the data shared with participating sites in a distributed network. Multi-Site Collaboration allows you to publish and unpublish objects, send objects for remote export or remote checkout, register or unregister

Command	Purpose
	<p>item identifiers, archive and restore Teamcenter data, and synchronize objects, components, and assemblies.</p> <ul style="list-style-type: none"> • Publishing an object makes that object available to other Teamcenter sites. When you publish an object, a publication record is created in the Object Directory Service (ODS) that can be read and searched by other sites. Until you publish an object, it can be seen only by the local owning site. Other Teamcenter sites are not aware that the object exists. • Unpublishing an object reverses the procedure, the object is only accessible by the local owning site. • Synchronizing updates objects, components and assemblies. • Sending lets you send for remote export or checkout. • Registering and unregistering lets you prevent and resolve non-unique item IDs. • Checking a replica sync state lets you determine whether a replica is current. • Archiving data stores older, infrequently used data on an archive server. Restoring data returns previously archived data to its original production site.
	<p>Note:</p> <p>You must have appropriate privileges on an object to publish or unpublish an object. Your administrator defines the rules that determine who has publishing privileges on objects.</p> <p>Typically, the owner of the object automatically gets publishing privilege. If you do not have the privilege to publish an object, an attempt to publish or unpublish the object returns an error. Check with your administrator about the Access Manager rules that control publishing privileges.</p>
Import	<p>Allows you to import data into the database from another Teamcenter site or connection directory or to bring non-Teamcenter product information under Teamcenter control.</p>
Export	<p>Exports data to various formats for specified destinations, such as a file which can then be imported to another database.</p>

Command	Purpose
Override Word templates	Displays the Override Word templates dialog box to let you select a specification template and override object templates for a specified object during export.
Send Data To	Sends selected data to an external application using an application interface object. Your Teamcenter administrator uses the Business Modeler IDE application to create new application interface types associated with a specific application. Each of these types are available in the Send Data To dialog box.
Send Additional Data To	Sends additional data to a running session of the application launched using the Send Data To menu command.
Vendor Management	Lets you work with vendor, vendor role, and bid package line item data.
Address List 	Allows you to create and manage address lists for Teamcenter users, groups, and external Internet addresses.
Intermediate Data Capture 	Captures intermediate data for retrieval and viewing. This capture data does not represent the final released state of the structure. The configuration rules are saved with the structure allowing its exact state at the time of capture to be reproduced each time it is retrieved. The IDC is stored as a PLM XML file containing references to specific files in datasets. The files are marked so they are retained even if they are subsequently modified; the copy is edited, not the original. An IDC is independent of a particular application and you can open it in any application that interprets IDC PLM XML data.
Open Live Excel 	Lets you use Microsoft Excel to change the values of editable properties for selected objects by generating an interactive (live) Excel file that is synchronized with the Teamcenter database.
Compare Contents	For comparing two requirements or comparing a requirement or specification to a previous versions, lets you start and end comparisons, or compare to a previous object.
Email Polling	Provides access to Start Email Polling , to collect, download, and import data from external sources such as suppliers, and Configure Email Polling forms, used by administrators.
Trace Report 	Displays complying or defining objects related to a selected linking or data object.
Site CheckIn/Out	Provides access to menu commands for Check-Out to site , Check-In from site , and Cancel Check-Out to site .
Localization	Lets you export, import, and filter objects for localization.
Reports	Lets you select a report option:

Command	Purpose
	<ul style="list-style-type: none"> • Report Builder Reports launches the Report Generation wizard. • View Rollup Reports displays the rollup report, if any have been created in the Structure Manager application.
Process Assignment List	Lets you create and edit assignment lists, assign an in-process object to a user or user list, and replace old group members with new group members. When you create a new assignment list, you can name the list, select a process template, provide a description, assign resources, and examine the process view.
 Assign Participants	Displays Assign Participants dialog box when an item revision is selected. Lets you view, add, and remove proposed workflow reviewers and responsible parties.
Part/Design	Lets you specify the selected item revision to be the primary representation or reset the primary representation of the part. If no appropriate item revision is selected, the system displays a message prompting you to select an item revision under part representations.

Actions menu

The **Actions** menu contains commands used for setting the actions of tasks. All commands on the **Actions** menu require **privileged user** status to function.

If a task is designated to process in the background, all actions except **Perform** and **Assign** are processed in the background. The **Perform** and **Assign** action execute in the foreground.

Note:

The **Actions** menu is displayed in My Teamcenter when **My Worklist** is selected from the **Quick Links** section in the navigation pane.

Command	Description
Perform	Displays the Perform dialog box for the selected task. The contents of the dialog box varies depending on the task selected.
Assign	Reassigns the selected task to another user.
Start	Manually starts a task. This command works only in certain circumstances.
Complete	Manually completes a task, if it is in either the Started or Pending states.
Suspend	Moves a selected task to a Suspended state. The only valid action from a Suspended state is Resume .

Command	Description
Resume	Moves a selected task from a Suspended state to the previous state.
Promote	Places the selected task into a Skipped state, and starts the successor tasks in the workflow process. For Review and Route tasks, the successor task can be either along the approve or reject path, depending on the user's selection.
Undo	Changes a selected task state from Started, Completed, or Skipped to a Pending state.
Stand-In	Allows you to perform the task while allowing the original user to retain control.
Autoset Current WorkContext	When the selected item or task has a work context defined, sets your user settings so you can work with the current item or task.

Window menu commands

Use the **Window** menu commands to open a new application window and customize your desktop.

Command	Purpose
Open Perspective	This command is not used by default. If enabled at your site, this command allows you to open alternate collections of view panes.
Show View	<p>Allows you to open alternate views.</p> <p>Depending on the configuration at your site, a variety of views may be available.</p> <ol style="list-style-type: none"> 1. Choose Window→Show View→Other to display the Show View dialog box. 2. Expand one or more categories to display the views available in those categories. 3. Select a view. 4. Click OK. <p>The selected view is displayed in the current application perspective.</p>
Save Perspective As	Saves a rearranged perspective with the current name, or creates a new perspective by saving the new arrangement of views with a new name.

Command	Purpose
Reset Perspective	Restores a rearranged perspective to the default view arrangement.
Close Perspective	This command is not used by default. If enabled at your site, this command allows you to close an alternate perspective.
Preferences	Use the Window→Preferences menu command to display the standard Eclipse Preferences dialog box, where you can set Relation Browser preferences and Teamcenter preferences for tab style, view title length, Content Management, and view network presentation.

Graphical Relation Browser Layout

Used by the Relation Browser and the Teamcenter Integration for NX.

Install/Update

Standard Eclipse functionality.

Teamcenter

Show traditional style tabs

Select to display rectangular tabs instead of rounded tabs.

Minimum characters for view title

Specifies the minimum number of characters displayed in view titles prior to putting titles into the associated view list.

Content Management

Used by Content Management to select an editor, specify graphic tagging for clipboard items, and specify content publishing defaults.

View Network Presentation

Select to set colors and patterns for view networks.

Note:

Most Teamcenter application options and preferences are set in the **Options** dialog box. Choose **Edit→Options** to display the **Options** dialog box.

Toolbar	Displays or hides the toolbar. A check mark indicates that the toolbar is displayed under the menu bar.
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Command	Purpose
Navigation Pane	Displays or hides the navigation pane. A check mark indicates that the navigation pane is displayed.
Full Screen	Alternates between full-screen display and adjustable-window display.

Translation menu

Use **Translation** menu commands to **translate data files**:

- CAD data files to 3D or 2D file formats for viewing in Teamcenter lifecycle visualization.
- Document dataset files from Microsoft Word format to zipped files and PDF files.
- Any other formats for which a translator is available.

Note:

The **Translation** menu is displayed only when Dispatcher is installed and configured.

Use menu commands to translate data and monitor translation processes.

Command	Purpose
Translate	Displays the Translation Selection dialog box with columns indicating the name of the object being translated, the dataset type, the provider of the dataset type, and the translator to service the request.
	<p>Note:</p> <p>When you choose the Translate menu command without an appropriate dataset selected, the system displays a dialog box with a message describing the error.</p>
Administration Console	Displays the Request Administration dialog box and queries the database to retrieve translation processes.

Help menu

You can use the **Help** menu commands to access the online help index, see view-specific help, and find information about the application that is currently running in the rich client interface.

Online help is not always installed, and for some views, online help is not available from the **Help→Current Application** menu command, the F1 key, or both.

When online help for a view is not available from the function key or menu command, follow these steps:

1. Choose **Help→Help Library**.
 - If help is installed, a browser displays the help.
 - If help is not installed, a browser displays an error message.
See your administrator for assistance.
2. Expand **Using Teamcenter Interfaces** and choose **Teamcenter Basics**.
3. Choose **Getting Started→Views available to rich client application perspectives→Rich client views**.
4. Locate the view for which you are seeking online help and click the link to display additional information.

Shortcut menus

When you select an object in a rich client view, you can often use the right mouse button to display a shortcut menu containing commands relevant to the currently active application or the currently selected object. The shortcut menu is dynamic; the available commands reflect the current context.





Shortcut menu commands are referenced and described in procedure and reference documentation in context of the application or object selection to which the commands apply.







Note:




On some Linux platforms, you must hold down the right mouse button while you select the desired command.


Much of the functionality available from menu commands is also available in shortcut menus, depending on type of object or objects selected when you click the right mouse button.

For example, the following are some of the commands that are available in the My Teamcenter shortcut menu, depending on type of object or objects selected.

Command	Purpose
Copy Reference	Lets you copy a Teamcenter reference to a selected image, Microsoft Excel, or JT dataset and paste that reference into a Microsoft Word document.
New Change in context 	When an item revision is selected, displays the New Change in context dialog box. You can select the type of change to be created, such as a problem report or a change request.
New	Creates a new object of a selected type.
Cut 	Removes a selected data object reference from the current location and places it on the clipboard. You must have read privileges on the object and write privileges on its container to move or remove an object.
Copy 	Replicates a data object reference in another application. You must have read privileges for the selected object that you want to copy. You can also create a copy by dragging the object to another Teamcenter application.
Paste 	Moves a data object reference from the clipboard to the current location in the data object area. It is important to select the proper destination for the data object reference before choosing the Paste menu command. You must have read and write privileges to the destination object.
	<p>Note:</p> <p>If your administrator has defined mandatory properties for the type of relation by which the pasted object reference (secondary object) is associated to the primary object, a dialog box lets you define attribute values for the objects.</p>
Resequence Structure	Resequences a structure.
Generate Report	Creates item reports generated in the context of one or more selected objects. Item reports generate in multiple output formats and follow PLM XML standards allowing integration with third-party reporting tools.
Send To	Selects an object in a navigation view; use the Send To shortcut menu command to choose an application to open with the object selected.
	<p>Note:</p> <p>For example, you can send a structure to Structure Manager from My Teamcenter. Teamcenter opens Structure Manager, loads the structure, and then applies the default revision rule.</p>

Command	Purpose
	<ul style="list-style-type: none"> • When an empty Structure Manager window is already open, Teamcenter loads the structure into it, and then applies the default revision rule. • When a Structure Manager window is already open and contains a configured structure, Teamcenter loads the structure into it, and then applies the revision rule used to configure the previously displayed structure.
Check In/Out	Reserves exclusive access to one or more objects and/or their attachments by locking the objects in the database upon checkout. You restore access to the objects using checkin. Only your administrator is allowed to circumvent the security that these menu commands provide.
Purge 	<p>Permanently removes old versions of a dataset from the database. You can select whether to purge all old versions or specific versions of a dataset.</p> <p>If sequence functionality is enabled and the latest sequence is selected, the system removes all nonimmune sequences of an item except for the latest sequence. If a sequence other than the latest sequence is selected, only the selected sequence is purged.</p>
Make Immune 	<p>Specifies an item revision sequence cannot be deleted from the system by a purge or checkin action.</p> <p>The Make Immune command is not available for the latest sequence. The system displays an error message dialog if you try to make the latest sequence immune.</p>
Remove Immunity 	<p>Removes immunity from an item sequence. The item can then be deleted from the system during a purge or checkin operation.</p> <p>The Remove Immunity command is not available for the latest sequence. The system displays an error message dialog if you try to remove the latest sequence.</p>
Refresh 	Reads information from the database and updates the information displayed in the workspace area.
Edit Properties 	For selected, single editable objects, displays the Check-Out dialog box, and then displays the Edit Properties dialog box for the selected object.
View Properties 	Allows you to view the properties of a selected data object.
Properties on Relation	Lets you edit and save properties on custom relations.

Command	Purpose
	<ul style="list-style-type: none"> When one secondary object is selected, this command displays the Properties dialog box showing the relation between the selected secondary object and the related primary object. When multiple secondary objects are selected, this command displays the Common modifiable properties dialog box.
Access 	Allows you to view, change, and/or apply access permissions for a selected object.
Project	Assigns or removes objects from projects.
License	Lets users attach or detach licenses: <ul style="list-style-type: none"> Users with IP Admin privileges can use the Attach or Detach commands to manage licenses for authorized data access (ADA) for intellectual property (IP) data objects. Users with ITAR Admin privileges can Attach or Detach commands to manage licenses for authorized data access (ADA) for data objects controlled through International Traffic in Arms Regulation (ITAR) policies.
Internal Trace Report	Displays complying or defining objects related to a selected linking or data object.
Add Design to Product 	Opens the Add Design to Product wizard that guides you through adding your CAD design to an installation assembly attached to an architecture breakdown element.
Add Part to Product 	Opens the Add Part to Product wizard that guides you through adding an enterprise resource planning (ERP) part to an architecture breakdown element.
Manage Global Alternates	Lets you work with global alternates. A global alternate part is interchangeable with another part, regardless of where the part is being used in the product structure.
Multisite Synchronization	For data shared with participating sites in a distributed network, lets you update objects, components, and assemblies.
Subscribe	Allows you to create subscriptions. You can also access this menu command from a shortcut menu by right-clicking a data object.
Subscription Manager	Allows you to manage (query, edit, and delete) persistent subscriptions.

Command	Purpose
Add To Favorites 	Lets you add selected objects to your Favorites list in the navigation pane.
Compare Contents	For comparing two requirements or comparing a requirement or specification to a previous versions, lets you start and end comparisons, or compare to a previous object.

Note:

Some menu commands must be enabled by your Teamcenter administrator.

Accessing online help

HTML and PDF help

Application administrators ensure the Teamcenter help is available to all Teamcenter users to assist them in using the product. Application administrators determine the best help format for their users. Teamcenter help is delivered in two formats: HTML and PDF. Each format has its own advantages.

- The Teamcenter HTML help benefits include a broad search capability and videos.

HTML (HyperText Markup Language) has the look and behavior typical to web pages: small chunks of information extensively linked to other chunks of information. HTML lends itself to quickly reading, copying, and sharing smaller chunks of information, such as stepped procedures. Videos can only be accessed in the HTML help.

- The Teamcenter PDF help benefits include downloading only the content you need and printing entire PDF files or portions of files.

PDF (Portable Document Format) are read-only files and can be viewed on most operating systems. Readers can easily email entire files to others and save the PDFs to other devices (such as an iPad or Android tablet) for use in locations without Internet connectivity. It is also easy to print sections or entire files.

Search the PDF help

You can search individual PDF files or search the entire Teamcenter PDF help. The procedure you use depends on how you are accessing the PDF files.

To	Do this
Search individual PDF files	Use the search feature within Acrobat when you are accessing a PDF file from the PDF help launch page.
Search all PDF files	On the PDF help launch page: <ol style="list-style-type: none"> 1. Type the text you want to find in the search box. 2. Click Search.
Using Acrobat Full Text Search	<ol style="list-style-type: none"> 1. Click the arrow next to the search text box and choose Open Full Reader Search, or type Ctrl+Shift+F to open Full Reader Search. 2. Type the text you want to find. 3. Click Search. <p>Search results are displayed in the Results box.</p>

Note:

The steps may vary if you use Full Reader Search in an Adobe Acrobat product other than Acrobat Reader.

View Teamcenter PDF help on the iPad

You can view your Teamcenter PDF help using Apple's iBooks mobile application on the iPad.

iBooks allows you to:

- Perform searches.



- Bookmark pages.





- Change the size of the page.















Personalizing the toolbar






My Teamcenter toolbar

To display or hide the toolbar, choose **Window**→**Toolbar**. The toolbar is displayed when the **Toolbar** command has a check mark ✓.

Several buttons to access functionality are located on the My Teamcenter toolbar.

Button	Purpose
Soft Abort 	<p>This button is active when an application is loading or when the system is processing data for a task. However, the soft abort operation is a logical interrupt that can be performed only when the system encounters an interruption between two processes. The following examples illustrate some situations in which you can use the soft abort button:</p> <ul style="list-style-type: none"> <p>Creating a folder</p> <p>When a folder is created, the system creates the folder, pastes the folder, and opens the folder (if Open on Create is selected). The only points in this process at which the Soft Abort button can be used to stop the process are between when the folder has been created and is about to be pasted or when the folder has been pasted and is about to be opened.</p> <p>Deleting objects</p> <p>When objects are deleted, the system loads the objects and then deletes them. The only point in this process at which the Soft Abort button can be used to stop the process is between when the object is loaded and when it is deleted, or if deleting multiple objects, the process can be stopped between when the previous object has been deleted and the next object is loaded.</p> <p>Running searches</p> <p>When a query is run, the system executes the query and then loads the objects. The only point at which the operation can be stopped is after the query has run but before the objects are loaded.</p>
Cut 	<p>Removes a selected data object reference and places it on the clipboard. You must have read privileges on the object and write</p>


Button	Purpose
	privileges on its container (object folder, item revision) to cut an object reference.
Copy 	Duplicates an object reference. You must have read privileges for the object that you want to copy.
<p>Tip:</p> <p>You can create a copy of an object reference in a different application by dragging the object from My Teamcenter to the other application.</p>	
Paste 	Pastes the contents of the clipboard into the selected container object.
Delete 	Deletes a selected data object.
Open Home folder 	Opens your Home folder in the My Teamcenter window.
Open Worklist 	Opens My Worklist in My Teamcenter.
Refresh selected object 	Refreshes the display in your rich client window.
Open selected object 	Opens a selected data object—folder, item, item revision, or dataset—to access product information.
Display properties 	Displays the properties of a selected object. You can also use this option to edit object properties.
Open Task Properties 	Displays the properties of a selected task.
Display accessibility 	Allows you to select a user and view, change, or apply access permissions for a selected object.
Perform Task 	Allows you to perform a selected task or complete a signoff.
Add Design to Product 	Launches the Add Design to Product wizard, which allows you to select products and designs, identify architecture elements, and select named variant expressions.
Add Part to Product 	Launches the Add Part to Product wizard, which allows you to select products and parts, identify architecture elements, and select named variant expressions.
Navigation Pane 	Display or hide the navigation pane .


Button	Purpose
Open Search View 	Displays the Search view used to execute database queries.
Open Simple Search View 	Displays the Simple Search pane used to build business object searches based on one or more property values.
Folders 	Displays the Folders pane (also called the tree pane).
Back 	Let you navigate between loaded Teamcenter rich client applications.
Forward 	

Customize the toolbar

You can add commands or remove commands from Teamcenter rich client perspectives.



The **Customize Toolbar**  shortcut menu command displays the **Customize Toolbar** dialog box.

- The **Customize Toolbar** dialog box lets you add commands to the toolbar or remove commands from the toolbar for each Teamcenter rich client perspective you use frequently.
- The **Restore Defaults**  shortcut menu command returns a perspective toolbar to its default state.

Note:

Some Teamcenter options do not have symbols associated with them. When you add these options to the toolbar, the generic button is displayed and the command name is shown as a tool tip when you move the mouse cursor over the button.

Communicating in Teamcenter

Using mail, email, and instant messaging in Teamcenter

Teamcenter provides an internal mail facility, called Teamcenter mail, as well as the capability to use external email programs, such as Microsoft Outlook, and the capability to use instant messaging.

Note:

The **My Worklist** view has an **Inbox** associated with workflow tasks you must perform or you can track. These are not mail or email.

- Teamcenter mail lets you to send mail from within the Teamcenter interface, including attachments and links, to other Teamcenter users. You can also send email from Teamcenter to recipients who are not Teamcenter users by specifying a valid SMTP address.

Teamcenter mail is delivered to the **Mailbox** in your **Home** view in My Teamcenter.

Note:

The ability to send operating system email from Teamcenter can be disabled by setting the **Mail_OSMail_activated** preference to **false**.

To view or edit preference information, use the rich client **Edit**→**Options** dialog box.

To send links with properly formed URLs inserted in a notification email, the following preferences must be set:

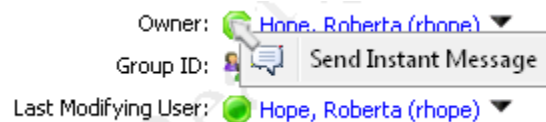
- **WEB_default_site_server**
- **WEB_protocol**
- **RICH_CLIENT_MARKER_ID**
- **WEB_default_site_deployed_app_name**

- Your administrator can configure Teamcenter to use external email programs, such as Microsoft Outlook, to send subscription and workflow notification using external mail programs.

Note:

An administrator can configure the **EPM-notify** and **EPM-notify-report** workflow handlers to send Teamcenter mail and email.

- Teamcenter rich client users can see when other users are available for instant messaging with Microsoft Office Communicator. Teamcenter users can view the current status of the owning and last modified users and can click the Microsoft Office Communicator symbol in Teamcenter to initiate communication.



Note:

Your administrator can configure the Teamcenter instant messaging to access available Microsoft Office Communicator features.

Send a mail message

1. (Optional) Select attachments from the navigation tree.

Tip:

You can also copy attachments to the clipboard and insert them in the **Attachments** box.

2. Choose **File**→**New**→**Envelope**.

3. Use one of the following methods to enter the addresses in the **To** box:

- Type the addresses of the users, groups, address lists, or external recipients in the **To** and/or **CC** boxes.

Note:




To send external mail, you must specify a valid SMTP address.

- Search for recipients by performing the following steps:

- a. Click the **To** button.

The system displays the **Select Recipients** dialog box.

- b. Type search criteria in the **Search** box to search by user ID, group, or address list.

- c. Click one of the following buttons to execute the search: **User** , **Groups** , or **Address List** .

- d. Select the users, groups, or address lists that you want to receive the message, and click the **To** or **CC** buttons.

Tip:


You can remove recipients from the lists by selecting the user and clicking the **Remove** button (–). In addition, you can create a new address list by clicking the **Launch Address List** button .


- e. Click **OK**.

4. In the **New Envelope** dialog box, type the subject of the message in the **Subject** box.

5. Type your message in the **Message** box.

Tip:

To include the contents of a text dataset in the body of your message, select the dataset in the attachment list and click .

- (Optional) Click the **Add** button  to the right of the **Attachments** section to copy items from the clipboard as attachments.

Note:

Attachments are Teamcenter objects and are only valid when sending Teamcenter mail. Teamcenter objects cannot be sent as attachments of external mail messages.

- Click **Send** to send the message.

Receiving and reading mail

An envelope is delivered to the mailbox of each user whose name appears in the **To:** or **CC:** list of sent mail.

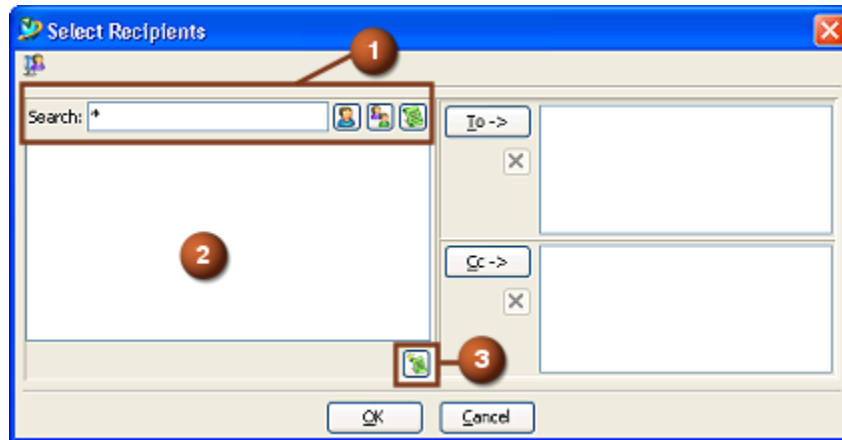
To read your mail in the rich client, open your **Mailbox** folder and click the envelope to display the contents in the **Viewer** pane.

Address lists

What are address lists?

Address lists can contain any combination of valid Teamcenter users and groups. In addition, external email addresses and other Teamcenter address lists can be used as entries in address lists.

You can create address lists when selecting mail recipients by clicking the **Launch Address List Dialog** button located beneath the search results pane in the **Select Recipients** dialog box.





- | | | |
|---|-----------------------------------|--|
| 1 | Search | Finds recipients by searching for users, groups, or address lists. Results display in the search results pane. |
| 2 | Search results pane | Lists recipients found by the search. |
| 3 | Launch Address List Dialog | Launches the Address List dialog box and lets you create an address list. |

Note:

When an address list containing inactive users is involved in a workflow, notification emails generated by the workflow are sent to all address list members except the inactive users.

Create an address list


1. Choose **Tools**→**Address List**.
2. Type the name of the address list in the text box under the **Address List** pane, and click the **Add** button .
3. Type the names of the members or select the members, users and/or groups, that you want to add to the address list. The members that you add to the address list display in the **Member(s)** pane.
 - Type the name of the user or group and click the **Add** button.
 - Perform the following steps to select members to add to the address list:
 - a. Place the cursor in the **New Member** box, and click the **Organization** button .
 - b. In the **Organization Selection** dialog box, select the **Include Sub-Groups** option to add all of the members of a chosen group.

- c. Expand the tree, select the groups and/or users, and click **OK**.

The system displays the name of the user and/or group in the **Member(s)** pane and the **Organization Selection** dialog box closes.

4. Click **Close**.

Modify an address list

1. Choose **Tools→Address List**.
2. Select the address list that you want to modify.
3. Type the names of the members or select the members, users and/or groups, that you want to add to the address list. The members that you add to the address list display in the **Member(s)** pane.
 - Type the name of the user or group and click the **Add** button.
 - Perform the following steps to select members to add to the address list:
 - a. Place the cursor in the **New Member** box, and click the **Organization** button .
 - b. In the **Organization Selection** dialog box, select the **Include Sub-Groups** option to add all of the members of a chosen group.
 - c. Expand the tree, select the groups and/or users, and click **OK**.

The system displays the name of the user and/or group in the **Member(s)** pane and the **Organization Selection** dialog box closes.

4. Click **Close**.
5. To remove a user or group from the address list, select the member in the **Member(s)** list and click the **Remove** button.

The system displays a confirmation message.

6. Click **Yes** to delete the selected member from the address list, click **No** to cancel the delete operation, or click **Close** to cancel the operation and close the dialog box.

Delete an address list

1. Choose **Tools→Address List**.

- In the **Address List**, select the name of the address list that you want to delete and click the **Remove** button.

The system displays a confirmation message.

- Click **Yes** to delete the selected address list, click **No** to cancel the delete operation, or click **Close** to cancel the operation and close the dialog box.

Changing user information

Change user settings

Double-click the application banner user and role or choose **Edit→User Setting** to display the **User Settings** dialog box to modify the following categories of user information:

- **Session** – Update settings for your current logon session.
- **Login** – Update default logon settings, change geography, and change your password.
- **Person** – Change user profile data including name, address, and phone number.

Note:

You must have administrative privileges to change your user profile.

- **Administrative** – Set administration and security logging.

Note:

This option is visible only if you are logged on as an administrator.

Tip:

You can also click the user information link in the application header to access the **User Settings** dialog box.

(Roberta Hope (rhope) - Engineering / Designer [S90119])

Change your user profile

Note:

You must have administrative privileges to change your user profile.

1. Choose **Edit→User Setting**.
2. Click the **Person** tab.
3. Change your information (address, city, state, ZIP code, country, organization, employee number, internal mail code, email address, and telephone number).
4. Click **OK**.

Change your password

Note:

When the Teamcenter rich client is configured to use Security Services, passwords are managed by an external identity service provider (for example, lightweight directory access protocol) rather than Teamcenter. In this circumstance, you cannot change a password through Teamcenter.

1. Choose **Edit→User Setting**.
2. Click the **Login** tab.
3. Click the **Change Password** button.
4. Type the old password, the new password, and confirm the new password.

The password must not be empty nor contain any whitespace characters such as space, tab, newline, carriage return, form feed, or vertical tab.

In addition, the password must not contain any of the following characters:

! @ \$ % = & ' " ; : . < > () { }

5. Click **OK**.

Change your default group and volume settings

1. Choose **Edit→User Setting**.
2. Click the **Login** tab.
3. (Optional) Change the default group.

Note:

The **Group** option displays only the groups in which you are an active member. If your membership in a group has been deactivated, you cannot switch to that group.

4. Change the default volume.

Note:

The session **Volume** and session **Local Volume** are shown in the **User Settings** dialog box:

In the **User Setting** dialog box, the user can change the **Volume** value but not the **Local Volume** value.

- If the user has a **Default Volume** value set in the **Organization** application, that value takes precedence.
- If the user does not have a default volume, the **Group** volume is used.
- If the user and the user's group do not have a volume specified, the system uses the first volume from the list of available volumes.
- If the user and the user's group do not have a volume specified, and there are no available volumes, the field remains empty.

5. Click **OK**.

Set your default role within a group

1. Choose **Edit→User Setting**.
2. Click the **Login** tab.
3. Select a group from the **Default Role** table and choose a role from the list.

Tip:

You can repeat this step to specify a default role for each group of which you are a member.

4. Click **Apply**.

Teamcenter saves the default role settings and applies them when you log on to a new session.

Change your group, role, volume, and logging session settings

Session settings allow you to assume a different group and/or role during your current Teamcenter logon session. You can also select a different volume for storing your data and enable application logging and journaling.

1. Choose **Edit→User Setting**.

The system displays the **User Settings** dialog box.

2. Click the **Session** tab.

The system displays the session settings.

3. (Optional) Select a new group, role, or volume, or, if present, local volume.

Note:

The **Group** option displays only the groups in which you are an active member. If your membership in a group has been deactivated, you cannot switch to that group.

A **Local Volume** field is available if the **TC_Store_and_Forward** preference is set to **true**. Default local volumes are temporary local volumes that allow files to be stored locally before they are automatically transferred to the final destination volume. This functionality is also known as *store and forward*.

To view or edit preference information, use the rich client **Edit→Options** dialog box.

4. Click **OK**.

The system applies the new session settings.

Set your work context

A work context is a particular profile you assume to complete a specific assignment. It is a combination of your user name, group, and role for a selected project.

Your application administrator may have defined work contexts for workflow tasks. If so, you should choose the appropriate work context for each workflow task you are assigned.

1. Choose **Edit→User Setting**.
2. Click the **Session Settings** link.

The system displays the work contexts associated with the workflow tasks (including target objects) that are assigned to you.

Note:

Your administrator can choose to display all work contexts (rather than only those related to your assigned workflow tasks) in this list by setting the **TC_wc_show_all** preference.

3. Click **OK**.

Set your current project

Your Teamcenter administrator may have assigned a default project in which you will work. You can override this default setting by choosing another project in the **User Settings** dialog box.

1. Choose **Edit→User Setting**.

The system displays the **User Settings** dialog box.

2. Click the **Session** link.

The system displays the session settings.

3. Select a project from the **Project** list.

4. Click **OK**.

The system applies the new session settings.

Getting information about a selected object


Using the information center



When you select an object, such as an item, in a Teamcenter rich client application, information about the selected object is shown in the information center. The information center is located at the bottom of the Teamcenter window, to the left of the clipboard.












Information center symbols convey where-used and where-referenced, access privilege, child count, and status information about the selected object. To display the information, point to the symbol. The information displays in the form of a tooltip.



Note:

The  indicator in the upper-right corner of any of the symbols in the information center indicates that the status represented by the symbol does not apply to the selected object.

For example, the  indicator in the corner of the **In Process** symbol  indicates that the object is not in process.

Symbol	Description
	Object access: Write access is permitted on the selected object.
	Object access: Delete access is permitted on the selected object.
	Object access: Change access is permitted on the selected object.
	Object state: The object is the target of an active workflow process.
	Object state: The object is checked out of the database.
	Object state: The object is released.
	Object state: The object is published.
	Object state: The object is classified.
	Where used: Where-used count for the currently selected object.
	Where referenced: Where-referenced count for the currently selected object.
	Children: Number of children of the selected component.

Set information center display options

1. Right-click in the information center.
The **Update Options** dialog box appears.
2. Select or clear the check boxes to configure the display of information.
3. Click **OK**.

Moving and removing data objects

Dragging and dropping data objects

In situations where drag-and-drop capabilities are supported by the current application, you can move data in the Teamcenter rich client by:

- Dragging a data object from one location to another.

For example, you can add an item to your favorites list by selecting it in My Teamcenter and dragging it to the **Favorites** area in the navigation pane.

Note:

When you drag and drop an object in a structure management application such as Structure Manager, the system makes a copy of the object in the new location and does not move the original object.

When you drag and drop an object in a manufacturing application such as Manufacturing Process Planner, the system moves the object to the new location and does not make a copy of the original object.

- Dragging a data object from one application to another application.

For example, you can add an item revision to an assembly structure. Select the item revision in My Teamcenter and drag it to the appropriate position in an assembly structure open in a Structure Manager pane.

Note:

Drag-and-drop capabilities vary by rich client application. For example:

- In the My Teamcenter **Summary** view, you can drag and drop a dataset file on the view header to attach the dataset to the currently selected item revision object.
- In the My Teamcenter **Viewer** view, drag-and-drop capabilities are not available for dropping dataset files on the view header.
- In Structure Manager, if you drag and drop a dataset onto a BOM line, the dataset is not attached, although it is created in the **Newstuff** folder.
- In the **Systems Engineering** view, drag-and-drop capabilities are not available for dropping dataset files onto a BOM line.

You can also open applications by dragging an object and dropping it on the application button in the navigation pane.

For example, you can drag an item revision representing a subassembly from the My Teamcenter tree and drop it on the Structure Manager button in the navigation pane. The system opens the Structure Manager application and shows the subassembly structure.

You can select multiple files and use drag and drop to link them to a business object. For each file a dataset is created and linked to the item revision.

- When you drop files on an item in Teamcenter, the **New Datasets for Multiple Files** dialog box displays file information in a table.
- The table populates the most suitable **Dataset Type**, **Tools**, and **Reference** based on the **Default_dataset_type** preference for each file dropped.
- The **Dataset Type** list is populated with the type which is suitable for the file dropped by the user. This is driven by **Dataset Type Definition** specified in the Business Modeler IDE.

In the rich client you can drop multiple files on following types of object and their subtypes:

- Items and item revisions

The relation between the item or item revision and the dataset is automatically selected, based on the default paste relation for the item or item revision type.

- Folders

Datasets are pasted in corresponding folders.

- BOM line objects

Created objects are pasted in the user **Newstuff** folder.

To attach datasets to underlying objects for a BOM line, you must drop the files into the Structure Manager **Attachments** data pane.

Note:

Set the following environment variables to specify behavior for drag and drop actions:

DRAG_AND_DROP_Default_dataset_type

Specifies the default dataset types for files added to objects by drag and drop actions.

DRAG_AND_DROP_file_limit

Specifies the number of the files that can be dragged and dropped by each drag and drop action.

DRAG_AND_DROP_SWING_dialog_enable

Specifies whether to show or hide the multiple file drag-and-drop dialog box for single-file drag-and-drop operations.

Cutting, copying, pasting, and deleting data objects

You can use cutting, copying, and pasting to move data in your workspace by:

- Cutting an information object from one application and pasting it into another Teamcenter application.
- Copying data to the clipboard and pasting it into another Teamcenter application.
- Copying data to the clipboard and pasting it into an application outside the Teamcenter environment.

If you have delete permission for an object, you can also delete data from the Teamcenter database, but you cannot delete an object from the database if that object is referenced in multiple locations.


To delete an object from the database, you may need to:

- Perform a where-referenced search to locate all references to the object.
- Contact all the owners of the references and ask them to delete their references to the object.
- When there are no remaining references, you can delete an object for which you have delete permission.


Note:

An object contained in multiple folders can be deleted by a single action if the object is not referenced by other nonfolder objects.

Cut data objects and paste them into another Teamcenter application

1. Select one or more objects from a tree or table.
2. Choose **Edit→Cut** or click **Cut** .

The object reference is removed from its current location and placed on the clipboard.

3. Open the application where you want to paste the object.
4. Click **Clipboard**  in the lower-right corner of the window.

- Select the object from those listed in the **Clipboard Contents** dialog box.


The system copies the object into the open application.

Note:

The **Cut** menu command removes a reference to an information object, but it does not delete the actual object from the database. To delete an object from the database, use the **Delete** option.

You cannot delete from the database an object that is referenced in multiple locations. Therefore, to delete an object from the database, you may need to perform a **where-referenced** search to locate all references to the object, then contact all the owners of the references and ask them to delete their references to the object. When there are no remaining references, you can delete an object for which you have delete permission.

Copy data objects

- Select the objects that you want to copy and click the **Copy** button , press Ctrl+C, choose **Copy** from the shortcut menu, or choose **Edit→Copy**.

A reference to the object is copied from its current location and placed on both the Teamcenter and system clipboards.

Note:

For Teamcenter Integration for NX, after you copy data to the clipboard, you can use the **Send the clipboard contents to NX** clipboard shortcut menu command to transfer data from the Teamcenter clipboard to the NX clipboard. Teamcenter Integration for NX must be running for this command to work. The **Send the clipboard contents to NX** command does not open the items in NX from the Teamcenter clipboard, but the **Paste** command becomes available in Assembly Navigator in NX.

Basics of pasting data objects


The **Edit** menu paste commands move object references from the clipboard to the selected container object.

When the system pastes an object reference into an item or item revision container, a relationship is established. This relationship is referred to as the *default relation type*.

Because data objects are complex entities, the paste options are more complex than similar options in other software applications.

Menu command	Description
Paste	It is important to select the proper destination for the data object reference before choosing the Paste menu command. You must have read and write privileges to the destination object.
Paste Special	Allows you to specify a relation type rather than using the default paste relation when pasting an object reference into an item or item revision.

Paste the contents of the clipboard

1. Cut or copy the data object to the clipboard.
2. Select the destination container for the copied object reference and do one of the following:
 - Click **Paste**  on the toolbar.
 - Press Ctrl+V.
 - Choose **Paste** from the shortcut menu.
 - Choose **Edit→Paste**.

Paste an item or item revision and specify the relation type

1. Cut or copy the item or item revision to the clipboard.
2. Select a container object.
3. Choose **Edit→Paste Special**.
4. In the **Paste Special** dialog box, select a relation type from the list and click **OK**.

Note:

If your Teamcenter administrator has configured mandatory properties (attributes) for the relation type you select, the **Properties** dialog box appears. If the **Properties** dialog box appears, enter values for the mandatory properties and click **OK**.

Pasting object references to applications outside the Teamcenter environment

References to objects that have been copied to the system clipboard can be pasted outside of the Teamcenter environment as URLs.





Outside of the Teamcenter environment, you can access the data object by clicking the URL. This launches Teamcenter and displays the data in My Teamcenter.

Note:

To access objects from a URL, the Teamcenter rich client must be installed on your machine and you must have a valid user ID and password.

Organizing with folders and pseudofolders

What are folders and pseudofolders?

A *folder*  is a container for an aggregation of objects. Some folders, such as the default **Home** , **Mailbox** , and **Newstuff**  folders, have unique icons.

You can use folders to organize both company-wide and individual user data.

- Your company may create a visual method of organizing data using folders.
- Folders can be nested to practically any extent desired.
- Data can be referenced by any number of folders.
- A folder in Teamcenter is not the same as a directory in the operating system. When you delete a folder in Teamcenter, only the folder is deleted, not the contents of the folder.

A *pseudofolder* 📁 is a special container that stores and displays item and item revision relations in My Teamcenter.

Note:

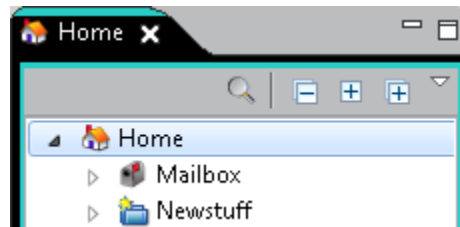
Pseudofolders show relations, but pseudofolders are not physical folder objects in Teamcenter.

Pseudofolders let you easily see and navigate to objects related to the current object, because pseudofolders are configured in hierarchical structures.

- Teamcenter automatically creates pseudofolders to display relations for many item types.
- You can use preferences to specify properties displayed as a pseudofolder under a node for an object.

Home, Newstuff, and Mailbox folders

The My Teamcenter application always contains the three default folders: **Home** 🏠, **Mailbox** 📧, and **Newstuff** 📁. These folders are automatically created by the system.



- **Home** 🏠

The objects you work with in the My Teamcenter application can be placed within your **Home** folder or within some folder structure beneath the **Home** folder.

- **Mailbox** 📧

The **Mailbox** folder is the receiving point for any Teamcenter mail that is sent to you. When you receive new Teamcenter mail, you see an envelope object in your **Mailbox** folder.

- **Newstuff** 📁

The **Newstuff** folder is the default folder for newly created database objects. You can change this behavior by opening the options window (**Edit**→**Options**), selecting the **General / UI** page, and then modifying **Insert without selection**.

Note:

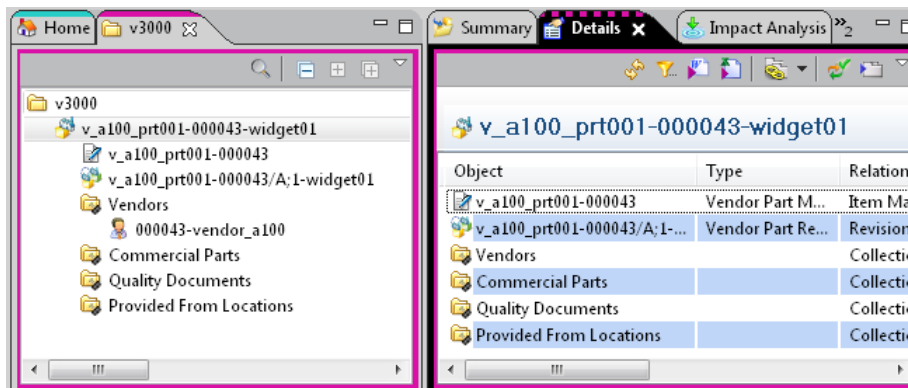
You can move through topics in a page-by-page manner by clicking an entry in the table of contents, and then pressing the down arrow. This displays the next topic and expands collapsed hierarchies as you proceed.

Working with pseudofolders and smart folders

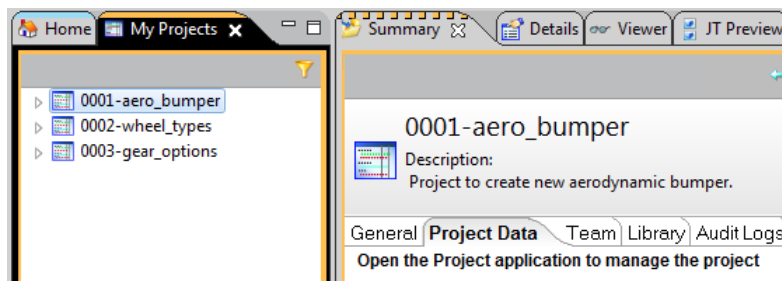
Pseudofolders display relations.

- In some situations, Teamcenter automatically creates pseudofolders.

For example, when you create a vendor management object such as a vendor part, the system creates organizational pseudofolders to display related vendors, commercial parts, quality documents, and locations.



Similarly, smart folders used by the Project application are pseudofolders and serve as filters for project data.

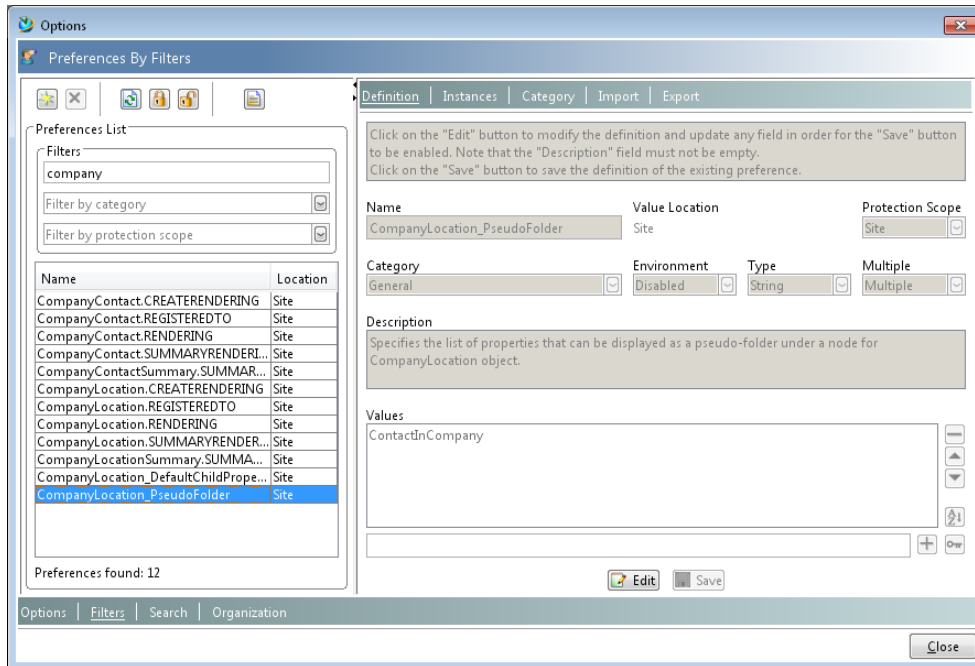


Functionality for which pseudofolders are automatically created by the system include vendor management, change management, and Project.

- You can set preferences to specify properties displayed as related pseudofolders. You can do this by directly editing preferences provided with the system or by adding shown relations to selected objects.

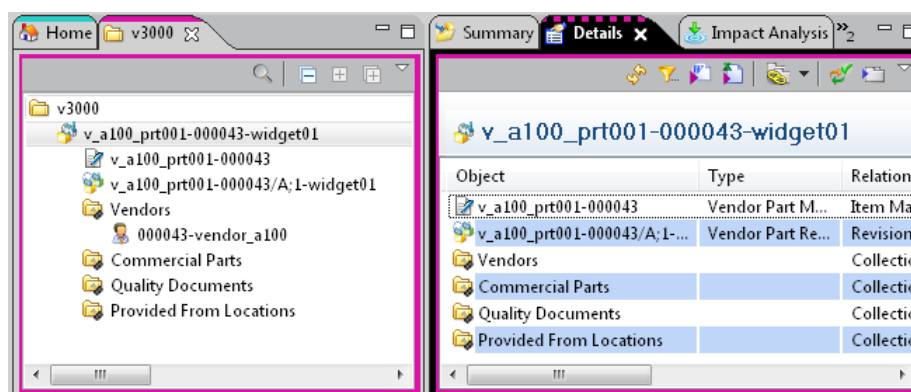
- To edit preferences directly, use the **Options** dialog box and select the appropriate preference in the **Index** pane. Choose **Edit**→**Options** to display the **Options** dialog box.

For example, by default, the system sets the **CompanyLocation_PseudoFolder** preference to specify that the **ContactInCompany** is displayed as a pseudofolder under a node of a company location object. Such preferences are described in the relevant application documentation.

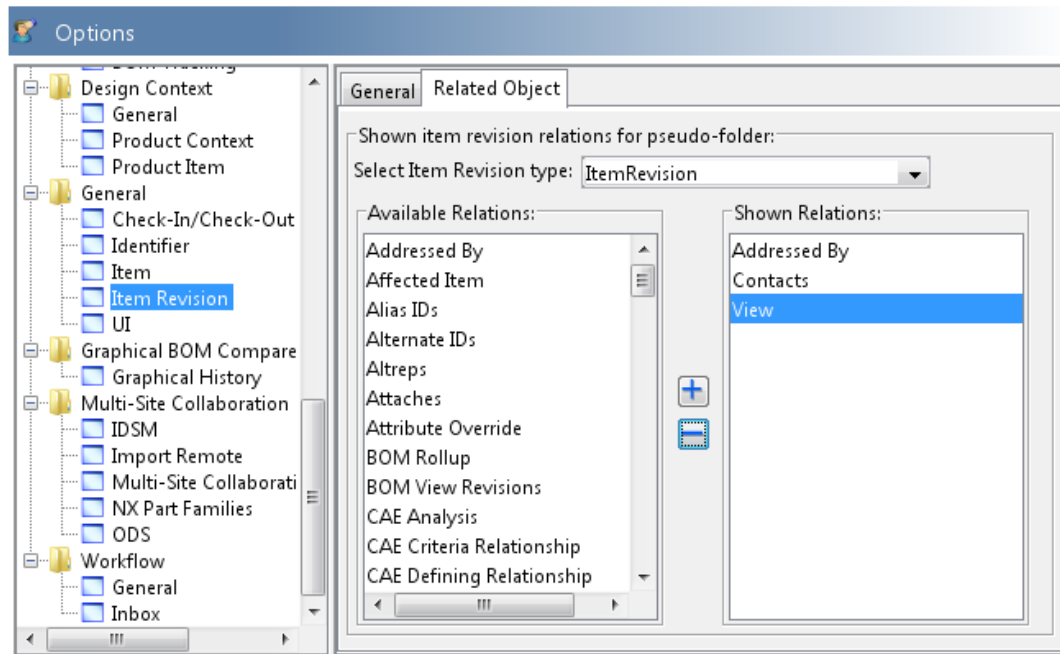


- To create pseudofolders for a specified item or item revision type, place the desired relations in the **Shown Relations** lists on the **General** and **Related Object** tabs of the **Options** dialog box.

For example, you can specify that each time an item revision is created, it contains pseudofolders for **Contacts** and **Addressed By** relations.



Choose **Edit**→**Options** to display the **Options** dialog box, and then select **Item Revision** and move the required relations to the **Shown Relations** box on both the **General** and **Related Object** tabs.

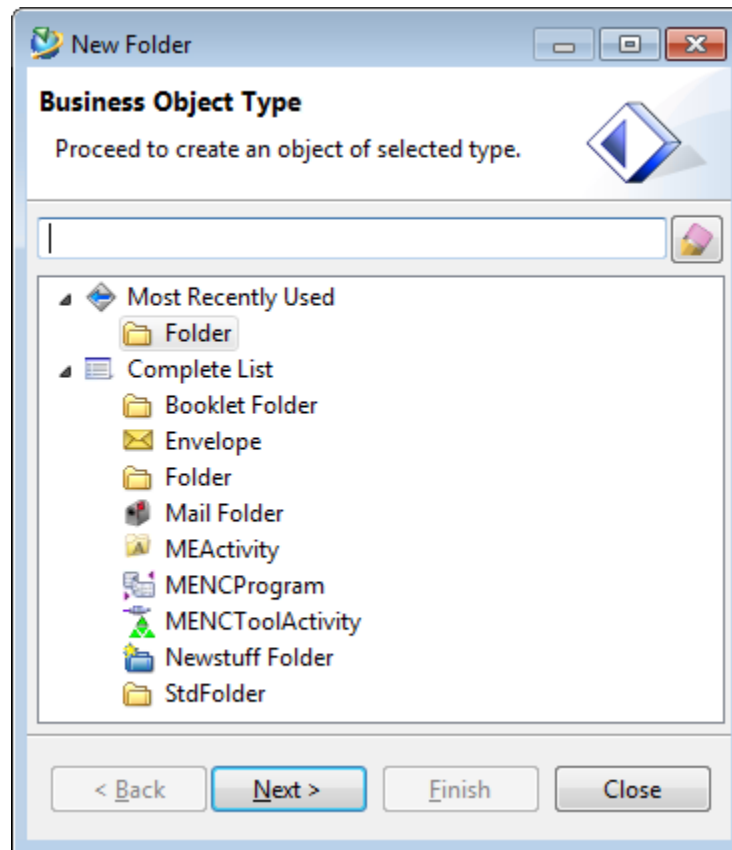
**Note:**

To avoid cascading circular references, never add **Revisions** from the **Available Relations** list to the **Shown Relations** list for **ItemRevision**.

Create a new folder

For your organizational purposes, you will typically create an ordinary folder.

- Select the container in which you want to create a new folder.
- Choose **File**→**New**→**Folder** to create a new folder.



In the **New Folder** dialog box:

- A red asterisk indicates a required entry.
- Enter a short descriptive name. The limit is 128 ASCII characters.
- You can enter a general text description of up to 240 characters. This is optional.

The screenshot shows a 'New Folder' dialog box with the following elements:

- Window title: **New Folder**
- Section: **Object Create Information**
- Sub-section: **Folder Information**
- Section: **Properties (required)**
- Field: **Name:*** (text input)
- Field: **Description:** (text area)
- Checkbox: **Open On Create**
- Buttons: **< Back**, **Next >**, **Finish**, **Cancel**

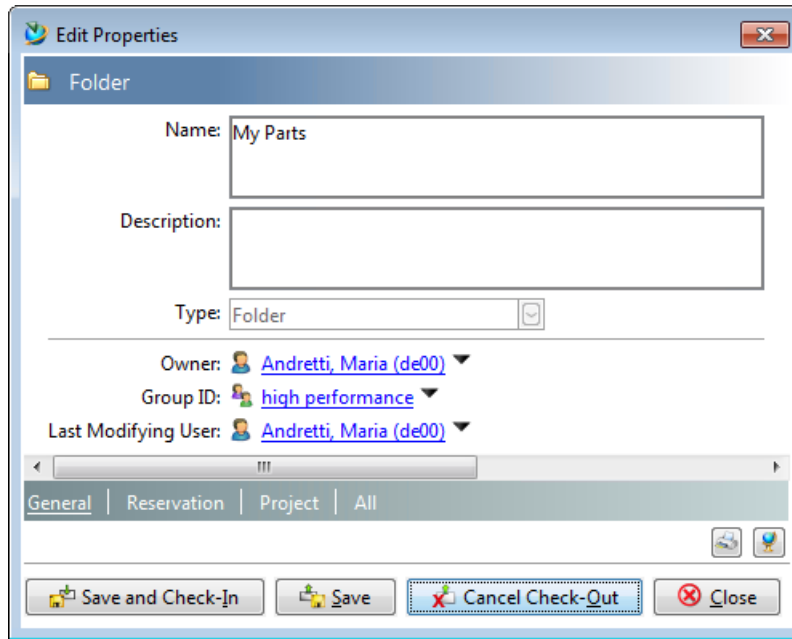
Rename a folder

1. To change the name of a folder, right-click the folder object and choose **Edit Properties**.

The **Checking-Out** dialog box appears.

2. (Optional) Type a value in the **Change ID** box and add comments.
3. Click **OK** to check out the object.


The **Edit Properties** dialog box for the selected folder object appears.



- In the **Edit Properties** dialog box, you can enter a new name and/or description for the folder, if desired.


Note:

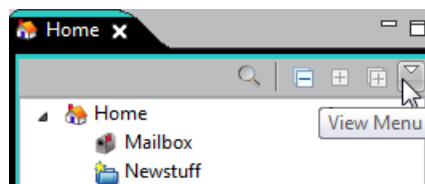
You may need to scroll down to access the **Name** and/or **Description** boxes to edit.

- Click **Save and Check-In** .

Reorder objects in a folder or view

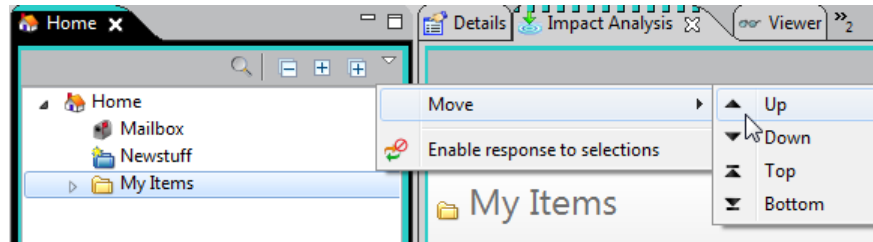
You can reorder objects in a folder or view in My Teamcenter using the **Move** command.

- Select an object in a My Teamcenter folder or view.
- Click **View Menu**  for the folder or view.



- Choose the applicable **Move** command.

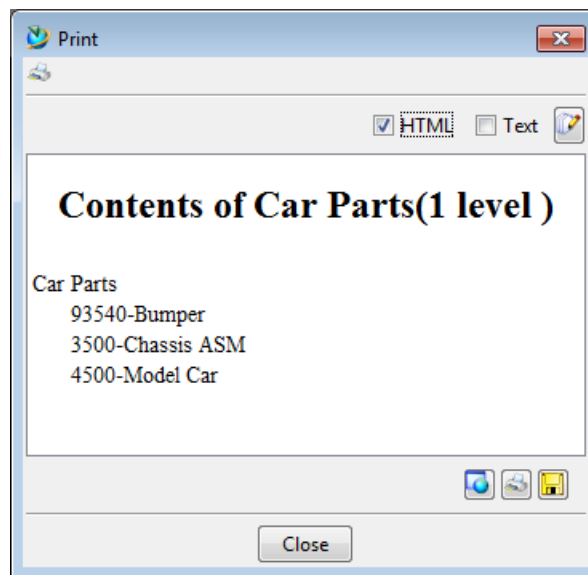
For example, choose **Move → Up** to move the object closer to the top of the list of objects in the My Teamcenter folder or view.



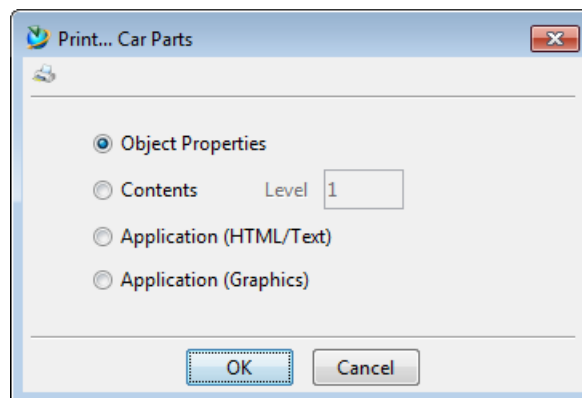
Print a folder

- Select the folder and choose **File**→**Print** or **File**→**Print...**

Choose **File**→**Print** to print the folder name and a listing of the folder contents.



Choose **File**→**Print...** to access additional print options.

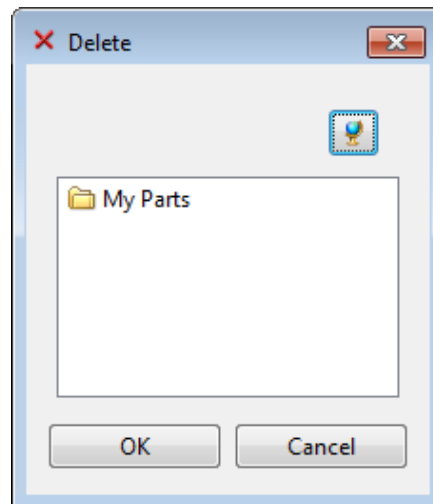


Delete a folder

When you delete a folder, the *contents* of the folder are not deleted. The folder contents remain in the database and can be located and retrieved using the search feature in My Teamcenter.

1. Select the folder object and click **Delete** .

A confirmation dialog box appears so you can confirm the deletion.



2. Click **OK** to delete the folder.

Printing information about your data

Printing basics

Use the **Print** and **Print...** commands on the **File** menu to display, format, save, and/or print the following types of information about your Teamcenter objects:

- The hierarchical structure of a selected object and its descendant objects.

For example, you can select a folder and display all of the first-level descendants or you can enter a level of descendants to be displayed. This allows you to display and print any level of the structure.

- The hierarchical structure of a selected object (first-level descendant objects only), including the object properties and corresponding values.
- The properties of a selected object and their corresponding values.
- The active Teamcenter table or the **Referencers** pane, as it appears in the application window.

Note:

You can only print information related to a single selected object.

The following table describes the printing options and the expected output for each option based on the selected object type.

Note:

The following table describes only the **Object Properties** and **Contents** options in the **Print** dialog box. The **Application** options in the **Print** dialog box enable you to print the active table, tree display, or **Referencers** pane as it appears in your Teamcenter window.

Selected object type	File→Print	File→Print...→
Folder	Displays the folder and its first-level descendant objects.	Objects Properties displays the folder properties. Contents displays the folder and its descendant objects to the level in the hierarchy that you specify.
Form	Displays the form properties.	Object Properties displays the properties associated with the form. Form Properties displays the property values of the specific form.
Item or item revision	Displays the item or item revision and its first-level descendant objects.	Object Properties displays the properties of the item or item revision. Contents displays the item or item revision and its descendant objects to the level in the hierarchy that you specify.
BOM line	Displays the BOM line structure currently displayed in Structure Manager.	Object Properties displays the BOM line properties. Contents displays the structure of the BOM line as it is displayed in Structure Manager.
Dataset	Displays the properties of the dataset.	Object Properties displays the properties of the dataset. Data launches the tool associated with the dataset and displays the contents within the tool. For example, if you select a text dataset and choose File→Print...→Data , you can select the text editor

Selected object type	File→Print	File→Print...→
		in Tool Used and view the contents of the file associated with the dataset.
Other	Displays the properties of the workspace object.	<p>Object Properties displays the properties of the selected workspace object.</p> <p>Contents displays the object and its descendant objects to the level in the hierarchy that you specify.</p>


Formatting information for printing

After you choose the information to print, you can select the output type; graphic, HTML, or text, and apply format options before printing or saving the information. The following tables describe the output types.

Format	Description
Application (Graphics)	Saves and/or prints a graphical image of object or table data as it is displayed in your Teamcenter window.
HTML	Saves object and table data in HTML format that can be viewed in any Web browser.
Text	Text format is used to save and/or print object or table data. The data can be aligned in columns or formatted as delimited text strings using a user-specified delimiter.

The following table describes the formatting options.

Option	Description
Title	Determines whether the title of the selected object or user interface component is printed.
Column Alignment	Enables column alignment when using text format.
Delimiter	Specifies the character that separates character strings.
Date	Determines whether the current date is included in the printed output.
Object Count	Determines whether the object count is included in the printed output.
Select Printing Columns	Displays a list of object properties to be printed, allowing you to select which properties to include in the printed output.

Click the **Set Result Format** button  in the upper-right corner of the **Print** dialog box to open the **Print Format** dialog box.

Print object information

1. Select the object in the tree structure or **Details** table and choose **File→Print...**

Note:

The contents of the dialog box differ depending on the type of object you select.

2. Select one of the following content options:

Object Properties

Creates a report of the properties of the selected object.

Contents

Creates a report of the contents of the selected object. When the **Contents** option is selected, the **Level** text box is activated so that you can define the level of content to be reported.

Increasing the content level is similar to expanding nodes in a tree structure.

For example, if you type **1** in the **Level** box, the selected object and its primary components are included in the report. If you type **2** in the **Level** box, the selected object, its primary components, and the children of the primary components are included in the report. You can continue to increase the level until you reach the bottom of the structure.

Application (HTML/Text)

Creates a tabular report of the properties of the selected object in HTML format.



Note:

If the **Referencers** pane is displayed in your Teamcenter window, the contents of that pane, rather than the properties of the selected object, are reported.


Application (Graphics)

Creates a graphical report of the active table as it appears in the application window. When this option is selected, the results are sent directly to the printer. There are no options for previewing and formatting the report.

For example, if the **Referencers** pane is active, its contents are printed as displayed in the application. The same applies to the **Details** table.

3. Click **OK**.
4. (Optional) Modify the print format settings.
5. Click **Print**  or **Save**  to print or save the output.
6. Click **Close**.

Print object information from the Properties dialog box

1. Select an object from the tree or **Details** table.
2. Choose **View→Properties**.
3. Click **Print**  located in the lower-right corner of the dialog box.

The system displays the **Print** dialog box.

4. (Optional) Change the print format to **Text**. (HTML is the default print format.)
5. (Optional) Modify the print format settings.
6. To save the file, open it in a Web browser or send it to a printer and complete the process that is appropriate to the file type and desired output.

Open HTML files in a Web browser

- a. Click **Open in Web Browser** .

The system displays a web browser window.

- b. Execute your browser's print command.
- c. Return to the Teamcenter window and click **Close**.

Print a text or HTML file

- a. Click **Print**  in the lower-right corner of the **Print** dialog box.

The system displays the **Print** dialog box.

- b. Define the printer to which the file is sent.

You can accept the default printer or select a different printer from the list.

- c. Click **Print**.
- d. Click **Close**.

Save output to a user-specified (HTML or text) file

- a. Click **Save**  in the lower-right corner of the **Print** dialog box.

The system displays the **Save** dialog box.

- b. Navigate to the directory location where you want to save the file.
- c. Type the name of the file, including the **.htm**, **.html**, or **.txt** extension, in the **File name** box.
- d. Click **Save**.
- e. Click **Close**.

Print information contained in tables

1. Right-click in the column heading area of the table, and choose **Print Table**.

2. Choose one of the following options:

HTML/Text Displays the contents and column properties of the table in HTML format. If you prefer to format the table in plain text, change the print format by selecting the **Text** option in the upper-right corner of the dialog box.

Graphics Allows you to send a graphical representation of the contents and properties of the table (as they are displayed in your application window) to the printer.

Print where-referenced information

1. Right-click in the **Referencers** pane and choose **Print**.

2. Choose one of the following options:

HTML/Text Displays the contents and column properties of the table in HTML format. If you prefer to format the table in plain text, change the print format by selecting the **Text** option in the upper-right corner of the dialog box.


Graphics Allows you to send a graphical representation of the contents and properties of the table (as they are displayed in your application window) to the printer.

Print form properties from the Properties dialog box


1. Double-click the form in the tree or **Details** table.

OR


Select the form and choose **File→Open**.

2. Click **Print file** in the lower-right corner of the dialog box.
3. (Optional) Change the print format to **Text**. (HTML is the default print format.)
4. (Optional) Format the report by performing the following steps:
 - a. Click the **Set Result Format**  button in the upper-right corner of the **Print** dialog box.
 - b. Modify the result format.
 - c. Click **Update**.
 - d. Close the **Print Format** dialog box.
5. To save the file, open it in a Web browser, or send it to a printer, complete the process that is appropriate to the file type and desired output.

Open HTML files in a Web browser


- a. Click the **Open in Web Browser** button .
- b. Execute your browser's print command.
- c. Return to the Teamcenter window and click **Close**.

Print a text or HTML file

- a. Click the **Print** button  in the lower-right corner of the **Print** dialog box.
- b. Define the printer to which the file is sent.



You can accept the default printer or select a different printer from the list.
- c. Click **Print**.
- d. Click **Close**.

Save output to a user-specified (HTML or text) file


- a. Click the **Save** button  in the lower-right corner of the **Print** dialog box.
- b. Navigate to the directory location where you want to save the file.

- c. Type the name of the file, including the **.htm**, **.html**, or **.txt** extension, in the **File name** box.
- d. Click **Save**.
- e. Click **Close**.


Print form properties from the viewer

1. Select the form in the tree or **Details** table.
2. Click the **Viewer** tab.
3. Click the **Print the file** button  in the lower portion of the viewer.
4. (Optional) Change the print format to **Text**. (HTML is the default print format.)
5. (Optional) Format the report by performing the following steps:
 - a. Click the **Set Result Format**  button in the upper-right corner of the **Print** dialog box.
 - b. Modify the result format.
 - c. Click **Update**.
 - d. Close the **Print Format** dialog box.
6. To save the file, open it in a Web browser, or send it to a printer, complete the process that is appropriate to the file type and desired output.

Open HTML files in a Web browser

- a. Click the **Open in Web Browser** button .
- b. Execute your browser's print command.
- c. Return to the Teamcenter window and click **Close**.


Print a text or HTML file

- a. Click the **Print** button  in the lower-right corner of the **Print** dialog box.
- b. Define the printer to which the file is sent.

You can accept the default printer displayed in the **Name** box or select a different printer from the list.

- c. Click **Print**.
- d. Click **Close**.

Save output to a user-specified (HTML or text) file

- a. Click the **Save** button  in the lower-right corner of the **Print** dialog box.
- b. Navigate to the directory location where you want to save the file.
- c. Type the name of the file, including the **.htm**, **.html**, or **.txt** extension, in the **File name** box.
- d. Click **Save**.
- e. Click **Close**.

Controlling behavior with preferences

Setting options and preferences

You can control the behavior and display of Teamcenter applications in the rich client using options and preferences.

- *Preferences* are configuration variables stored in a Teamcenter database that are read when a Teamcenter session is initiated.
- *Options* are preferences presented in the rich client by category (in a tree). Options usually have predefined valid values.

Note:

To set Teamcenter options and preferences in the rich client, choose **Edit**→**Options** to display the **Options** dialog box. The options are organized by category. You can use the cursor to hover over an option to display the associated preference name and information about the preference. Changes you make to Teamcenter using this dialog are user-specific. They will not effect other users.

What are preferences?

Preferences are special environment variables stored in the Teamcenter database. Preference instances are used to control the behavior and display of Teamcenter applications.

- Teamcenter provides many preferences that you can use to configure the product to your specific needs.
- You can configure many aspects of a session, such as the checkout directory and how often Teamcenter checks for new system mail. Preferences can apply to the entire site, a specific user, a group, or a role. Only administrators can change preference settings for groups, roles, or for the site.

Preferences control the behavior of Teamcenter clients and servers. The *rich client* provides an **Options** dialog box that lets you interactively tailor Teamcenter's behavior for the way you work. Changes you make here only affect your experience.

Note:

In the rich client, another set of preferences are provided by the **Window → Preferences** menu command. These client preferences, which are displayed and edited in the **Preferences** dialog box, are local to the user. These preferences are documented in the context of the applications to which they apply.

3. Searching in Teamcenter

Searching in the Teamcenter rich client

The Teamcenter search functionality lets you find data in the Teamcenter database. Search options can configure case sensitivity, dataset version retrieval, classification hierarchy, wildcard characters, multiple entries, escape characters, default searches, and search locale.


My Teamcenter in the rich client provides the following search methods:


- The **Search** box, at the top of the navigation pane and in the Getting Started application, lets you perform a *quick search* and display results in a **Quick Open Results** dialog box.




The quick search is based on a single criterion, such as item ID, item name, or dataset name, which you select from the menu. You can also select **Advanced** to display the **Search** view.


Quick search results cannot be saved to your saved searches list.

- The **Search** view  lets you use queries created in the Query Builder application to search Teamcenter databases.

Results are displayed in the **Search Results**  view.

For queries performed using the **Search** view, the `TC_QRY_search_result_display_mode` preference specifies whether to display the total number of found objects for which the user has access privileges.

- The **Simple Search** view  lets you create searches based on business object property values.

Results are displayed in the **Search Results**  view.

- In the **Impact Analysis** view in My Teamcenter, you can perform *where-used* and *where-referenced* searches. Where-used searches enable you to identify all assemblies that contain a particular item or item revision. Where-referenced searches determine where a part or component is referenced within the Teamcenter database.

Extended Multi-Application Search lets you run *classification searches* to search a classification hierarchy by using familiar criteria, such as name or ID. If you classify parts or equipment into hierarchies with the Classification application, you can search in a particular hierarchy or to search through all hierarchies.

You can use saved queries to search for your work in the Teamcenter database or in databases that are part of a Multi-Site Collaboration network. Saved queries are grouped into three categories:

- **My Saved Searches**

This category contains queries that you ran previously and chose to save for later use.

You can save the results of a search and add the search to your **My Saved Searches** list. You can share a saved search in the rich client, and you can restrict sharing to specified groups of users.

- **System Defined Searches**

This category contains both standard queries and custom queries defined by your Teamcenter administrator. Standard queries allow you to search by common parameters such as item identifier. Custom queries allow you to search for data that is unique to your site or company.

- **Search History**

This category contains the most recently run queries. By default, the last eight queries are listed, but you or the administrator can change the number of queries shown.

Use Active Workspace search in the rich client

You may use Active Workspace **Search** as an alternative to rich client search options. If Active Workspace global search is configured, it can provide full text search to rich client users. Access the Active Workspace search option under the rich client search box.

Active Workspace must be enabled for the rich client to use Active Workspace **Search**.

Using quick search

What is quick search?

Quick search finds objects that match a predefined list: item name, item ID, or dataset name.

Use the **Search** box at the top of the navigation pane to find objects in the Teamcenter database. A quick search can be performed based on an item ID or other search criteria listed in the quick **Search** menu.

- **Item ID**

Type an item ID to search the Teamcenter database for item ID properties.

- **Item Name**

Type an item name to search the Teamcenter database for all item name properties.

- **Dataset Name**

Type a dataset name to search the Teamcenter database for all dataset name attributes.

- **Advanced**

Access the advanced search capabilities and predefined search queries.

If Active Workspace is enabled in your environment, you can use the Active Workspace Search in the rich client.

Administrators can customize the rich client to add quick search items.

Perform a quick search

The quick **Search** box lets you enter a single value or text string to search for objects based on the search type you select from the **Perform Search** menu.

1. Locate the quick **Search** input box at the top of the navigation pane.
2. Click ▼ and select a search type. Item ID is the default search type.
3. Type your search criteria in the **Search** box.

You can use wildcard characters such as * and ?.

4. Click **Perform Search**  to run the search.

The **Quick Open Results** dialog box appears showing a list of objects that match the specified criteria.

Shortcut context-menus are not supported in **Quick Open Results**.


5. In **Quick Open Results**, you can double-click an object to open it or select an object in the list and click **Open**.


If you are not satisfied with the results, you can **Cancel**.

You may want to try **advanced search** to access predefined search queries with additional search criteria.

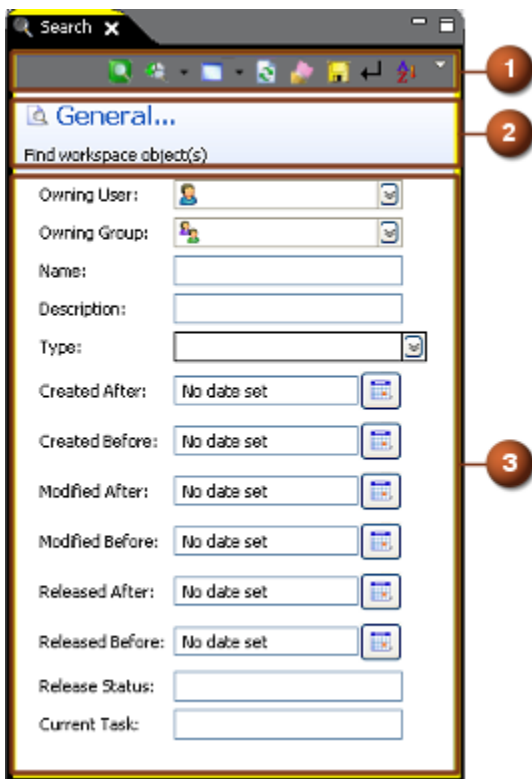
Entering criteria in the Search view

Using the Search view

Use the **Search**  view to enter criteria and execute a search.




- Select **Advanced** from the quick **Search** menu at the top of the navigation pane.
- Click the **Search** button  on the Teamcenter toolbar.






The **Search** view, which provides access to search functionality and a wide range of predefined search criteria queries, has a standard tab, a toolbar with options and a menu, a title, and a criteria area.



1 **Search** view
toolbar


Contains the following options:

-  Executes the search and displays the results in the search result view
-  Change search from search history
-  Select a Search

-  Re-execute search. Show results in currently open search view page
-  Clear all search fields
-  Add Search to My Saved Searches
-  Organize My Saved Searches
-  Sort

Note:

When you sort an advanced search query created with Query Builder, two internal preferences are created: **QRY_<query_name>_SortKeys** and **QRY_<query_name>_SortOrder**. If you see a query you are using has sort keys that do not match the sort keys shown in Query Builder in the rich client, choose **Edit**→**Options** to display the **Options** dialog box, and then use the **Filters** pane to select and delete the existing sort key user preferences for the query.

-  **View Menu**
 - **Lock Search**

Locks the current search criteria pane when you open an executed query by switching between search entries in the **History** area in the navigation pane.
 - **View Search Criteria Definition**

Lets you view current search criteria in a query clause format.
 - **Change Search Criteria Definition**

Lets administrators modify query criteria.
 - **Extended Multi-Application Search**

Lets you perform **advanced searches spanning multiple applications**. For example, you can run a Classification search with multiple applications in the target list.

- **Options**

Launch the **Options** dialog box.

Note:

This accesses the same settings as the **Edit→Options** menu command.

- | | | |
|---|-----------------|---|
| 2 | Search title | Indicates the name of the current search. |
| 3 | Search criteria | <p>Contains input boxes and lists of values for search criteria.</p> <p>You must enter data in at least one field of the search form.</p> <p>For searches that do not require user input, the search view displays the message:</p> |

This query requires no user interaction.
Please press the execute query button to perform this query.

The search buttons let you change, rerun, or save a search, and clear the search form contents. You can also use search tools to lock a search or to view or change criteria definitions; the content of a search form can be modified by privileged users.


Teamcenter provides some saved queries such as **Current Task** criteria to search the **Process Stage List** (**process_stage_list**) attribute of the **WorkspaceObject** business object. In this case, the current task examines all complete and uncompleted tasks of the workflow associated with the objects to search, not the current workflow step.

To use a list of values (LOV) for a property on a form business object, the LOV must be attached to the same property on the form's parent business object. The form parent serves as the storage class for the properties. Otherwise, the LOV is not attached to the property and does not display in Teamcenter clients.

The advanced search results are shown in tree format or thumbnail format. You must enable thumbnail functionality to view the thumbnail format.

In some applications, results are displayed in the **Folders** pane.

- The name on the search tab matches the name of the search form.
- If you perform multiple queries using the same form, a number is added to the name on subsequent tabs.
- You can rename search views to make them easier to find and use.

You can confirm that a search meets your needs by choosing **View Search Criteria Definition** from the **Search** view menu . The **Query Detail** dialog box appears showing the definition of the search criteria for the search type currently selected.



Perform an advanced search

1. Click **Search**  on the toolbar or select **Advanced** from the search menu at the top of the navigation pane.

The **Search** view appears showing the default search name and description followed by the search criteria form. The software ships with **Item ID** selected. The **Item ID** search form has only the **Item ID** box for criteria.

2. (Optional) On the **Search** view toolbar, click  to select a search from the list of search types.

The search form with the criteria for the selected type appears in the **Search** view.

3. (Optional) Click  to clear the content of all boxes on the search form.
4. Type the values for the search criteria in the boxes on the search form. You can use wildcard characters such as * and ? in your search criteria.
5. Click  to perform the search.

Results appear in the **Search Results** view.

Using search types

A search in Teamcenter involves selecting a search type, which in turn specifies criteria for a database query and distinguishes the databases to be queried. For example, the following search types produce different query behavior:


- An **Item ID** search queries the Teamcenter database for the specified item ID.
- An **Item Name** search queries the Teamcenter database for the specified item name.
- A **Dataset Name** search queries the Teamcenter database for a dataset name.
- A **Dataset** search queries the Teamcenter database for attributes and the index search engine database for dataset content.

Other types of searches may be available, depending on your available applications and the information desired. For example, *where-used* and *where-referenced* searches are available in the My Teamcenter application **Impact Analysis** view.

- Where-used searches identify assemblies that contain an item or item revision.
- Where-referenced searches determine which objects in the database reference a selected object.

Using search forms



You can search for data in the database using predefined search query forms that target specific types of information for retrieval.

- Standard search forms are delivered as part of your Teamcenter installation, enabling you to perform basic searches both in your local database and in remote databases corresponding to Multi-Site Collaboration sites.
- Advanced search is accessed from the **Search**  button on the toolbar or by selecting **Advanced** from the quick **Search** menu at the top of the navigation pane.


The advanced search functionality lets you find database objects and indexed data using predefined search forms.

Note:

The advanced search results appear in the **Search Results** view, which does support shortcut menus.

- Click the **Select a Search**  button on the advanced **Search** view to display the **Change Search** dialog box. Use this dialog box to select the search form you want to use for your search criteria from a list of predefined searches.
- The **My Saved Searches** container located under **Quick Links** in the navigation pane can be used to access search criteria you saved from a previously executed search.
 - Click the expand button  to select and rerun a saved search.
 - Click **My Saved Searches** to customize your saved searches by deleting, renaming, or reordering the saved searches.

Using search menus and options

Using the **Search** and **Search Results** view menu  you can access the following search features.

- **Lock Search**

Lock the search view so the values in the search criteria form cannot be overwritten when you select a new search or execute a saved search.

- **View Search Criteria Definition**

View the definition of the search criteria for the selected search form.

Note:

If you are logged on as an administrator, the **Change Search Criteria Definition** option is also available. Administrators can use this option to adjust the definition of the search criteria for the selected search.

- **Extended Multi-Application Search**

Access additional search features:

- **Adhoc Classification Query**

Define search criteria related to attributes of classification classes.

- **Target List**

Select objects from other Teamcenter applications, active workflow processes, the clipboard, or from the results of other searches to use as search filters.

- **Options**

Display the **Options** dialog box to set search preferences. The **Options** dialog box can also be accessed by choosing **Edit**→**Options** from the Teamcenter menu bar.

Providing search input

You can use the following as search input:

- Multiple values in search criteria boxes.
- The contents of table columns or rows.
- Lists of objects derived from other applications or from the results of a search.
- Wildcard characters and limits on the number of results that are loaded.
- Search definitions modified by advanced editing.

Working with search output

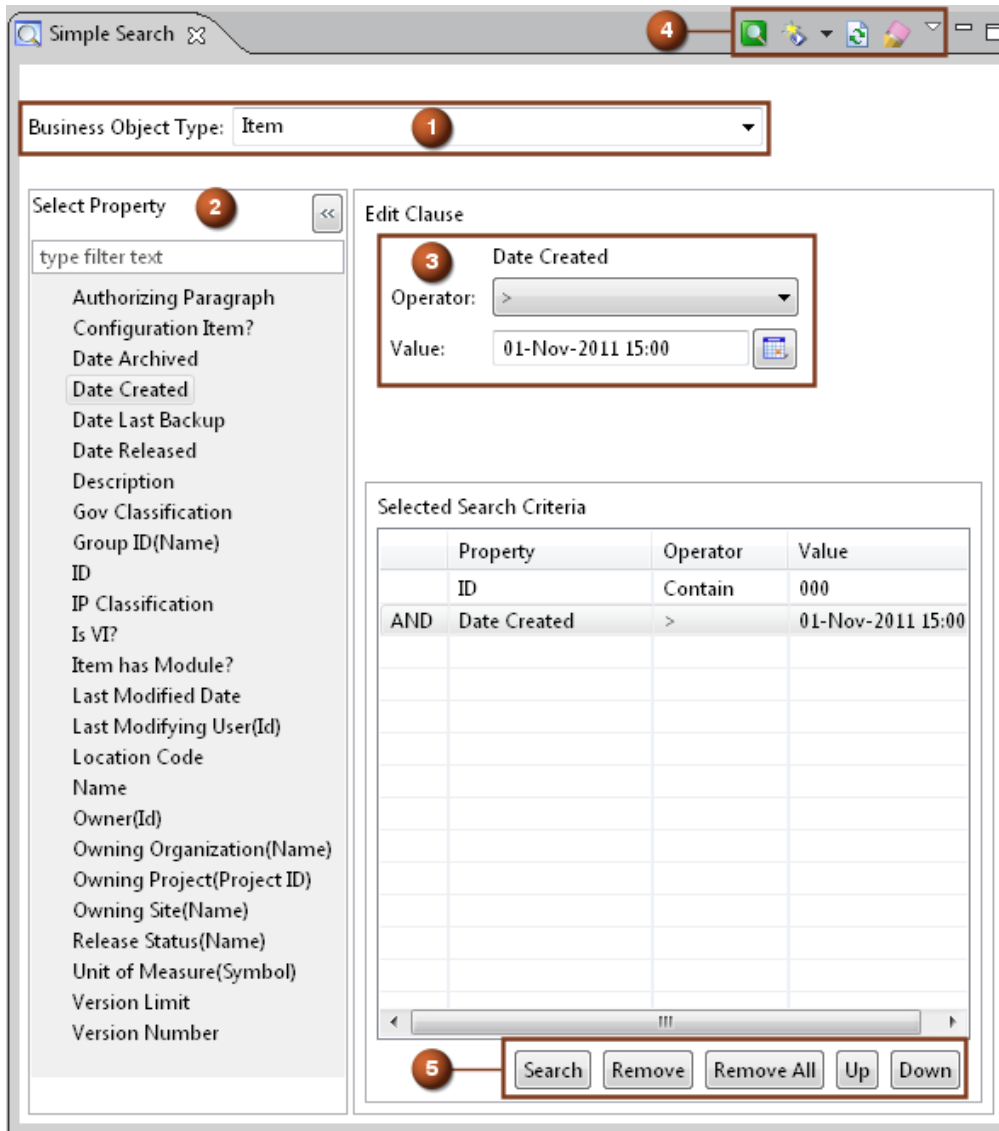
You can:

- Print search results.
- Lock the search view to view results views without overwriting search criteria.
- Work with objects in search results views that persist from session to session.
- Rename and save search criteria to **My Saved Searches** or another folder.
- Compare results to the contents of your **Home** folder, **My Worklist** view, or to other recent search results.
- Use the property finder formatter (PFF) to view additional data related to the objects listed in the search results.


Entering criteria in the Simple Search view





Simple Search view components

Use the **Simple Search**  view to create searches based on business object property values.



- 1 **Business Object Type** box Enter a business object type. The menu lists favorite types. This box accepts any valid business object type.
- 2 **Select Property** list Select a property. The available properties change when you change the selected business object type.
- 3 **Edit Clause** section For the selected property, specify an operator and a value. The edit clause is added to the selected search criteria, and you can select another property to create another edit clause.


You can click the clause connector to change **AND** to **OR**, or vice versa.
- 4 **View toolbar** The **Simple Search** view toolbar options let you:
 -  Execute the search.

-  Select a business object type, beyond what is provided by the **Business Object Type** list.
-  Re-execute the search.
-  Clear the search criteria values while retaining the criteria.
-  Display the **Options** dialog box.

This dialog box lets you set query and wildcard options, delimiting and escape characters, and result display options. You also use this dialog box to specify the list of favorite business object types and, in the **General** tab, to set the default business object type for searches. Administrators can set the site-wide list of displayed business types.

5	Selected search criteria buttons	Start the search, change the clause order, or remove clauses.
---	----------------------------------	---

Simple search basics

The rich client **Simple Search**  view lets you create business object searches based on one or more property values. You first select the object type, and then build a search by selecting properties and specifying criteria.

- Choose properties to build search criteria.


You can use attribute properties and typed reference properties, but not run-time properties, relation properties, or compound properties.

- Business objects that are available to be searched are limited to **WorkspaceObject** and its subtypes, but typed reference properties can point to any type of business objects.

To retrieve objects when **WorkspaceObject** is selected as the business object type, you must select the **Enable the Hierarchical Type Search** box under **Query Options** in the **Options** dialog box **Search** view. This finds all types that inherit attributes from **WorkspaceObject**.

To set search preferences, use the **Simple Search** view menu bar **Preferences** command to display the **Preferences (Filtered)** dialog box.

- The scope of the search is limited to the local Teamcenter database.
- You can execute a simple search, but it cannot be saved or reused by other users.
- Ad hoc and classification searches are not supported for business object searches.
- The search results are displayed in the **Search Results** view, and users can refresh, compare, save, and assign to project the results.
- Current search preferences are applied to the simple search being executed.

To set search preferences, use the **Simple Search** view menu **Options**  command to display the **Preferences (Filtered)** dialog box.

- Preferences can be created to support configuration of simple search:

- **Default_Business_Object_To_Search**

Specifies the default business object selected when the **Simple Search** view is first opened.


This is the same as the **Default Business Object Type** in the **Preferences** dialog box for **Simple Search**.

- **Favorite_Business_Objects_To_Search**

Specifies favorite business object types.


- **Searchable_Business_Objects**

Filters the business object types shown for the entire site, specified groups, or roles. This preference is used by administrators.

The **Simple Search**  view is available from the toolbar in the rich client **My Teamcenter** perspective, and in other perspectives through the **Window**→**Show View**→**Other**→**Teamcenter**→**Simple Search** menu command.

Perform a simple search

Use the **Simple Search** view to find objects in Teamcenter based on business object properties.

1. In My Teamcenter, click **Simple Search** .

You can also choose **Window**→**Show View**→**Other**→**Teamcenter**→**Simple Search** or, if it is present, **Window**→**Show View**→**Simple Search**.

The **Simple Search** view is displayed.

2. Select or enter a business object type.

You can also use the **Select a Business Object Type To Search**→**More** ▼ menu command to select a type in the **Select Business Object Type** dialog box.

3. Select a property and choose an operator and a value for the edit clause.

You can repeat this step as many times as needed to create the search criteria.

4. Click **Search**.

The **Search Results** view is displayed with objects that meet the specified criteria.

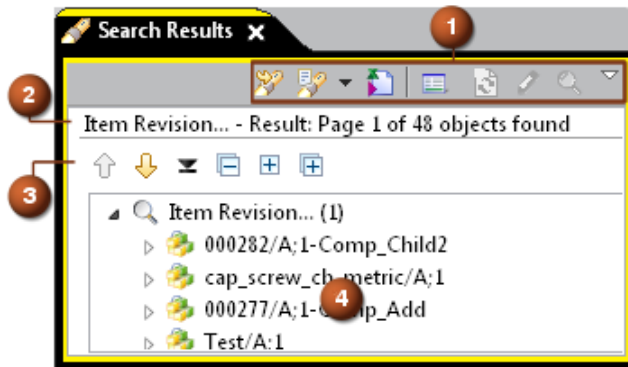
If the **Default_Business_Object_To_Search** preference is not defined or has no values, the **Select Property** list is displayed as a very narrow box.

- For immediate resolution of this situation, you can drag the right border of the **Select Property** box to the right to display the attribute list correctly.
- For permanent resolution of this situation, specify one or more values for the **Default_Business_Object_To_Search** preference.





Viewing search results

Search Results view components

Use the **Search Results** 🔍 view to examine the list of objects that satisfy the search criteria.



- | | | |
|---|---|--|
| 1 | Search Results
view toolbar | <p>Contains the following options:</p> <ul style="list-style-type: none"> • Rerun current search 🔍 • Show Previous Searches 📄 • Export Objects to Excel 📄 • Select PFF 📄 • Refresh property formatter search 🔄 • Edit property formatter ✎ • Run Adhoc from Property Formatter 🔍 • View Menu → Options ▼ |
| 2 | Search title | <p>Indicates the name of the current search and the number of items returned.</p> |
| 3 | Search Results
view page
toolbar | <p>Contains the following options:</p> <ul style="list-style-type: none"> • Previous page ⬆️ • Next page ⬇️ |

- **Load all** 
- **Collapse to the root object** 
- **Expand the selected object(s)** 
- **Expands the selected object(s) to all levels** 
- **Show**

Show is available only when thumbnails are enabled.

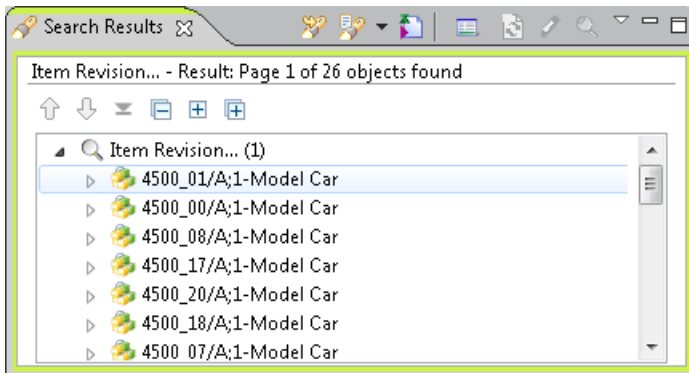


If thumbnails are enabled, options are **Tree**, to display the standard tree view, and **Thumbnail**, to display **Small**, **Medium**, and **Large** thumbnail graphics.

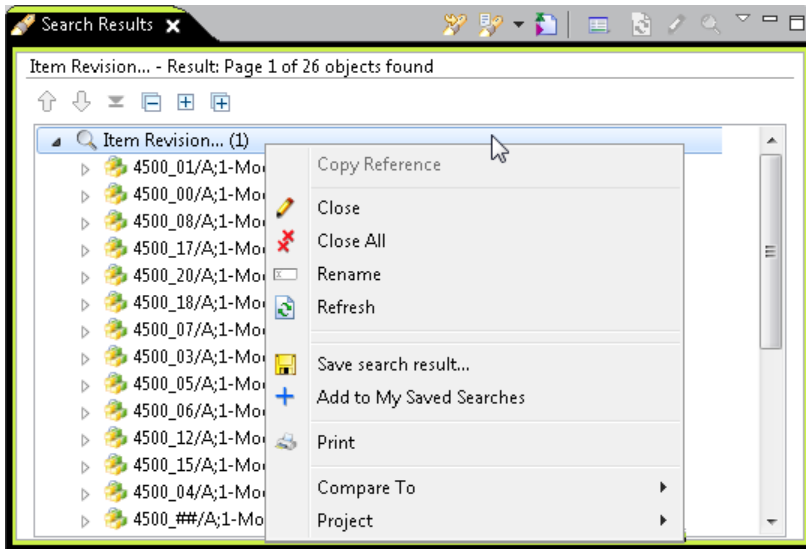
- 4 Search results Lists objects that meet search criteria.
-

Accessing actions from search results

In My Teamcenter, search results appear in the **Search Results** view.



Each time you execute a search, the results of the latest search appear in the **Search Results** view, replacing the results of the previous search. Right-click the search name at the top of the list of search results to access the shortcut menu.



From this menu, you can perform various actions on the search results including assigning the objects to a project and comparing the results to those of another search.

Navigate the search results and adjust the display setting

When you run a search, the total number of objects found and the relative position of the displayed objects within that total appears at the top of the search results.

Item ID - (1 ~ 30 / 127) ← Number of items

↑ ↓ ← → ← Navigational buttons

Item ID (1) ← Search results (version)

standard_thread_inch

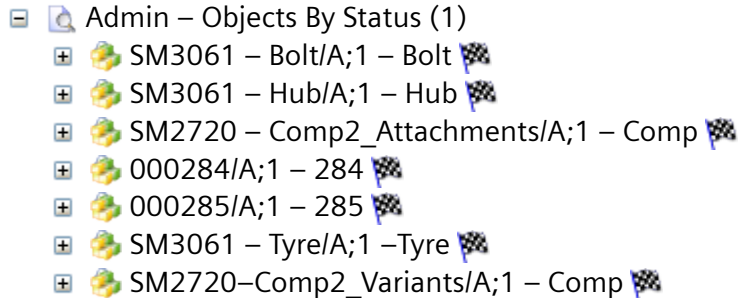
cap_screw_cb_inch

- You can see the number of items displayed (for example, 1 ~ 30) and the total number of items found (for example, 127).
- You can move back and forth through the results by clicking the navigational buttons and load all buttons located in the search results view.
- You can see the search results version (for example, 1). When searches are run multiple times, the version number distinguishes each result.
- To set the number of objects loaded in a search results view, choose **Edit→Options** and select **Search**. Click the **General Options** tab and adjust the gauge for the **Set Loading Page Size** option.

The **Set Loading Page Size** option can also be accessed by selecting **Preferences** from the search menu.

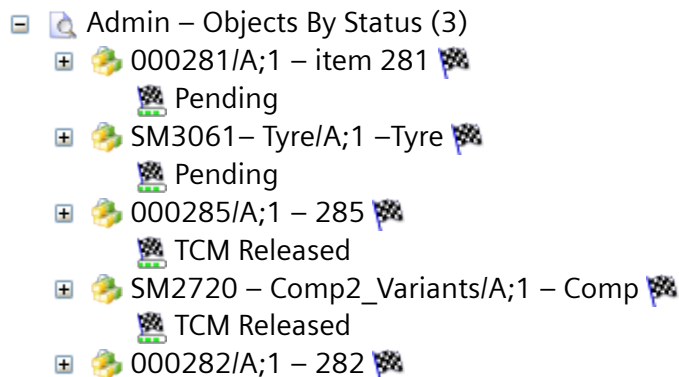
Indented search results

By default, search results are returned in a flat list from which you can expand objects to navigate down to related items.



When you select a search created with the **Show Indented Results** check box selected in Query Builder, a **Show Indented Results** check box appears at the bottom of the search criteria form.

- You can select or clear the **Show Indented Results** check box, depending on which view you prefer, then execute the search.
- The indented view shows only the components related to the search criteria in the search results.



- To view the related items for an object in the indented search results, select the object in the search results list and open the **Details** view.

Formatting search results by object properties

Using PFF objects

A set of property finder formatter (PFF) objects corresponding to the basic search types are delivered as part of the standard Teamcenter installation. PFF objects are similar to query definitions but they navigate the relationships in the object schema to locate the properties of the objects returned in the search results. The properties for the objects listed in the search results are then displayed in the defined format.

Click the **Select PFF** button in the **Search Results** view to access the property finder formatter objects available to you.

Find properties related to objects in your search results

1. Execute the applicable search to display the desired search results.
2. Click the **Select PFF** button in the **Search Results** view.
3. Select a property formatter from the list.
4. Click **Refresh**.

Teamcenter populates the display data table with the properties for the objects in the search results list, according to the definition of the formatter.

If you modify or refresh the search, you must also refresh the display data table.

Compare search results

Search results can be compared to the results of other searches.

1. Execute the applicable search to display the search results list you want to compare.
2. Right-click the search name at the top of the list of search results.

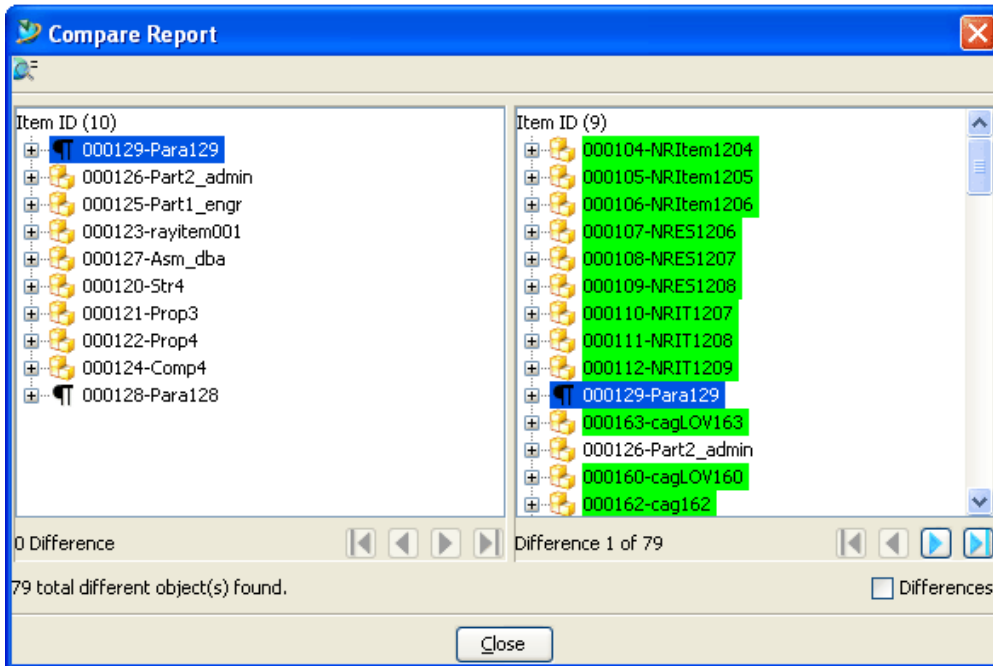
The **Explorer Popup Menu** appears.

3. Choose **Compare To** to access a list of open searches.
 - Select an open item from the list or, if the list is extensive, from the expanded list under the **More** option.
 - If the number of open items is difficult to navigate from the menu list, select **Compare to Search Result List**.

The **Compare To** dialog box appears. You can use this dialog box to scroll through the open items and make a selection.

4. Select a search name from the **Compare To** list or dialog box.

The **Compare Report** dialog box appears showing the contents of the selected search results. Differences between the components in the selected search results lists are highlighted in green, identical objects have a transparent background, and the object currently selected is highlighted in blue.



5. (Optional) Browse the differences using the navigation buttons at the lower-right corner of each pane. This can be useful when comparing components containing a large number of objects.
6. (Optional) Select the **Differences** check box to display only the differences between the components.
7. Click **Close** to exit the dialog box.

Rename search results

If you plan to keep a search open in My Teamcenter for an extended period of time, or if you have multiple queries open, renaming the search results is a convenient way to make your display more manageable.

1. Right-click the search name at the top of the list of search results.
2. Choose **Rename** from the menu.
3. Type a new name for the search results.
4. Press Enter.

The name of the search is changed to reflect the new name.

Print a snapshot of the search results tree

1. Right-click the search name at the top of the list of search results.

The **Explorer Popup Menu** appears.

2. Choose **Print**.

The **Print** dialog box appears.

3. (Optional) Modify the print options and properties.

4. Click **OK**.

The list of objects in the search results tree is printed. If the tree displays all of the results, all results are printed. If the tree only displays one page of results, only that page is printed.

It is also possible to print the properties of an object in the search results tree.

Close search results

1. Right-click the search name at the top of the list of search results.

The **Explorer Popup Menu** appears.

2. Choose **Close** to close the current search or select **Close All** to close all open searches.

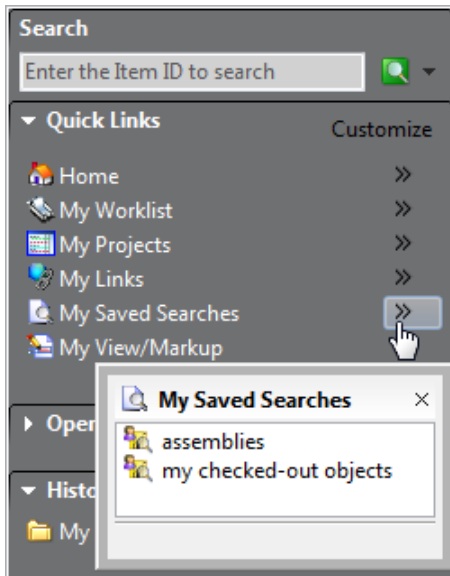
Search results that have not been saved to a folder are lost when you close the view.

Saving searches

My Saved Searches

You can save searches to the **My Saved Searches** folder, or you can create a hierarchy of subfolders in which to save searches.

When the **Search** view is not open, you can access your saved searches from the **My Saved Searches** expand button **>>** under **Quick Links** in the navigation pane.



Saved searches are also listed in the **My Saved Searches** folder in the **Change Search** dialog box.

Perform a saved search

1. Expand the **My Saved Searches** menu **>>** in the **Quick Links** section in the navigation pane.
2. Select a saved search.

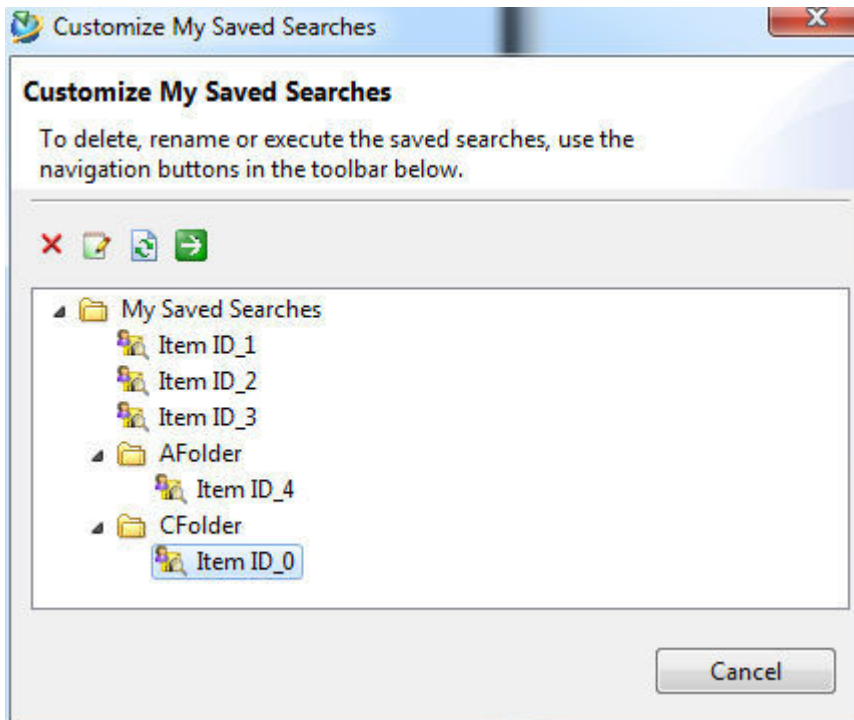
The system displays the criteria in the **Search** view and the results in the **Folders** and **Data** panes.




The search criteria for the saved search appears in the **Search** view. The results of the search appear in the **Search Results** view.

Customize saved searches



1. Click the **My Saved Searches** text in the **Quick Links** section on the navigation pane.

The **Customize My Saved Searches** dialog box appears.



2. Select a saved search from the list of saved searches.
3. Use the buttons to delete  or rename  the saved search.
4. Click **Execute**  to run the selected search and close the dialog box; or click **Cancel** to close the dialog box.

Save search results to your My Saved Searches folder



1. In the **Search** view, display the desired search form and set the criteria to the values for the search you want to save.
2. Click  to perform the search to verify the criteria values are set accurately for the intended search results.
3. Click **Save**  at the top of the **Search** view.

The **Add Search to My Saved Searches** dialog box appears.

4. Type a unique name for the search in the **Name** box.
5. Click **OK**.

The search is saved and listed in your **My Saved Searches** folder.

Save search results to a subfolder of My Saved Searches

1. In the **Search** view, display the desired search form and set the criteria to the applicable values for the search you want to save.
2. Click  to perform the search to verify the criteria values are set accurately for the intended search results.
3. Click **Save**  at the top of the **Search** view.

The **Add Search to My Saved Searches** dialog box appears.

4. Type a unique name for the search in the **Name** box.
5. Click **Create In**.

The **Add Search to My Saved Searches** dialog box expands to show the saved searches folders.

6. Select a folder to save the search in or, if you want to create a new folder, select a folder to create the new folder in and click **New Folder**.

A new subfolder is created in the selected folder.

With the new subfolder selected, click **Rename** and type a new name for the subfolder.



7. Click **OK**.

The saved search is listed in the subfolder of the **My Saved Searches** folder structure in the **Change Search** dialog box.



The saved search is also listed in the navigation pane under **Quick Links** in **My Saved Searches**.

Share saved searches

You can:

- Create new shared searches.
 - Share existing saved searches with other users.
 - Use saved searches that others users have shared.
1. Click the **Search** button  on the My Teamcenter toolbar in the rich client.
 2. In the **Search** view, click **Select a Search** .

The **Change Search** dialog box is displayed.

3. Choose a search type and provide search criteria, and then click **Perform Search** .
4. Click **Add Search to My Saved Searches** .

The system displays the **Add Search to My Saved Searches** dialog box.

5. Type a name for the search.
6. Click **Is Shared** to create a shared search.
7. Click **Create In** to expand the dialog box to display existing saved searches and folders.

In the expanded area, you can create new folders, rename or delete searches or folders, or specify access privileges for searches.

8. Click **OK** to create the shared search.

Note:

By default, saved searches are private. You must select **Is Shared** in the **Add Search to My Saved Searches** dialog box for others to view your saved searches.

Increasing search success

Search techniques

You may use wildcards and operators in carefully crafting queries to increase your success. For example, to search alternate ID values in Structure Manager, use an **Item** or **Item Revision** search. To display alternate ID values in Structure Manager, you must edit a preference to add the column to the BOM line display table. An administrator can use the Business Modeler IDE to add a title for the new column. Specific searches in some applications require additional setup.

Using wildcard characters in search strings

Wildcard characters, such as ***** and **?**, broaden your searches by allowing you to match a single character or multiple characters occupying specific positions in a search string.

Each box in the search form corresponds to a property of the search type. This property can be a string, date, integer, or logical value. Date, integer, and logical type search boxes do not support wildcard characters. Wildcard characters can only be used in boxes corresponding to string properties.

- * The asterisk wildcard searches for the root of a word followed by one or more characters.

For example, a search for **communicat*** returns items containing terms such as communicate, communicates, communicated, communication, communications, and communicating.

? The question mark wildcard searches for the root of a word with the question mark as a substitute for any other character.

For example, a search for **Anders?n** returns items that contain terms such as anderson, andersun, andersen, and andersin.

Three wildcard character sets (**SQL Style**, **UNIX Style**, and **Windows Style**) are available and can be set using the **Options** dialog box accessed from the **Search** view menu **Options** command.

After the wildcard style has been set, it applies to all saved searches; however, it does not affect Classification searches.

To enhance local metadata searches, your administrator can set the **search_automatic_wildcard** site preference to automatically add the asterisk (*) character as a prefix, suffix, or both for search criteria for all string properties. This feature is available in all Teamcenter clients. By default, this feature is turned off.

Note:

Remote queries, Classification queries, and other specialized searches are not affected by the **search_automatic_wildcard** site preference.

The following values are valid for the **search_automatic_wildcard** site preference:

- 0 Search criteria are not altered. This is the default value.
- 1 The asterisk (*) character is added as a suffix.
- 2 The asterisk (*) character is added as a prefix.
- 3 The asterisk (*) character is added as both a suffix and a prefix.

All other values have the same effect as adding 0.

Examples of using wildcard characters

Consider searching for a text dataset named **Field Report**. To locate this dataset, you could enter **Field*** in the **Name** box and **text** in the **Type** box on the search form. The results return all text type datasets with names beginning with the characters **field**. If you know more details about the object, the search can be refined by specifying additional criteria, such as the owning user or owning group, or the approximate date that the object was created or modified.

Now consider searching for an item revision when the word **model** appears in the middle of the item revision name. By entering ***model*** in the **Name** box and **ItemRevision** in the **Type** box, the results returns all item revisions with names containing the letters **model**.

Searching a large database using wildcard characters can return an unwieldy number of matches that can consume considerable time and potentially tie up system resources, possibly causing your current session to terminate unexpectedly. Your administrator can define parameters for wildcard searches to make searches more efficient. When such parameters are in place, an error message providing information about the parameters is displayed when input values are invalid. For example:

```
You must enter at least 3 character(s) before the wildcard character for
item_id
```

Searching with date and time criteria

Date and time values can be used as search criteria; however, these values must be entered in the exact format used at your site. The default format for date and time values is:

15-Jan-1997 15:51

If you do not specify a time, the time is assumed to be 00:00, which corresponds to 12:00 midnight at most sites. Date and time value ranges are frequently used in search forms. When start and end date and time boxes are used, the end date and time value must be at least one second later than the start date and time value.

If the calendar has scroll bars, you can scroll to select the date. To fit the entire month in the calendar box, reduce your system text size (typically **smaller** on Windows systems) and set your default browser text size to medium.

You cannot locate objects by specifying exact date and time criteria because Teamcenter stores precise date and time values in milliseconds.

By default, users can enter dates from **1/1/1900** to **12/31/9999**. When you exit the date entry form:

- Dates earlier than the year 1900 automatically revert to 1900.
- Dates later than the year 9999 automatically revert to 9999.

Search using values from table rows or columns in a data pane

1. Right-click a column header to display the **Table Function Menu** and set the copying mode by choosing one of the following commands:

- **Enable Row Selection**

Row selection lets you select the entire contents of a row, or rows, to copy.

- **Enable Column Selection**

Column selection lets you select cells within the column to copy.

2. Select the rows or column cells that you want to copy to the search form box.
3. Right-click the column header again, and choose **Copy Selected Data→For Query**.

The data is copied to the system clipboard.

4. Right-click in the search box into which you want to paste the selected data and choose **Replace Text** or **Append Text** from the shortcut menu.

The data is pasted into the search form.

Select multiple values from lists as search criteria

1. Click the list to display the values.
2. Hold the Shift key (for adjacent values) or the control key (for nonadjacent values) and select the values from the list.

As you select values, they are displayed in the query field.

Searching for datasets

Siemens Digital Industries Software recommends using the **Dataset** query (from the **Search** view **System Defined Searches** list), rather than the **General** query to search for datasets.

- Using the **General** query and selecting dataset as the type produces inaccurate results.
- You can use the **General** query to search for a dataset, but the type parameter must be left blank.

This method is not recommended, because initiating a general query without specifying an item type results in a search of all object types in the database. This is inefficient and time consuming.

Finding imported PLM XML data

Teamcenter data is usually created and contained in folders, assemblies, and in other organizational containers that make the data easy to locate. In some cases, however, you may not know the container involved or there is no container, as may be the case with data imported from PLM XML files.

A Teamcenter search is a complex query on the database that you generate based on your input. Your input depends on the type of data you want to find. Search criteria to find imported data depend on the type of the data being imported, as illustrated by the following examples:

- When you are importing items and you know the item IDs, you can simply search on item ID to get imported objects.
- When you import a more complex structure consisting of several items, item revisions, forms, and BOM lines, and you know the top BOM line ID, you can use the top BOM line ID to get the top line, and then send that object to Structure Manager to view the structure. Similar methods can be used to get manufacturing items, generic design elements (GDE), and so on.
- When you import objects such as forms or datasets, you can use search criteria based on the form or dataset object type. You can, for instance, import Teamcenter Mechatronics Process Management objects such as signal, GDE, or connection objects used in complex electromechanical structures, and search based on either item ID or object type.
- For many objects you can search based on a creation date timestamp with a start time immediately prior to the import and an end time after the import.

You cannot search based on creation date timestamp for occurrences or other runtime objects.

Searching using localized strings

You can use localized names and values as the search criteria. When a localizable attribute is involved in the search, the search becomes a *locale search*.

To return the expected object, locale searches require that the database has a property value translation for the locale specified by the **TC_language_search** search locale preference. This is a general search preference you can set by choosing **Edit**→**Options** in the rich client.

For example, the objects in the following table have the **object_name** property localized. The system has English and German names for the objects.

Key	English name	German name	Type	Status	Master locale
1	Wheel Assembly	Radbaugruppe	Item	Pending	English
2	Axle	Achse	Item	Pending	English
3	Wheel	Rad	Item	Released	English
4	Wheel Requirements	Radanforderungen	Document	Released	English
5	Change Wheel	Radänderung	EngChange	Released	English

Key	English name	German name	Type	Status	Master locale
6	New Car	Neues Auto	Item	Pending	German
7	New Commercial Truck	Neuer Lastkraftwagen	Item	Pending	German

For this example, assume Windows-style wildcards are in effect.

Also in this example, **Pending** and **Released** are internal status names with display names in English and German.

- **Pending:** Needs sign-off (English), **Unterzeichnung erforderlich** (German)
- **Released:** Approved for manufacturing (English), **Genehmigt für die Herstellung** (German)

For a standard **Item** search, results are returned based on the search locale.

Search locale	Search criteria	Objects found per key in previous table
German	Name: <i>Rad*</i>	1, 3, 4
German	Name: <i>Neu*</i>	6, 7
German	Name: <i>New*</i>	None
German	Name: <i>*Rad*</i>	3, 4
	AND:	
	Status: <i>*Herstellung*</i>	
English	Name: <i>Wheel*</i>	1, 3, 4
English	Name: <i>New*</i>	6, 7
English	Name: <i>Neu*</i>	None
English	Name: <i>*Wheel*</i>	1
	AND:	
	Status: <i>*sign-off*</i>	

When searching using a list of values (LOV) display value, if the internal value of that given LOV matches a value used at another level of the hierarchy, a false positive may be returned. For example, a **Document** business object is a child of the **Item** business object, and it has a property description with an attached LOV value of *color*. If a user performs a general search and enters the value *rouge*, which




is the French translation for *red*, any business objects that are children of the **Item** business object that have a value of *red* are returned with the search result.

You can avoid this behavior by narrowing down the search on a particular document type. For example, select **type=Document** on the search dialog box.

Actions available in Search view


Using Search view buttons

Search view buttons let you execute, change, rerun, clear, and save a search.

- Click  to perform a search.
- Click the **Rerun** button  at the top of the **Search** view to refresh queries and update the search results.
- Click the **Clear**  button at the top of the **Search** view to clear the contents of all boxes on the search form.


Changing a search in the Search view

Click the **Change search from search history** button  to list, in reverse chronological order, your recent searches. Select a search to load it into the **Search** view.

Click the **Change** button  in the **Search** view, and then click **More...** to access the **Change Search** dialog box.

My Saved Searches

This tab lists, in a folder view, your saved searches.

- Select a search to load it into the **Search** view.
- Click **My Saved Searches** in the navigation pane to display the **Customize My Saved Searches** dialog box to delete, rename, or execute saved searches.
- Click **Organize My Saved Searches**  in the toolbar to display the **Organize My Saved Searches** dialog box to create new folders and to rename, delete, or share saved searches.

System-defined searches

This tab lists, in alphabetical order, the standard searches defined for use at your site.

- Select a search to load it into the **Search** view.
- Many searches are provided with the software. Your administrator can adjust this list to match the needs at your site.

Change your search

1. In the **Search** view, click **Select a Search**  .

The **Change Search** dialog box appears.

2. Select a new search from the **System Defined Searches** or **My Saved Searches** categories.
3. Click **OK**.

The search form with the criteria for the selected search appears in the **Search** view.

When you change the search, the content of the currently displayed **Search** view is overwritten to display the form associated with the new search. To prevent the search criteria from being overwritten, you can choose **Lock Search** from the menu in the **Search** view toolbar.

Search pane tools

Search view tools capabilities

Using the **Search** and **Search Results** menu, you can access tools to:

- Lock searches.
- View search criteria definitions.

Administrators can also change search criteria definitions.

- Run extended multi-application searches and define search attributes for classification data.
- Set search options and preferences.

Lock the search view

When you change a search in the search view, the content of the currently displayed search form is overwritten to display the form associated with the new search.

You can lock the search to prevent the content of the currently displayed search form from being overwritten:

- Choose **Lock Search** from the **Search** menu ▼.

View search criteria definitions

Query forms displayed in the **Search** view provide an easy way to enter search criteria, but they intentionally do not display much information about the construction of the underlying query.

The **Query Detail** dialog box displays the properties and logical operators used to construct each search clause and the Boolean rules used to combine the clauses. These details provide useful troubleshooting information if a search does not return the expected results.

1. Display the search form you want to examine in the search view.
2. Choose **View Search Criteria Definition** from the **Search** menu ▼.

The **Query Detail** dialog box appears.

The properties and logical operators used to construct each search clause and the Boolean rules used to combine the clauses in the search criteria are listed for the selected search. These details provide useful troubleshooting information if a search does not return the expected results.

3. Click **Close** to exit the dialog box.

Extended multi-application searches

Performing ad hoc Classification searches

To search for data using Classification attributes, create an ad hoc Classification search.

When you use a saved query to search for an item, item revision, dataset, or class that has the **IMAN_classification** attribute set, you add criteria for Classification classes and attributes to the search.

Create an ad hoc Classification search

1. In the **Search** view, select an **Item**, **ItemRevision**, or **Dataset** search.
2. Choose **Extended Multi-Application Search** from the **Search** menu ▼.

The **Advanced** dialog box appears.

3. Click the **Adhoc Classification Query** tab.
4. Click the **Search Classification Class** button to access the **Class/Attribute Selection Popup** tree.

Note:

If applicable, you can specify the system of measurement as metric or nonmetric. You cannot search in both measurement systems simultaneously.

5. Double-click a class name to select it from the popup tree.

Note:

If you want to search by attribute value, you must select a class that contains attributes.

A row for the class is added to the classification search criteria definition table.

Note:

You can add or remove a search criteria clause by clicking the **Add** or **Remove** button on the right side of the table.

6. Click the name of the class in the **Property Name** column to list and select the desired search attribute.

Note:

You can use relational operators to search for a combination of attribute values, for example, for a value range.

7. When done adding rows to the **classification search criteria**, click **OK**.

A pane with the ad hoc classification search criteria is added to the end of the search form in the search view.

Note:

You can remove the ad hoc classification search criteria pane from the search view by clicking the **x** button at the right of the pane.

You can change the values for the classification search criteria in the **Adhoc Classification Query** dialog box. The classification search criteria pane on the search form and the **Adhoc Classification Query** dialog box are synchronized after any modification to the classification search criteria clauses.

8. Click  to perform the search.

The number of classes matching your search are displayed at the bottom of the dialog box, and the first result is highlighted in the tree.

To navigate through the results:

Go to next match	Press F3, Page Down, or Down Arrow key.
Go to previous match	Press the Page Up or Up Arrow key.
Go to first match	Press the Home key.
Go to last match	Press the End key.

Search for data using Classification attributes

1. Click **Search** in My Teamcenter.
2. Select a search value from the **LOV** list for a Classification attribute if that attribute is associated with a **KeyLOV**.
3. Add it to the list by double-clicking the attribute.
4. Select the **Search Criteria** from the list.

Note:

If a Classification attribute used in a saved query is hidden from the user, this attribute is not displayed in the query form. Similarly, if a class is hidden from the user, any saved queries of this hidden class are not displayed.

Define search criteria using multiple Classification classes

You can create ad hoc classification search criteria using multiple classes. The following example illustrates using multiple classes to search for angle base plates with more than 20 holes or with a length greater than 10:

1. Select the **Angle Base Plate** class, and add the following clause to the table:

```
Number of Holes > 20
```

2. Select the **Base Plate** class, and add the following clause to the table:

```
Length > 10
```

3. Combine these two search clauses with the **OR** logical operator

Saved queries on classification attributes

In the My Teamcenter application, you can execute a Classification saved query by filling out the query form in the same way you perform other saved queries. The classification objects are returned to the user if the saved query is based on a class.

An ITK programmer can write code against the ITK APIs to define a Classification query, which you can then execute in My Teamcenter.

The scope of the search is determined by the **QRY_search_classification_hierarchy** user preference. The default value is **false**.

- If this preference is set to **false**, the query searches only the specified class.
- If this preference is set to **true**, the saved query or ad hoc Classification query searches the specified class as well as all classes of which the specified class is an ancestor.

Note:

If a classification attribute used in a saved query is hidden from the user, this attribute is not shown in the query form. Similarly, if a class is hidden from the user, any saved queries of this hidden class are not shown to the user.

Using target list filtering in searches

You can select objects from other Teamcenter applications, active workflow processes, the clipboard, or from the results of other searches to use as search filters.

To access this feature, choose **Extended Multi-Application Search** from the **Search** menu ▼ and click the **Target List** tab.

Note:

This is supported only for **Local** queries.

When saving a search, filter criteria selected from **Extended Multi-Application Search** are not included with the saved search. Properties from **Extended Multi-Application Search** are valid only during the current session, so they are not supported in saved searches.

Apply target list filtering criteria to your search

1. Choose **Extended Multi-Application Search** from the **Search** menu ▼.

The **Advanced** dialog box appears.

2. Click the **Target List** tab.

The source options from which you can filter searches appear on the **Target List** pane. Source options include **Clipboard**, **Referencers**, **Prior Search**, **Active Workflows**, **Applications**, and **Structure Manager**.

Note:

Multiple sources can be used to filter a single query. For example, you can select the results of a prior search along with the BOM elements of an assembly displayed in Structure Manager.

3. Apply one or a more of the search filters.

- **Clipboard**

Uses objects on your clipboard to filter searches. The number of objects on the clipboard appears to the right of the check box.

- **Referencers**

Filters based on all elements that appear in the **Impact Analysis** view, or the **Referencers** pane in some applications, as a result of a where-referenced or where-used search performed on the selected object.

- **Prior Search**

Filters based on the results of prior searches. The list displays all search results that are open in your session, and you can select one or more sets of search results from the list. All elements in the selected search results are included in the search filter.

- **Active Workflows**

Queries the database for active workflows and displays the query results. You select a single workflow and the database is queried for the targets of the workflow. These target objects are added to the list of items used to define the search filter.

- **Applications**

Filters based on objects currently selected in the chosen application or applications.

- **Structure Manager**

Lets you perform the following steps to filter based on the contents of a Structure Manager BOM window:

- a. Select the **Structure Manager** list to filter based on the contents of an open BOM window. When you select a BOM window, the system displays the **Collect BomElements** dialog box. This dialog box lets you specify how the BOM lines are expanded in the selected BOM window.
- b. Choose an expansion option, either **Expand Selected Lines** or **Expand From Top Line**.

Note:

Depending on the search type, BOM lines are expanded and the BOM lines, item, item revision, or occurrences, are added as target objects for the query. When a BOM line cannot be further expanded, only the data items from the BOM line are added as target objects for the query.

- c. (Optional) Set **Load Value**. The load value determines the number of BOM lines that are loaded before a cancellation can be effected. For example, if the value is **250** and you click **Cancel**, the operation stops after loading 250 BOM lines.
- d. Click **Go**.

The system loads the components and closes the **Collect BomElements** dialog box.




4. Click **OK**.

The filters and number of objects associated with each filter are displayed at the bottom of the search view. To remove any of the filters, click **X**.

Note:

The number of objects in each filter is displayed after the search has been run; however, the objects associated with the filters are not saved and the search results are not saved when you exit your Teamcenter session.

Sort search options

The **Search** view **Sort**  command displays the **Sort Options** dialog box, which provides a two-column list with attributes on one side and order direction settings on the other. On the right side of the pane, there are arrows for moving a selection up  or down  in the precedence list.

- To assign the sort priority of an attribute (in relation to other attributes in the list), select the row containing the attribute and move it up or down using the arrow buttons.
- To specify the sorting for a particular attribute, click the cell in the **Order By** column and select **Ascending**, **Descending**, or **None** from the list.

Note:

For attribute precedence to take effect, you must specify an **Order By** value other than **None**.

Setting search options

Search options and preferences can be set in the rich client using the dialog box you access by choosing either of the following:

- **Options** from the **Search** ▼ menu in a **Search** view
- **Edit**→**Options**

Option settings persist from session to session or until reset.

Determining impact with where-used and where-referenced searches

Where-used and where-referenced searches

The where-used and where-referenced features available in the **Impact Analysis** view or the **Referencers** pane in some applications, let you determine:

- Whether a given item or item revision is used in any assemblies.
- What objects in the database reference a selected object.

You can use these searches to help determine the effect of modifying an item or item revision.

Where-referenced searches

Methods of performing where-referenced searches

Use a where-referenced search to find objects that reference a selected object.

There are two methods of performing where-referenced searches.

- The first method produces a graphical representation of all references to the selected object.
- The second method uses the **Referencers Print Wizard** dialog box.

Use the **Where_Ref_Avoid_Duplicate_Expansion** preference to specify whether to display the subtrees of duplicate nodes.

Perform a graphical where-referenced search

1. Select the **Impact Analysis** view.

2. Select an object in the tree view.

The selected object appears in the **Impact Analysis** view.

3. Select **Referenced** from the **Where** option list, located in the upper left area of the view.
4. Select a depth level from the **Depth** option list.

- **One Level**

Reports only immediate parent components of the object.

With this level selected, you also have the option to set the **Type** and **Relation** filters.

- **All Levels**

Reports all parent components of the object, up to the top-level directory.

- **Top Level**

Reports only the top-level component.

5. (Optional) If you selected a depth of one level, you can also select a search filter from the **Type** and **Relation** options.

Note:

If your administrator has added custom relations for your site, these are visible in the **Relation** list only if they are referenced in the **WHERE_REFERENCED_RELATIONS_FILTER** preference.


6. Double-click the object in the view pane to activate the search.

The object and the objects by which it is referenced are displayed in graphical format. The results can be used as the basis for another where-used or where-referenced search, or they can be formatted and printed.

Perform a where-referenced search using the Referencers Print Wizard

1. Select the **Impact Analysis** view.
2. Select an object in the tree view.

The selected object appears in the **Impact Analysis** view.

3. Select **Where-Used/Referenced Report** from the **View** menu  in the upper-right of the **Impact Analysis** view.

The **Referencers Print Wizard** dialog box appears showing the first step of the wizard.

4. Select the **Where Referenced** option.
5. Click **Next**.

Step 2 of the wizard appears in the dialog box.

6. Select a depth level.

One Level	Reports only the immediate parent component of the object.
All Levels	Reports all parent components of the object, up to the top-level directory.
Top Level	Reports only the top-level parent component.

7. Click **Next**.

Step 3 of the wizard appears in the dialog box.

In this step, the object to be used as the basis of the search is shown along with report generation options.

8. Select a report generation option:

Generate HTML/Text report	Presents the where-referenced results in HTML format in the Print dialog box. From this window, you can format the report and either print it or save it to a file.
Generate the structure report	Presents the where-referenced results in tree format in the Report dialog box.

9. Click **Yes**.

The where-referenced search is generated and the results are displayed.

At this point, you can format, save, or print your report.

Where-used searches

Methods of performing where-used searches

Where-used searches let you identify all the assemblies that contain an item or item revision.

You can do this to assess the impact of engineering changes to the product structure or to check if changes in one assembly affect other assemblies.

There are two methods of performing where-used searches.

- The first method produces a graphical representation of the assembly or assemblies in which the item or item revision is used.
- The second method uses the Referencers Print wizard and produces a report of the where-used results.

A where-used search can take into account the revision rule when searching the product structures, and you can choose one of the following outputs:

- All revisions

Reports all item revisions that have an occurrence of the source item revision. This search result displays all combinations of usage that can possibly occur; when a particular set of revision rules is applied not all paths may be realized.

- Only the revision configured by a selected revision rule

The search result is filtered to include only those revisions configured by the selected revision rule.

The revision rule is applied at each level, up to and including the top level. The system displays any intermediate level nonconfigured revisions referenced by precise occurrences, if the top of the chain of precise links is configured. To configure this mode, set the **PS_wu_configd_imprecise_only** user preference to **true**. This preference has no effect if the selected revision rule contains any precise entries.

The **All** option for where-used searches is a special case mode, not a revision rule.

The **From PSE** option, available only when a where-used search is accessed from the Structure Manager application, is also a special case mode, not a revision rule.

Perform a where-used search to display a graphical result

1. Select an item or item revision in a component or details view.
2. In My Teamcenter, select the **Impact Analysis** view.
3. Select **Used** from the **Where** option list, located in the upper left of the view.
4. Select a rule from the **Rule** list.

This rule provides parameters to locate the assemblies in which the item or item revision is used.

Revision rules are made up of sequential lists of entries, each of which is evaluated to obtain a configured revision of the item.

For example, if you select the **Any Status; Working** rule, the only assemblies retrieved use the released or working revisions of the target object. Multiple revisions of the same assembly can be retrieved if the parent-child configuration matches the selected revision rule.

5. Select one of the following depth levels from the **Depth** list located in the bottom-right corner of the window:

- **One Level**

Reports only immediate parent components of the object.

- **All Levels**

Reports all parent components of the object, up to the top-level directory.

- **Top Level**

Reports only the top-level component.

6. Double-click the object to start the search.

- If the item or item revision is not part of an assembly that matches the selected revision rule, the system displays a message to that effect.
- If the item or item revision is part of a configured assembly, the structure is displayed in graphical format.


The results can be used as a basis for another where-used or where-referenced search, or they can be formatted and printed.

You can change the item revision properties that are shown in the results by selecting the required properties from the **Display** list. Teamcenter remembers your selection for future sessions.

You can also filter the results to show only selected item types. To do this, select the **Filter by Item Type** check box and select the required item type and filter level from the lists. You can also select the **Include Subtypes** check box to include both item revisions whose item is of the specified type and any subtype of that type. You can further refine the selection by showing the results only for the top level of the structure or for all levels below the selected top level. To rerun the where-used search with changed criteria, double-click the target node.

Perform a where-used search to create a text or HTML report

1. Select an item or item revision in the tree or **Details** table.

2. In My Teamcenter, select the **Impact Analysis** view.
3. Select **Where-Used/Referenced Report** from the **View** menu  in the upper-right of the **Impact Analysis** view.
4. Select the **Where Used** option to generate a where-used report and click **Next**.
5. Select one of the following **Depth** level options and click **Next**:

- **One Level**

Reports only immediate parent components of the object.

- **All Levels**

Reports all parent components of the object, up to the top-level directory.

- **Top Level**

Reports only the top-level component.

6. Select a **Where-Used** rule and click **Next**.

The **Where-Used** revision rule provides parameters to locate the assemblies in which the item or item revision is used. For example, if you select the **Latest Working** rule, only the latest working revision of the assembly is retrieved. Released assemblies and earlier versions of the assembly are not retrieved when the **Latest Working** rule is selected.

7. Select the item type to filter by.
8. Confirm that the required items, item revisions, and revision rules are shown correctly, and then select a report generation option.

- **Generate the HTML/Text report**

Presents the where-used results in HTML format in the **Print** dialog box. From this dialog box, you can format the report and either print it or save it to a file.

- **Generate the structure report**

Presents the where-used results in tree format.

9. Select the item or item revision properties to include in the report and click **Next**.

The system displays the item or item revision and selected revision rule that is the basis of the search, together with report generation options.

Note:

The preselected properties are those used when you last ran the wizard. You can change them as necessary.

10. Click **Yes**.

Teamcenter runs the where-used search and displays the results. At this point, you can format, save, and print your report.

- (Optional) Change the print format.

- **HTML**

Displays results in the default print format.


- **HTML Table**

Displays results in tabular format. This improves readability for large reports.

- **Text Format**

Displays results as text.

- (Optional) Format the report by performing the following steps:


- a. Click **Set Result Format**  in the upper-right corner of the **Print** dialog box.

Teamcenter displays the **Print Format** dialog box. The formatting options vary depending on the type of object selected and whether you are printing in HTML, HTML table, or text format.


- b. Modify the result format.
- c. Click **Update**.
- d. Close the **Print Format** dialog box.

11. To save or print the report, complete the appropriate process.

- Print a text or HTML file.

- a. Click **Print** .
- b. Define the printer to which the file will be sent.

You can accept the default printer that is displayed in the **Name** box or select a different printer from the list.

- c. Click **OK** to print the file and exit the dialog box.
 - d. Click **Close** to exit the **Print** dialog box.
- Save output to an HTML or text file.
 - a. Click **Save**  (located in the lower-right corner of the **Print** dialog box).

The **Save** dialog box appears.

- b. Navigate to the directory location where you want to save the file.
- c. Type the name of the file, including the **.htm**, **.html**, or **.txt** extension, in the **File name** box.
- d. Click **Save** to save the file and exit the dialog box.
- e. Click **Close** to exit the **Print** dialog box.

Using shape search

Search for similar released item revisions

Shape Search functionality is available from any Teamcenter application that displays selectable Item Revisions. As an example, start **My Teamcenter**, and find an Item Revision which contains a JT dataset. Right-click on the Item Revision, choose **Send To > Shape Search**.

Presentation of search results

The results of the Shape Search appear as a grid of thumbnails in the **Shape Search Results** view in the current application or perspective.

Each part listed in the new view will be an Item Revision whose shape has some degree of similarity to the query part. The first part in the array is always the query part and has a gray background area. Parts are ordered in decreasing order of similarity from left to right and down the page.

The results displayed depend on the query part, the contents of the Geolus database, and on how the search has been configured. Results will be excluded if the current Teamcenter user does not have read privileges on the Item Revision(s) unless the display of inaccessible parts has been enabled (see **Display of inaccessible parts**).

For each part, the name and size relative to the query part is usually shown. The information displayed is configurable.

Examine individual items in search results

Parts can be selected from the array: the selected part has a blue border. When in the **My Teamcenter** application, the **Summary**, **Details** and **Viewer** views relate to the current selected part.

Right-click to see the available options.

Option	Action
Send to Shape Search	Initiates a new Shape Search using the selected part
Send to Lifecycle Viewer	Opens the selected part in the Lifecycle Viewer (the Shape Search Results view remains open)
Send to My Teamcenter	Opens the selected part in My Teamcenter (the Shape Search Results view remains open).
Copy	Allows copy and paste functionality into Teamcenter applications.
Properties	Opens the Teamcenter properties dialog to show the Item Revision.

Display a large set of results

Larger sets of Shape Search results are usually divided into pages. A typical page might consist of 30 items (the exact number that are displayed on each page is configured). Up and down arrows allow navigation through several pages, and you can display all the results on one page.

Before displaying all the search results, check the total number of results indicated at the top of the Shape Search Results view. It can take an appreciable length of time to render the thumbnails if there are more than a hundred results to display at once.

Modify search criteria

Modify the current search by selecting **Modify Search**. The Shape Match control displayed in this dialog box and in **Preferences** can be changed by the Teamcenter administrator.

The relative minimum and maximum sizes are used to filter the search results to include only those parts whose size relative to the query part is within the given bounds.

A common configuration gives a list of three choices:

Shape Match Setting	Returned Results
Identical	Return parts that Geolus considers identical
Very Similar	Return parts that Geolus considers very similar
Similar	Return parts that Geolus considers similar

Ask your Geolus Server administrator to explain other terms that appear in this list.

If the Geolus administrator makes changes to the server configuration that affect the shape match options, these changes will not be available until the rich client is restarted.

A slider can be used to control shape match. The left-most position of the slider corresponds to Identical. Dragging the slider to the right will increase the number of results obtained from a search. The right-most position corresponds to all similar results.

The **Save Options** section controls if and how the modified search is saved for later use.

Option	Action
Add New Search	Save the modified search as a new search, in addition to the original
Replace Current Search	Replace the search which is being modified with the modified version
Do Not Save Modified Search	Do not save the modified version of the search

Information about saving searches is in [accessing previous searches](#).

Attribute Filters allows search results to be refined by applying alphanumeric filters on the generic attributes stored in Geolus. The filter labels will depend on the Geolus database and may vary in number.

A search can be modified so that only parts where the attribute **ITEM NAME** starts with 04_s will be returned.

The characters * and ? are wild card characters, matching any number of characters and any single character respectively.

If the Geolus Server administrator connects to a different database or makes a change to the database which affects the attributes stored in it, the rich client must be restarted. This is a very rare circumstance. If the rich client is not restarted, then the result of any search that includes attribute filters will be unpredictable.

Modify the default search

To modify the default search, select the **Preferences** option.

- The **Search** preferences control the minimum and maximum size filters and shape match parameter used for all subsequent searches. Shape match is set by a slider control but may be replaced by a drop-down.
- The **Results** preferences control what is displayed with each part, how many results are displayed per page (default 30), and how many results are saved with persisted searches (default 30).

Display inaccessible parts

The Teamcenter administrator can enable this functionality which is disabled by default. If this functionality has been enabled, Item Revisions that are not directly accessible by the currently logged in Teamcenter user will be shown in the results of searches. Depending on the configuration, more or less information about these results can be seen, enabling suitable candidate results to be explored.

This functionality is configured by your administrator.

All accessible results are shown with normal thumbnails, the Item/Revision name and the size match information. If objects are inaccessible, they display with a padlock image (this image can be changed), and are slightly faded (the amount of fading can also be changed). When an inaccessible result is selected, the thumbnail will be shown without any fading.

The accessible and inaccessible search results appear in the same order as they would if the same search were performed through the Geolus web interface.

To show more information about an inaccessible result, hover over the thumbnail to show a tool-tip. The text can be configured by the Teamcenter administrator. To copy this text, right-click on the result and select **Copy accessibility text to clipboard**.

Note the rest of the menu entries are disabled.

Saved search queries

Every time a Shape Search is run, the search query parameters are saved for later use, including between Teamcenter sessions. This means that running a saved search against a Geolus server that has changed (in configuration or content) may produce different search results.

Access previous searches

You can see a list of the saved searches in the **Shape Search Results** view. This displays a list of the most recent searches, with the option of showing all saved searches by clicking on **More Open Shape Search Results**.

Hover over a search in the list to display the search parameters.

If a search is saved and the maximum number of saved searches has been reached, the oldest search will be deleted to make space. The maximum number of saved searches can be configured using **Preferences** as explained in [modifying the default search](#).

The **More Open Shape Search Results** option opens the **Previous Shape Searches** dialog, allowing the entire list of saved searches to be accessed. Individual searches or the entire list can be deleted. Searches can run again using **Open**.

Selecting the option **Clear All Shape Search Results** removes all saved searches.

Run previous searches

Searches may be run again either by clicking on the entry in the list or by clicking **Open** in the dialog box. If parts were added or removed from the Geolus server since the search was originally created, the new results will reflect this.

In rare situations, a saved search may refer to shape match values that do not correspond to the current Geolus server configuration. A dialog prompts for an alternative shape match value selected from those currently available. Choosing the correct shape match value depends on the type of search required. Contact the Geolus administrator for guidance.

If the Geolus administrator connects it to a different database or makes a change to the database which affects the attributes stored in it, this will affect any saved search which refers to attribute filters. If this happens, restart the rich client and clear the list of saved searches.

4. Working with Teamcenter data

Creating data

Data managed in Teamcenter is represented by:

- Items

Represent parts, components, documents, or products.

- Item revisions

Iterations of items that reflect a change in the form, fit, or function of the part, component, or product.

- Datasets

Manage files created by other software applications, for example visualization files, text files, and Word documents.

- Design elements

Represent CAD designs.

Forms associated with items and item revisions enable you to store information about your data that can be used by people throughout your organization.

Teamcenter supports document creation and management using item revision definition configuration objects (IRDC) configured by your Teamcenter administrator. The IRDC specifies behavior when a new item is created, including whether a document management template is applied. The IRDC also specifies behavior when an item is checked in, checked out, copied, or revised.

You can render and translate document revisions and datasets for Microsoft Office dataset types, such as **MSWord**, **MSExcel**, **MSPowerPoint**, and **MSProject**, to a variety of other derived visualization formats, such as Adobe PostScript, Adobe PDF, and TIF. Translation can be configured to be activated by events, workflow steps, or user actions.

Viewing and modifying object properties

Overview of object properties

Objects have properties.

The properties associated with your data objects can be viewed in the **Details** table or in the **Properties** dialog box.

- Object properties, such as ownership and unit of measure, can be viewed and modified, either for a single object or for multiple objects, using the **Properties** dialog box. The **Description** can only be viewed. You must check out the object in order to edit the description.



- Click **Check-Out and Edit** or press Alt+E to check out the objects.
- Click **Cancel** or press Alt+C to cancel changes and close the dialog box.
- Property modifications can automatically be propagated to related objects using type and relation filters.

For object properties, the **Properties** dialog box can incorporate a **Check-Out and Edit** button that lets you quickly check out an object and edit applicable information in an **Edit Properties** dialog box.

You can then:

- Click **Save and Check-In** or press Alt+I to save changes, check in the object, and close the dialog box.
- Click **Save** or press Alt+S to save the changes and retain the dialog box.

Note:

If you click **Save** or press Alt+S, and then click **Cancel Check-Out** or press Alt+O, the changes are reverted and the checkout status for the object is canceled.

- Click **Cancel Check-Out** or press Alt+O to cancel the checkout without saving the changes and close the dialog box.
- Click **Close** or press Alt+C to close the dialog box.

Note:

If any revision of an item has been released, the unit of measure cannot be modified.

You can also find and replace string property values and add prefixes and suffixes to values.

You can use the Tab key to move from field to field, except for lists of values. To move between lists of values, press Ctrl+Tab.

When text is truncated in a list of values, use your cursor to hover over the list and display a resizable dialog box.

Note:

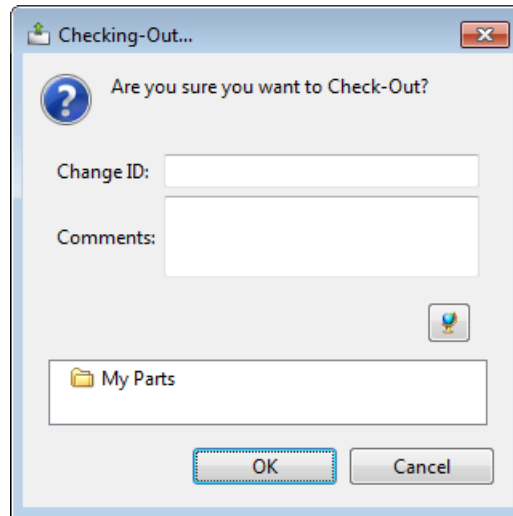
The **TC_overwrite_protection** preference can be used to notify you when an object property has been modified concurrently by another user.

- When the preference is set to **FALSE** (the default), the property value is saved without any indication about concurrent modification. This overwrites the property values modified by another user.
- When the preference is set to **TRUE**, a message informs you to discard your edits and update the property with latest value.

Modify the properties of a single object

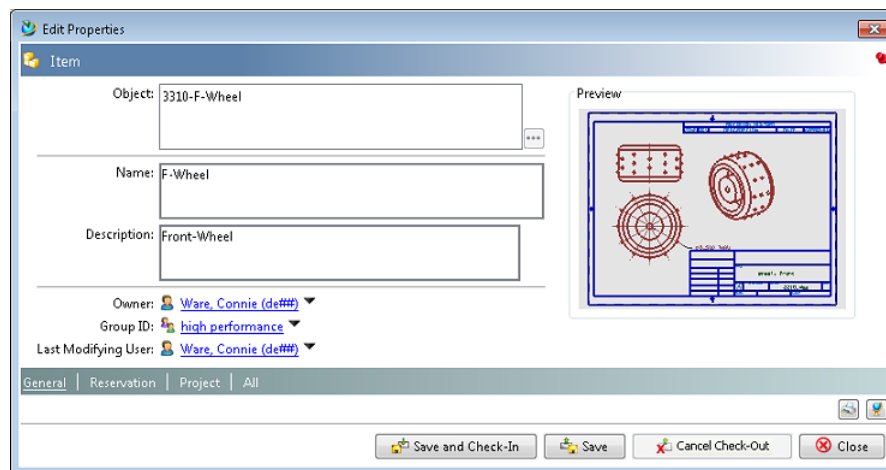
If you are granted the necessary permission, you can modify the properties of data objects. The object owner normally has this permission. Groups can be configured whose members have change permission for object properties.

1. Select the object that you want to modify from the tree or **Details** table.
2. Choose **Edit**→**Properties** or right-click the object and choose **Edit Properties**.




- a. (Optional) Type a value for **Change ID** and add comments.
- b. Click **OK** to check out the object.

The system displays the properties of the selected object in the **Edit Properties** dialog box. The properties that can be modified vary from object to object, and you must have write access to make modifications.



Note:

You cannot change ownership of the selected object from the **Properties** dialog box. You must use the **Change Ownership** option on the **Edit** menu.

3. Modify the property values, as required.
4. (Optional) Propagate the modified properties to related objects, as follows:
 - a. Click **Explore Selected Components**  .

The system displays the component structure of the selected object in the **Explore** dialog box along with a pane for defining rules that determine which related objects are included.

- b. Select the related objects, using one of the following methods:

- By individual selection

Select the check box corresponding to the component in the tree.

- By selecting all components

Click **Select All Components** located beneath the tree.

- According to user-defined rules

The right pane of the **Explore** dialog box lists type and relation combinations that can be used to select components, as defined by your preference settings. Both the **Type** and **Relation** lists include the **Any** option, which allows you to select all instances of a specific object type, regardless of relation, or to select all instances of a specific relation, regardless of object type.

Apply rule filters, as follows:

- A. Click **Add a Rule (+)** to add a rule to the table.
- B. Choose a type and relation combination by double-clicking the boxes and selecting a value from the **Type** and **Relation** lists.
- C. Click **Update the selection in the tree based on rules** to update the selections in the tree.

Note:

Rules can be removed from the table by selecting the row and clicking **Remove selected rules**.

- D. Click **OK** to apply the filters to the objects in the **Explore** tree.

The system closes the **Explore** dialog box and displays the pane related to the original operation.

Note:

The selection rules are saved as a user preference.



E. Click **OK** to accept the related objects and return to the original operation.

5. Click **Save and Check-In** , **Save** , **Cancel Check-Out** , or **Close** .

If errors occur during the update process, a dialog box displays the objects and properties on which the failure occurred and states the cause of the failure. This error report can be saved or printed to an HTML or text file.

Editing properties when working in different locales

Teamcenter supports the configuration of multiple locales to render the client user interface in different human languages. The default Teamcenter database configuration has one **Master Locale** supporting one language, which the installing administrator can change. One or more *alternate locales* can be configured, which allows users to select their preferred language to work with Teamcenter.

If you have translation access privileges, when you log on to Teamcenter you may see the **Localization**  button in properties dialog boxes next to property objects that are localizable. This button appears only if special localization configurations are defined. Clicking **Localization**  opens the **Language Translations** dialog box, which lists existing translation values.

Note:

If you find that Asian multibyte characters do not display correctly in the rich client, set your system font to a font that supports Asian multibyte characters. For example, on Microsoft Windows systems, the **Arial Unicode MS** font can be set to **Message Box** to correct this problem.

Similarly, if you find that Asian multibyte characters do not display correctly when you start the rich client using the native language (**-nl**) option, restart your system in the appropriate locale and set your system font to a font that supports Asian multibyte characters.

Caution:

If you use the Lifecycle Visualization embedded viewer, do *not* launch the rich client using the **-nl** option.

The embedded viewer will not work properly if the operating system locale and the rich client runtime locale do not match. The **-nl** option overrides the Java locale and can cause incorrect behavior in the embedded viewer.

Example

Consider a database where the **Master Locale** is configured for English, and an alternate locale for German is also configured. By default, all users work in the **Master Locale** and see the user interface rendered in English. German-speaking users can optionally change to the German alternate locale.

Suppose that in the **Master Locale**, the value in an assembly's Description field is **This component controls the rate of flow**. Users working in the German locale see this English text by default until a translation of the value is created in the German locale. Users who have translation permissions can change the value to German- **Diese Komponente steuert die Durchflussrate** for example. By default, the owner of an object has translation permissions.

A user working in the German locale can also change the value in the **Master Locale** without switching to that locale. For example, if the Description in the **Master Locale** is outdated, the user can update it before changing the translated value in the German locale.

Related topics

- [Modify a property in an alternate locale](#)
- [Modify Master Locale values from a different locale](#)

Modify a property in an alternate locale

You are working in an alternate locale that has a language different from the language of the **Master Locale** configured for the database. You want to modify the value of an object property that has been translated to the language of your locale, or add a translation for a property value.

For related conceptual information, see [Editing properties when working in different locales](#). For examples, scroll to the end of this topic. See also [Modify Master Locale values from a different locale](#).

Restrictions and limitations

You must have permission for translation, and must be the owner of the content or a member of a group that has permission to modify properties.

Prerequisites

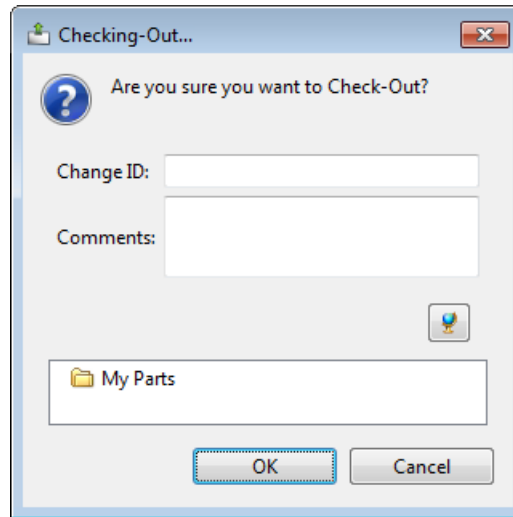
The alternate locale must be configured for your database in addition to the **Master Locale**.

You should know how to [propagate modified properties to related objects](#) if you are going to opt to do that.

Procedure

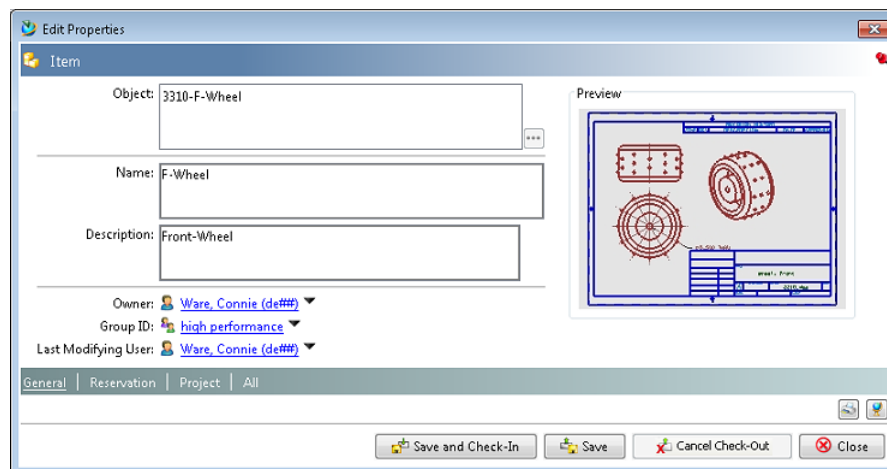
1. Select the object that you want to modify from the tree or **Details** table.

2. Choose **Edit**→**Properties** or right-click the object and choose **Edit Properties**.



- a. (Optional) Type a value for **Change ID** and add comments.
- b. Click **OK** to check out the object.


The system displays the properties of the selected object in the **Edit Properties** dialog box. The properties that can be modified vary from object to object, and you must have write access to make modifications.



Note:

You cannot change ownership of the selected object from the **Properties** dialog box. You must use the **Change Ownership** option on the **Edit** menu.

3. Select the property you want to modify.





- Click the **Localization**  button that appears beside the selected property field. (If the button does not appear, it means your selection is not a localizable property object.)

The **Language Translations** dialog box appears.

- Enter the modified value string, change the **Status** to **Pending** and click **OK**.

Tip:

If no translation for your alternate locale exists, the value in the language of the **Master Locale** appears as the property value. You can add a translation by clicking the + (plus) icon in the dialog box.

- Optionally propagate the modified properties to related objects.
- Click **Save and Check-In** , **Save** , **Cancel Check-Out** , or **Close** .

If errors occur during the update process, a dialog box displays the objects and properties on which the failure occurred and states the cause of the failure. This error report can be saved or printed to an HTML or text file.

Results

The translated value is saved and a notification is sent to whoever is responsible for approving translations. Your translation does not appear to others using the same alternate locale until the translation status is changed to **Approved**.

Examples

- The **Master Locale** language for your database is English and an alternate locale for German is configured. You are working in the German locale. You open an object and discover that the translated property value for your locale is not accurate and you want to correct it.
- The **Master Locale** language for your database is English and an alternate locale for German is configured. You are working in the German locale. You open an object and discover that no German translation exists for some property, so you see the English value from the **Master Locale** and you want to add a German translation.

Modify Master Locale values from a different locale

You are working in an alternate locale that has a language different from the language of the **Master Locale** configured for the database. You want to change the value of an object property in the **Master Locale** without switching to that locale.

For related conceptual information, see [Edit properties when working in different locales](#). For an example use case, scroll to the end of this topic. See also [Modify a property in an alternate locale](#).

Restrictions and limitations

You must have permission for translation, and must be the owner of the content or a member of a group that has permission to modify properties.

Prerequisites

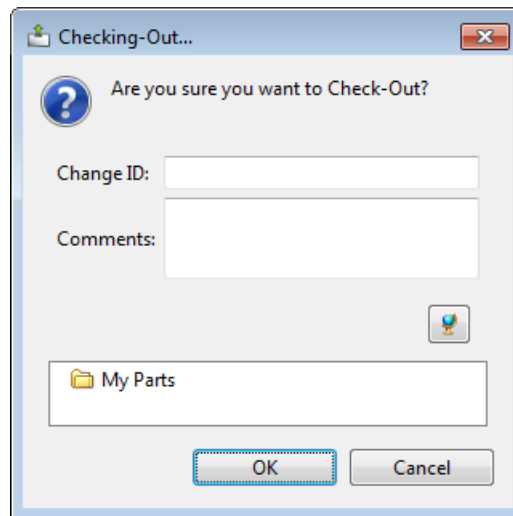
The alternate locale must be configured for your database in addition to the **Master Locale**.

Procedure

1. Click **Save and Check-In** , **Save** , **Cancel Check-Out** , or **Close** .

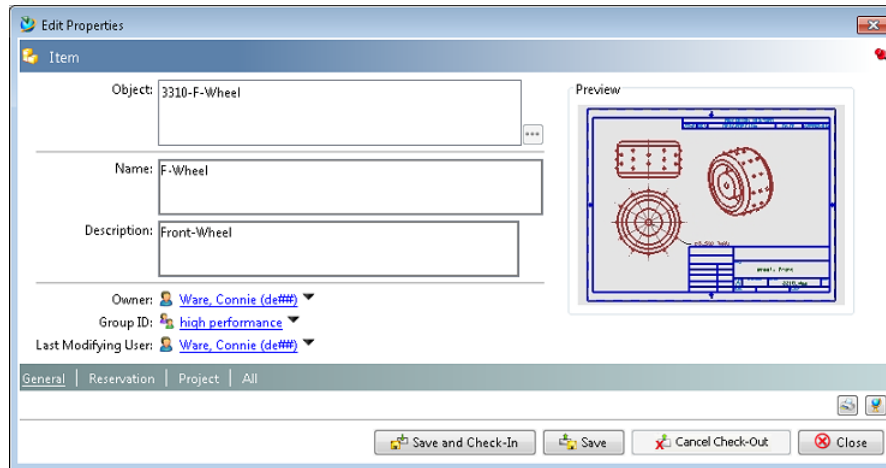
If errors occur during the update process, a dialog box displays the objects and properties on which the failure occurred and states the cause of the failure. This error report can be saved or printed to an HTML or text file.

2. Choose **Edit→Properties** or right-click the object and choose **Edit Properties**.








3. Optionally, type a value for **Change ID**, add comments, and then click **OK**.

The system displays the properties of the selected object in the **Edit Properties** dialog box. The properties that can be modified vary from object to object, and you must have write access to make modifications.

**Note:**



You cannot change ownership of the selected object from the **Properties** dialog box. You must use the **Change Ownership** option on the **Edit** menu.

4. Select the property you want to modify.
5. Click the **Pencil**  button that appears beside the selected property field.
The **Edit value** dialog box appears.
6. Modify the existing value as desired and click **OK**.
7. Click **Save and Check-In** , **Save** , **Cancel Check-Out** , or **Close** .

If errors occur during the update process, a dialog box displays the objects and properties on which the failure occurred and states the cause of the failure. This error report can be saved or printed to an HTML or text file.

Warning:

If you are working in an alternate locale, do not update the **Master Locale** with a value in the language of your alternate locale. If you do, all users of the **Master Locale** will see the value in the language of your alternate locale.

When updating the **Master Locale** be sure to use the **Pencil**  button and not the **Localization**  button.

Results

The value you entered is saved and users working in the **Master Locale** can now see it.

Examples

The **Master Locale** language for your database is English and an alternate locale for German is configured. You are working in the German locale.

An object or revision has been modified in such a way as to require that some property value be updated - the Description for example. Both the translated value in your alternate locale and the original value in the **Master Locale** need to be updated. You want to change the **Master Locale's** English value, translate that to German, and modify the property value in your alternate (German) locale.

Modify the properties of multiple objects simultaneously

1. Select the objects in the tree or **Details** table.

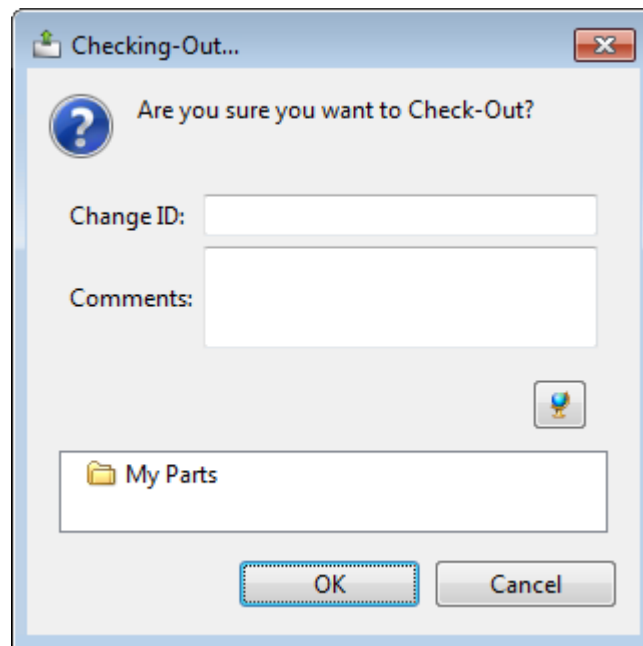
Note:

You must have write access to modify object properties. If you do not have access to one or more of the selected objects, an error message is displayed.

2. Choose **Edit→Properties** or right-click the objects and choose **Edit Properties**.

If you have previously applied filters for propagating property modifications to related objects, the affected objects are displayed as children of the selected objects.

3. In the **Check-Out** confirmation dialog box:



- a. (Optional) Type a value in the **Change ID** box and add comments.

- b. Click **OK** to check out the object.

The **Common Modifiable Properties** dialog box displays only those modifiable properties that are common to all of the selected objects.

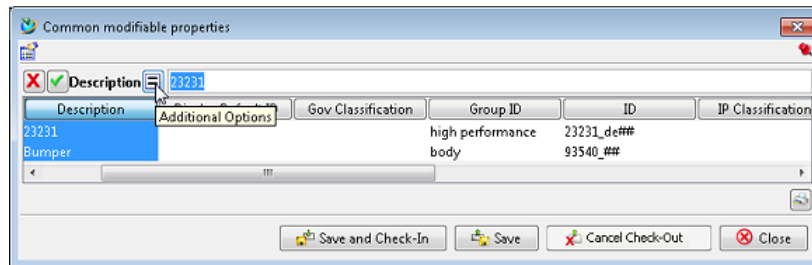
4. Select the cells corresponding to the property values that you want to modify.


You can select a single cell, multiple cells in the same column, or all cells in a column. To select all cells, click the column header.

Note:

The ID properties of multiple objects cannot be modified, because duplicate object IDs are not permitted in Teamcenter.


5. In the **Additional Options**  box at the top of the dialog box, enter or select a new value.



- This area displays either a box or a list depending on whether the values associated with the selected properties are strings or lists of values.
- When using the box to enter string values, you can click **Cancel Changes**  to revert to the last submitted value at any time prior to submitting the changes.

6. Click **Submit Changes**  or press the Enter key.

The modifications are reflected in the table but are not updated in the database until you click **Apply** or **OK**.

7. (Optional) Use the **Additional Options feature** to find and replace values or add prefixes and suffixes.
8. (Optional) Propagate the modified properties to related objects:
 - a. Click **Explore Selected Components** .

The system displays the component structure of the selected object in the **Explore** dialog box along with a pane for defining rules that determine which related objects are included.

b. Select the related objects, using one of the following methods:

- By individual selection

Select the check box corresponding to the component in the tree.

- By selecting all components

Click **Select All Components** located beneath the tree.

- According to user-defined rules

The right pane of the **Explore** dialog box lists type and relation combinations that can be used to select components, as defined by your preference settings. Both the **Type** and **Relation** lists include the **Any** option, which allows you to select all instances of a specific object type, regardless of relation, or to select all instances of a specific relation, regardless of object type.

Apply rule filters, as follows:

- Click **Add a Rule (+)** to add a rule to the table.
- Choose a type and relation combination by double-clicking the boxes and selecting a value from the **Type** and **Relation** lists.
- Click **Update the selection in the tree based on rules** to update the selections in the tree.

Note:

Rules can be removed from the table by selecting the row and clicking **Remove selected rules**.

- Click **OK** to apply the filters to the objects in the **Explore** tree.

The system closes the **Explore** dialog box and displays the pane related to the original operation.

Note:



The selection rules are saved as a user preference.

- Click **OK** to accept the related objects and return to the original operation.

- Click **Save and Check-In** , **Save** , **Cancel Check-Out** , or **Close** .

If errors occur during the update process, a dialog box displays the objects and properties on which the failure occurred and states the cause of the failure. This error report can be saved or printed to an HTML or text file.

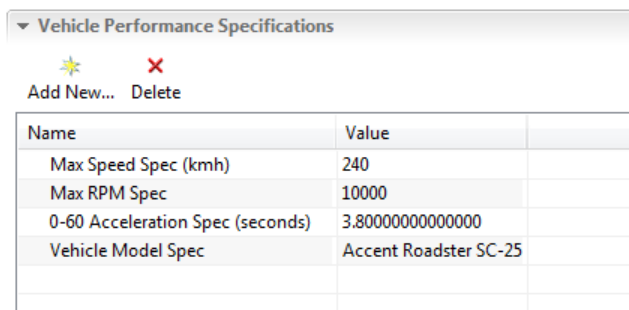
Note:

Saving your modifications with **Save and Check-In**  and **Save**  applies changes for selected rows. If no rows are selected, the command acts upon all rows.

Modify table properties

Name-value properties display name-value pairs in a table format.

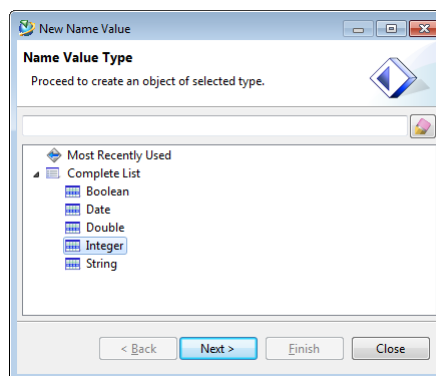
- You can add, edit, or remove rows of names and values in name-value tables.
- Each row in the table is unique by name and can contain different types of data, such as Boolean, date, double, integer, and string.



Name	Value
Max Speed Spec (kmh)	240
Max RPM Spec	10000
0-60 Acceleration Spec (seconds)	3.8000000000000000
Vehicle Model Spec	Accent Roadster SC-25

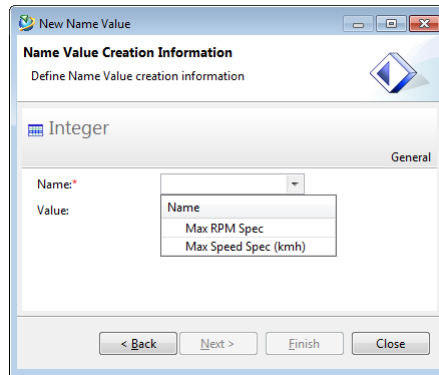
- Click **Add New** .

The **Name Value Type** dialog box is displayed.



- Select the type of data to add.

- Select from the list of property names already entered, or type a new name.




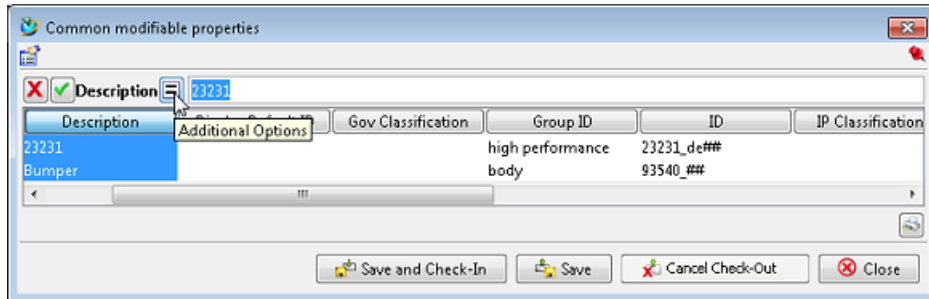
Note:

Name-value properties only appear in the **Summary** tab of the rich client. To make a name-value property appear, an administrator must add the property definition in a summary XML rendering style sheet using an **objectSet** tag.

Modify string properties

Find and replace property values

When modifying string properties, you can click **Additional Options**  to find and replace a specific text string or add a prefix or suffix to a property value.



Find/Replace additional properties options

Option	Description
Find What	Specifies a text string to be matched in the selected cells in the table. The Find Next button is enabled when text is entered in this

Option	Description
Prefix	<p>box. Values entered in this box are retained and displayed the next time you open the dialog box.</p> <p>Specifies a prefix to be added to the values of the selected properties. Values entered in this box are retained and displayed the next time you open the dialog box.</p>
Replace With	<p>Specifies the text string that replaces the text designated in the Find What box. The replacement takes place only when the Replace or Replace All options are selected. Values entered in this box are retained and displayed the next time you open the dialog box.</p>
Suffix	<p>Specifies a suffix to be added to the values of the selected properties. Values entered in this box are retained and displayed the next time you open the dialog box.</p>
Pattern	<p>Specifies that the characters in the Find What box will be considered as a pattern to be matched during the search.</p>
Entire Word	<p>Specifies that all of the characters in the Find What box must be present to be considered as a match in the search.</p>
Case Sensitive	<p>Specifies that the case of the characters in the Find What box must be matched during the search.</p>
Clear button	<p>Clears the contents of the dialog box.</p>
Replace	<ul style="list-style-type: none"> • Adds the string in the Prefix box to the values of the selected properties in the table. • Adds the string in the Suffix box to the values of the selected properties in the table. • Replaces the next occurrence of the text in the Find What box with the text in the Replace With box.
Replace All	<ul style="list-style-type: none"> • Adds the string in the Prefix box to the values of the selected properties in the table. • Adds the string in the Suffix box to the values of the selected properties in the table. • Replaces all occurrences of the text in the Find What box with the text in the Replace With box.

View property values in the Details table

1. In the component view or tree pane, select the parent of the object or objects that you want to display.
2. Click the **Details** tab.

The system displays the properties of the children of the selected object in the **Details** table.

Note:

You must check out the Item Revision to edit the fields, such as the **Description** field, from the **Details** table.

View properties of a single object in the Properties dialog box

1. In the component view or tree pane or **Details** table, select the object that you want to display.
2. Choose **View** → **Properties** or right-click the object and choose **View Properties**. Alternately, press Alt+P as the short-cut key.

The system displays the properties of the selected object in the **Properties** dialog box.

- Click **Check-Out and Edit** or press Alt+E to check out the objects.
- Click **Cancel** or press Alt+C to cancel changes and close the dialog box.

Note:

The **Properties** dialog box for a dataset may display read-only boxes for relationships such as **UG Expressions**, **UG WAVE Geometry**, and various others. These boxes, which are normally blank, are used to display relationship information stored in the database.

View properties of multiple objects in the Properties dialog box

1. In the component view, tree pane, or **Details** table, select those objects for which you want to view properties.

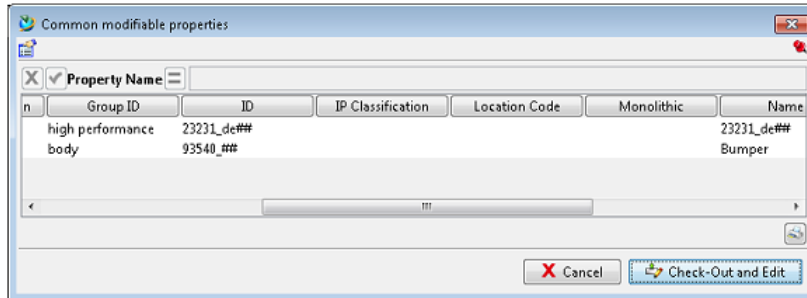
Tip:

To select contiguous objects, click the first object, press the Shift key, and select the last object.

To select multiple noncontiguous objects, click the first object, press the Control key, and select the remaining objects.

- Choose **View→Properties** or right-click the selected objects and choose **View Properties**.

The system displays the properties of the selected objects in the **Common modifiable properties** dialog box.



- Click **Check-Out and Edit** or press Alt+E to check out the objects.
- Click **Cancel** or press Alt+C to cancel changes and close the dialog box.

Change the table display

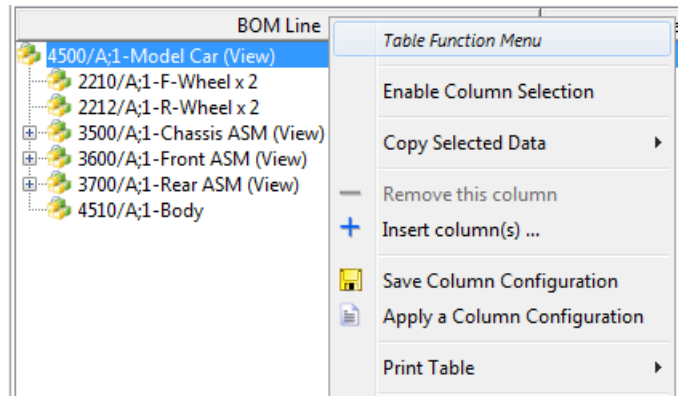
Configuring table data display in the rich client

You can configure the way data is displayed in tables throughout the rich client interface. The method of configuring data display in application table panes, such as in Structure Manager, differs from the method of configuring data display in view tables, such as the **Details** view in My Teamcenter.

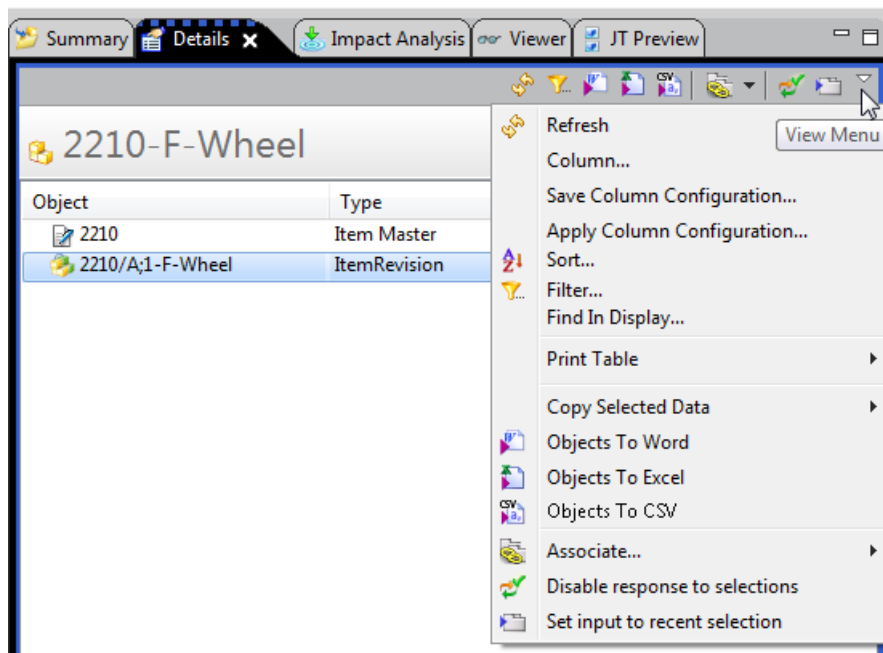
After you configure the table data display using either method, you can:

- Apply the configuration to the current table.
- Save the configuration and apply it another time you want to view data.

To configure the data display in an applications table pane, right-click a column header and choose the applicable command from the **Table Function Menu**.



To configure the data display in a view table, click the **Menu** button ▼ and choose the applicable command from the view menu.



Reposition columns in a table

1. Click the header of the column that you want to move and hold the mouse button.

Note:

For ease of use, leave the **Object** and **Type** columns in the first and second positions in the table.

2. Drag the column to the desired position in the table and release the mouse button.

The column appears in the new position.

Sort data in a table

1. Right-click in one of the column headers in a table pane or click **View Menu** ▼ in a table view.
2. Choose **Sort** from the menu.

The **Sort** dialog box appears.

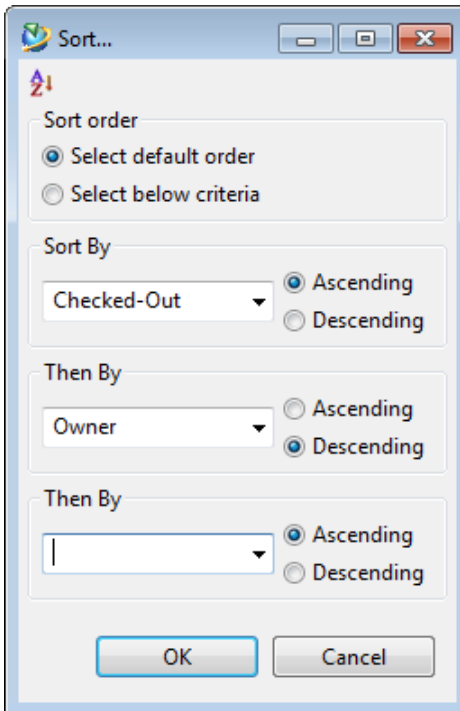


Table data can be sorted in ascending or descending order using up to three properties as sort criteria.

3. Select the primary property to be sorted on from the list in the **Sort By** section. Select **Ascending** or **Descending** to designate how to sort the property values.
4. (Optional) Select up to two additional properties to use as sort criteria by selecting a property from the list in each of the **Then By** sections of the dialog box. Select **Ascending** or **Descending** to designate how to sort the property values.
5. Click **OK** to sort the property values in the table display or click **Cancel** to close the **Sort** dialog box without sorting the property values.

Insert columns in a table pane

Note:

Before you insert columns in a table pane, you may want to save the current column configuration of the table pane display to use at another time. You can use the **Save Column Configuration** command on the **Table Function Menu** to save the current configuration.


1. Right-click a column header in the table pane and choose **Insert column(s)**.

The **Change Columns** dialog box appears.

2. Double-click a category and select the object type for the properties you want to display.

Note:

Display only the properties that you view or change frequently. The more properties that are displayed, the longer it takes to expand folders and items.

3. Select the property you want to add to the table pane display from the **Available Columns** list and click the **Add the selected columns from Available Columns to Displayed Columns** button .

The selected property appears in the **Displayed Columns** list.

Tip:

You can also double-click the property in the **Available Columns** list to add it to the **Displayed Columns** list.

4. Repeat step 3 for all property columns you want to add to the table pane display.
5. Click **Apply** to insert the columns into the current table pane display.

Note:

You can use the **Save Column Configuration** command on the **Table Function Menu** to save the current table pane display, including the columns you inserted.

You can use the **Apply a Column Configuration** command on the **Table Function Menu** to apply a saved configuration to the table pane display, or modify a saved configuration.

6. (Optional) Click **Save** to save the properties you added to the **Displayed Columns** list.
7. Click **Cancel** to close the dialog box.

Remove columns from a table pane

1. Right-click the header of the column that you want to remove and choose **Remove this column**.

You are prompted to confirm that you want to remove the column from the table.

2. Click **Yes** to remove the column from the table pane display.

Editing property values in live Word

When objects are exported from Teamcenter for live integration with Word, the object template selected during export to Microsoft Word determines the properties that are included in the output live Word document. Teamcenter extracts the property values to the live Word file during export, and the live Word file is synchronized with the Teamcenter database through the Microsoft Office integration.

To edit the property values in a live Word document and interactively update the values in Teamcenter, open and edit the live Word document in a Microsoft Office integration environment. Editable values you change in the Word file are immediately applied to the Teamcenter database and appear in Teamcenter. Furthermore, values that you or other users change in the Teamcenter client are updated automatically in the live Word file.

To edit the property values in a live Word document offline, store the live Word export document for offline editing during the Word export operation. After you edit the property values in the live Word document offline, you can synchronize the update to Teamcenter. To synchronize offline updates to Teamcenter, open the edited live Word file in a Microsoft Office integration environment and then choose to synchronize updates to Teamcenter.

Edit property values in live Excel

You can use Microsoft Excel to change the values of editable properties for selected objects. When you start a live Excel session, you can work in an interactive Excel file that is synchronized with the Teamcenter database.

Note:

Editable values that you change in the Excel file are immediately applied to the database, and then are displayed in My Teamcenter. Furthermore, values that you or other users change in the client are updated automatically in the Excel file.

1. Do one of the following:
 - To create a new file:
 - a. Choose **Tools**→**Export**→**Objects To Excel**.

The **Export To Excel** dialog box appears.

- b. Under **Output**, click **Live integration with Excel (Interactive)** or **Live integration with Excel (Bulk Mode)**.

Values that you cannot change in the database are grayed-out in the cells of the live Excel file.

- c. To check out objects while exporting to live Excel, select **Check out objects before export**.

Note:

The check out applies to all objects being exported. You should use this option carefully if you are exporting a large set of objects or perhaps an entire specification.

- d. Under **Output Template**, select a template from the **Use Excel Template** list.

- e. (Optional) Click **Copy URL**.

Note:

- **Copy URL** is unavailable if you select more than one object to export.
- **Copy URL** is unavailable if you select any of the following dialog box options:

- **Work Offline and Import**
- **Export All Visible Columns**
- **Export All Objects in View**

The **URL Generated** message is displayed, confirming that the URL is in your Windows Clipboard and showing the URL details.

- f. Click **OK** to generate the Excel export file.
- To open a file:
 - a. Choose **Tools**→**Open Live Excel**.

Excel Live starts with Excel's **Open** dialog box.

- b. Select the file and click **Open**.

Values that you cannot change in the database are dimmed in the cells of the Excel Live file.

2. In the Excel Live file, do any or all of the following:

- To change a value:
 - a. Double-click the cell that contains the value.

Warning:

Do not change the value in the Teamcenter client while the cell is in edit mode. Otherwise, Excel Live displays an error message.

A list appears if the property has a choice value.

Note:

The choice list can be modified, and you may see different choices from time to time.

If the choice list is a project-based conditional list of values, a different list of choices may appear for one item than another. This depends on whether the items are assigned to a project, to which project each item is assigned, and if the applicable projects have a different list of values for the same property.

If you have questions about the choice list, consult your Teamcenter administrator.

A box opens if the property has a date, numeric, or text value.

- b. Do one of the following:
 - In the choice list, select the choice or choices for the new value, and then click another cell to close the list.

Buttons indicate a single-choice list. You can select only one choice.

Check boxes indicate a multiple-choice list, in which you can select any combination of choices. Selecting an unchecked choice adds it to the value, and selecting a checked choice removes it from the value.

- In the box, enter the new value, and then press the Enter key.

For a date or numeric property, the value must match the valid format for the property.

For a text property, any keyboard characters are valid, except that the **Name** property value cannot contain double quotation marks.

You can also select the cell and enter the new value directly.

Note:

If you create an Excel formula, you can automatically update values in all dependent cells when you change the value in a precedent cell. This is described in *Microsoft Excel Help*.

- To copy or move a value:
 - a. Select the source cell, and then choose Excel's **Edit→Copy** or **Edit→Cut** menu command.
 - b. Select the destination cell, and then choose Excel's **Edit→Paste** menu command.

Note:

If you cut the value and paste it into a different row, the value remains with the source object in the database. Therefore, the value is not moved in the Teamcenter client.

- To hide or show rows, click the button in the heading of a property column, and then select a filtering criterion from the popup list.
3. To end the Excel Live session, choose **File→Exit** in Excel.

Excel Live displays a message asking if you want to save the changes.

- If you click **No**, the file remains on your computer as a temporary file.
- If you click **Yes**, Excel displays the **Save As** dialog box, in which you assign the file name, file type, and location. The file remains interactive with Excel Live after you exit.

Relation properties

What are relation properties?

Objects are associated by relations.

For example, datasets (secondary objects) are associated with item revisions (primary objects) using relation objects. The meaning of the secondary object may vary from one context to another. Properties on relations enable you to record information specific to the association or context in which the object is used.

Your administrator can create custom attributes (properties) to apply to relation business objects in the system.

A single item can be associated to multiple items or contexts. Objects are associated by relations, and the meaning of the relation may vary from one context to another.

Establish a relation between objects

1. Open My Teamcenter.
2. Select the secondary object items that you want to paste on the primary object item and choose **Edit→Copy**.
3. Select the primary object item with which you want to associate the secondary business object and choose **Edit→Paste special**.

The **Paste** dialog box appears, displaying a list of relations.

4. Select the relation that you want to use to associate the primary and secondary business objects.
5. Click **OK**.
6. If there are any visible attributes defined on the relation, the **Enter the Values for Properties on Relation** dialog box appears. Enter the values for the attributes.

Note:

If you click the **Apply All** button, the values provided for the first relation are set for the other relations if you selected multiple secondary object items. Click **Next** to enter different values for the other relations.

7. Click **Finish**.

Note:

The **Finish** button is available only when values have been provided for all mandatory attributes.

The secondary business object is pasted on the primary business object through the selected paste relation business object.

Note:

You can either choose **Edit→Paste** or drag the secondary business objects to the primary business object to associate the secondary and primary business objects through the default paste relation of the primary business object. You can perform the same actions in the **My Navigator**, **CM Viewer**, and **Details** panes of the Structure Manager.

Modify the properties of a single relation object

1. In the component view, tree pane, or **Details** table, select the secondary object for which you want to view relation properties.

2. Choose **Edit→Properties on Relation** or right-click the object and choose **Properties on Relation**.

The system displays the properties of the relation between the selected secondary object and the primary object.

Note:

You must have write access to modify relation properties.

3. Modify the property values, as required.
4. Click **OK** or **Apply**.

Modify the properties of multiple relation objects simultaneously

1. Select the secondary objects in the tree or **Details** table.

Note:

You must have write access to modify object properties. If you do not have access to one or more of the selected objects, an error message is displayed.

2. Choose **Edit→Properties on Relation** or right-click the object and choose **Properties on Relation**.

The **Common Modifiable Properties** dialog box displays only those modifiable properties that are common to all selected objects.

3. Select the cells corresponding to the property values that you want to modify.

You can select a single cell, multiple cells in the same column, or all cells in a column. To select all cells, click the column header.

4. Enter a new value at the top of the dialog box.


This area is either a box or a list depending on whether the values associated with the selected properties are strings or lists of values.

When using the box to enter string values, you can click **Cancel Changes** to revert to the last submitted value at any time prior to submitting the changes.


5. Click **Submit Changes** or press the Enter key.

The modifications are reflected in the table but are not updated in the database until you click **Apply** or **OK**.

Delete a relation

1. Open My Teamcenter.
2. Select the secondary object that has a relation with a primary business object.
3. Right-click the secondary object and choose **Cut**, choose **Edit→Cut** or click  to cut the relation between the primary and secondary objects.

Create saved queries based on properties on relations

1. In the Teamcenter rich client application window, click **Query Builder** in the navigation pane.
2. Remove any existing information from the **Query Builder** boxes by clicking the **Clear** button.
3. In the **Name** box, type the name of the query. The name of the query must be unique.
4. In the **Description** box, type additional information about the query.
5. From the **Modifiable Query Types** list, select **Local Query** as the query type.
6. Click **Search Class**  to select the target class for the query.



The **Class Selection** dialog box appears.

7. Specify the desired search class by selecting an entry from the **Class Selection** dialog box. For example, select **Item**.
8. Click **Display Setting** and select **All Attributes**.

All the classes and attributes appear in the **Attribute Selection** pane.

9. In the **Attribute Selection** pane, double-click the **Referenced_By** node.

The **Class Attribute Selection** dialog box appears.

10. Click the **Search Class**  button to select the referencing class for the query.
11. Type the name of the relation business object and click  or scroll through the tree structure and select the relation business object. Relation business objects appear as a subclass of **ImanRelation**. Close the dialog box after selection.

The POM schema in tree format appears in the **Class Attribute Selection** dialog box.

- In the **Class Attribute Selection** dialog box, select the referencing object. For example, select **primary_object** by double-clicking the node.

Note:

You can also select the secondary object as the referencing object.

- The referencing object, in this case, **primary_object**, and class, **Newrelation**, appear in the **Attribute Selection** area.
- Select the attributes of the referencing object on which you want to build query clauses.

The attribute appears in the **Search Criteria** table.

Note:

The display name of the attribute is *Relation_business_object←referencing_object←attribute_name*, for example, **Newrelation←primary_object←Attribute1**. The ← symbol indicates a reversed-reference relationship.

- In the **Attribute Selection** section, select the other referencing object. In this case, select **secondary_object** in the **Attribute Selection** section.

The **Class Selection** dialog box appears.

Note:

If you selected primary object in step 12, select the secondary object in this step. If you selected secondary object in step 12, select the primary object in this step.

- Select the class and click **OK**. For example, select **Item**.
- To include other attributes of a relation, select the attributes in the **Attribute Selection** section.

The attribute appears in the **Search Criteria** table.




- Click the **Create** button to create the query.


The query is added to the **Saved Queries** tree of the **Query Builder** pane and is available in the **Select a Query** list in My Teamcenter.

Execute a saved query based on properties on relations

Note:

Your administrator must first use Query Builder to create queries for properties on relations.


1. Open My Teamcenter.
2. Locate the quick search input field, execute button, and menu    at the top of the navigation pane.

3. Click the menu button  and choose **Advanced**.

The **Search** view appears.

4. Click the **Select a Search** button on the **Search** view toolbar and choose **More**.
5. In the **Change Search** dialog box, expand the **System Defined Searches** folder.
6. Select the appropriate properties on the relation query and click **OK**.

The **Search** pane displays the search attributes associated with the relation query.

7. Enter the attribute values and click the execute button .

The search results are displayed in the **Search Results** view.

Controlling data access and ownership

Managing object protection and ownership

Managing object protection and ownership is crucial in a distributed-computing environment. Because workspace objects represent actual product information in the database, they must be protected from unauthorized or accidental access, modification, and deletion.

Teamcenter implements two different tiers of data protection:

Rules-based protection	Rules-based protection is configured by your administrator and includes conditions or rules that control access to objects. These rules affect your entire Teamcenter site and are enforced by the Access Manager (AM).
Object-based protection	Object-based protection uses access control lists (ACL) to create exceptions to rules-based protection on an object-by-object basis. Object ACLs are most useful for either granting wider access or limiting access to a specific object.

With the exception of the **Create** privilege, rules and ACLs do not control the creation of objects. You can restrict the user from creating certain business objects.

You can classify data to restrict object access based on intellectual property and international distribution requirements.

Teamcenter provides mechanisms for rules-based and object-based protection, and for authorized data access (ADA) for intellectual property (IP) and international traffic in arms regulation (ITAR).

Rules-based protection

Rules provide security for your Teamcenter data by:

- Controlling access to data on a global basis.
- Determining whether a user has permission to view or perform an action on an object.
- Filtering data according to the attributes of the data.
- Granting privileges to the data according to the users' IDs and their session context (the group and role they used to log on).

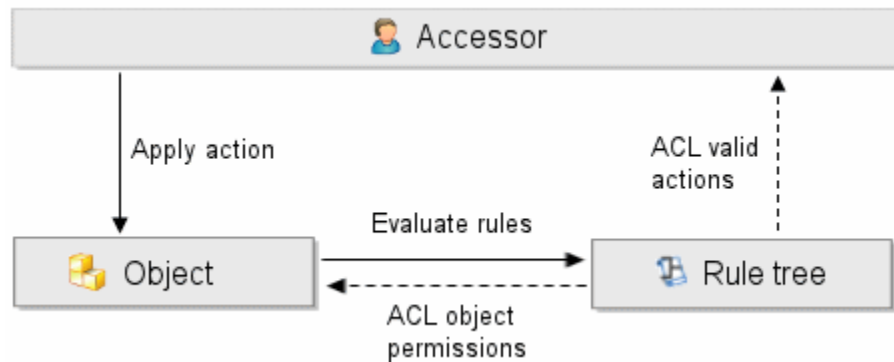
Note:

Rules do not control the creation of objects. They only determine what operations can be performed on existing objects.

Rules are defined by a combination of:

- A condition.
- A value for the condition.
- An access control list (ACL) that grants privileges to accessors.

The condition and value identify the set of objects to which the rule applies; the ACL defines the privileges granted to users (accessors).



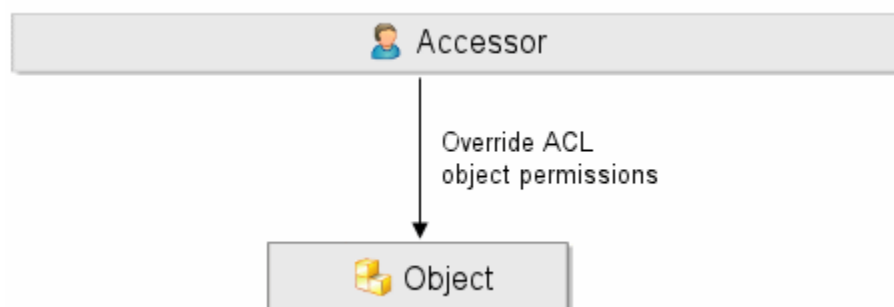
User actions against objects cause the rule tree to be evaluated to dynamically build an access control list for the object. The ACL controls permissions for the object and determines who (accessors) can do what (actions) to the object.

Object access control lists

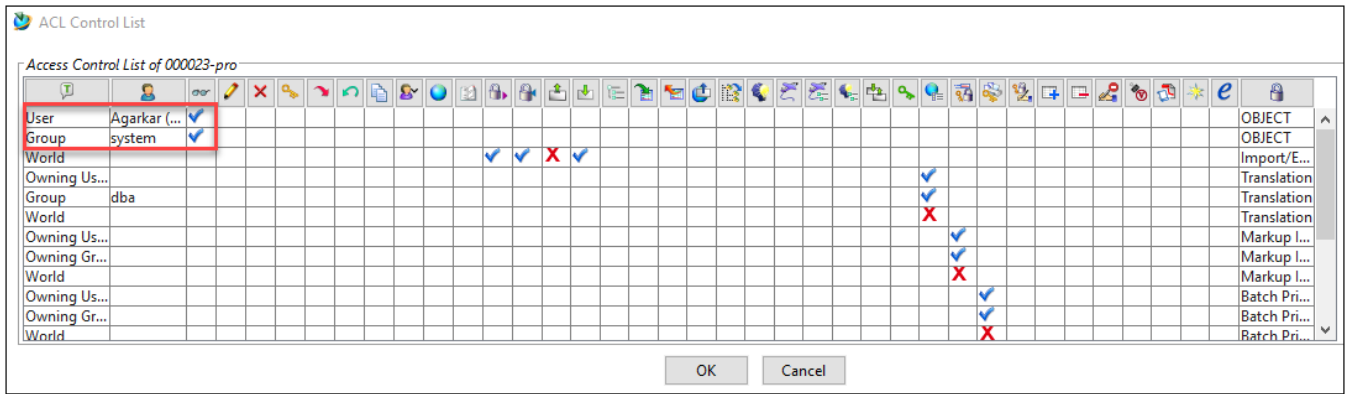
Object-based protection uses access control lists (ACLs) to create exceptions to rules-based protection on an object-by-object basis.

Object ACLs are most useful when you need to:

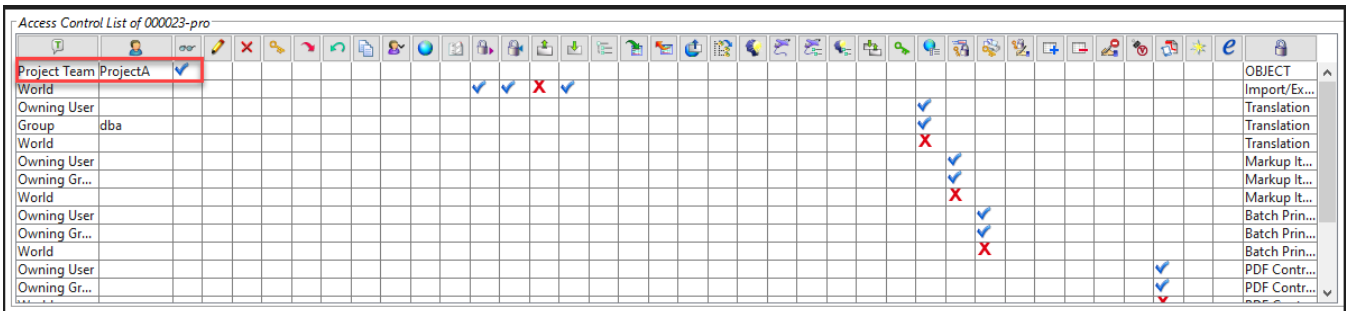
- Grant wider access to a specific object.
- Limit access to a specific object.



Teamcenter uses ACLs to determine access to an object only by users and groups. For example, the object ACLs (**User-Agarkar** and **Group-system**) are valid.



In contrast, the object ACL (**Project Team-ProjectA**) is *invalid*, as object ACLs are not used to determine access to an object by *Project Team*.



Users with proper permissions can override the ACL for an object to grant or deny permissions for certain users but only when the rule tree allows.

For example, the rule tree does not allow object-based access rules to override the rules-based protection when:

- An object has an assigned status.
- The object access rule is granted in a workflow.

Note:

Object ACLs do not control the creation of objects. They only determine what operations can be performed on existing objects.

- Each object ACL contains a list of accessors and the privileges granted, denied, or not set for each accessor.
- Each individual pairing of an accessor with their privileges is considered a single access control entry (ACE).

Determining object access


View access privileges

Use the **Access** dialog box to determine the access privileges you have to an object. You can also view the access privileges for another user.

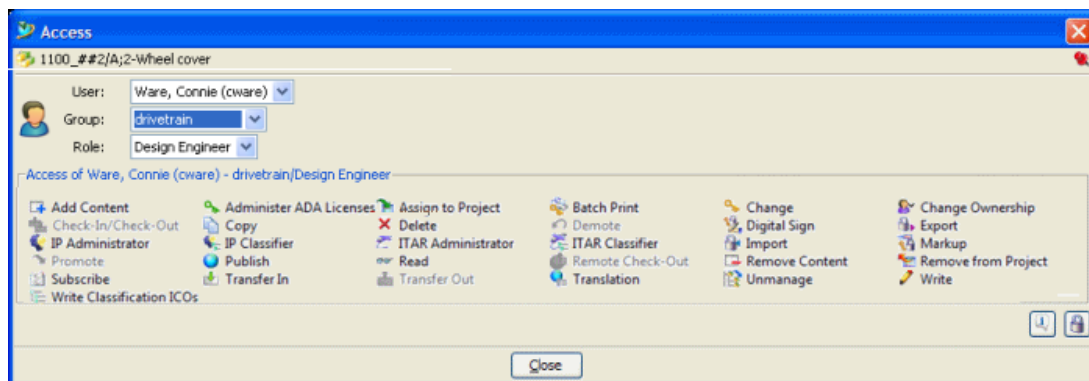
For quick access to summary access information, you can use the Information Center in the lower portion of the Teamcenter window next to the clipboard.

1. In My Teamcenter, select the object affected by the access rule and choose **View**→**Access**.

Tip:

You can also right-click the object and choose **Access** from the shortcut menu, or you can click **Access**  on the toolbar.

The **Access** dialog box appears, showing the privileges that the logged-on user has to the selected object.



2. To view privileges assigned to your other roles and groups, select the role or group from the lists in the **Access** dialog box.

The system updates the **Access** table to reflect the privileges of the selected group and role.

3. To view the privileges of a different user, select the user, group, and role from the lists in the **Access** dialog box.

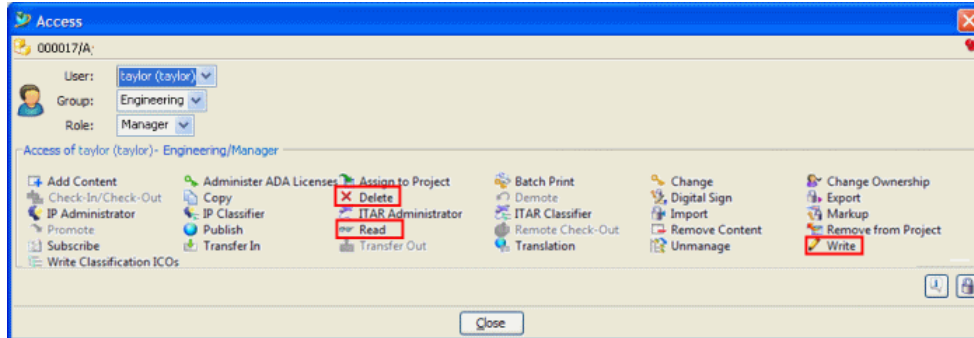
The system updates the **Access** table to reflect the privileges of the selected user, group, and role.

View access privileges example

In this example, you see privileges for two users for one object.

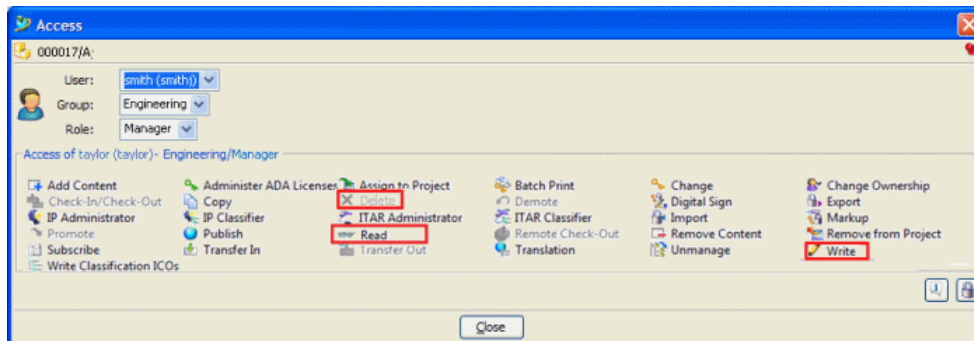
1. To view access on a selected object, choose **View→Access**.

The **Access** dialog box shows the user **taylor** has several privileges, such as **Delete**, **Read**, and **Write** privileges to the **000017/A** item.



2. To view the privileges of a different user, select the user, group, and role from the lists in the **Access** dialog box.

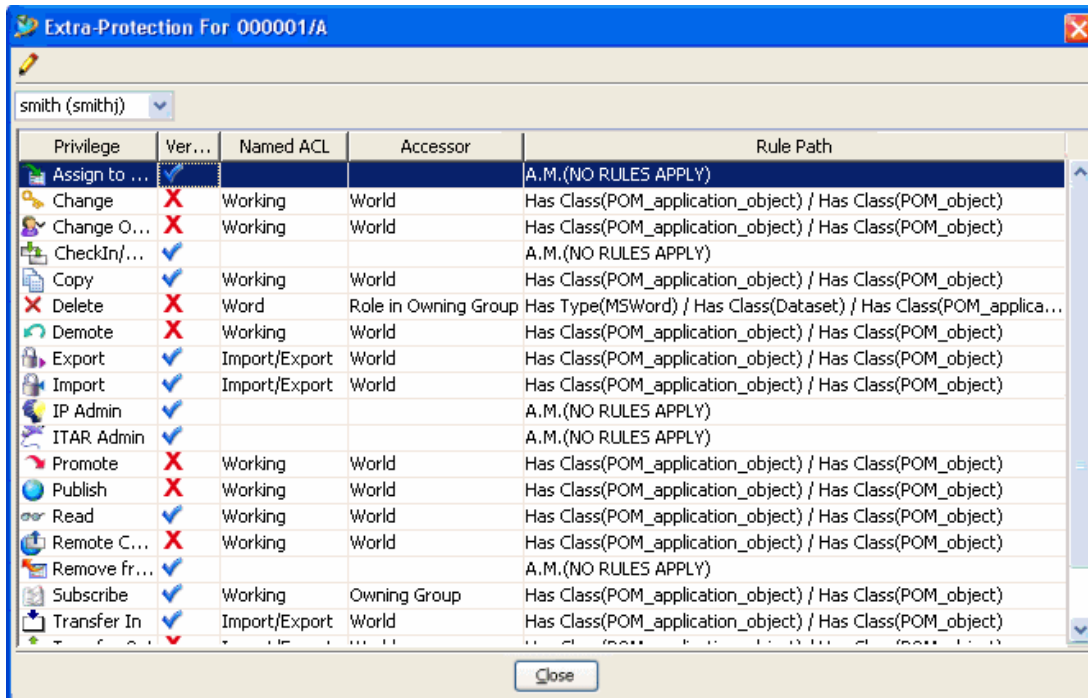
The **Access** dialog box shows the user **smith** has **Read** and **Write** privileges but does not have **Delete** privileges to the **000017/A** item.



View the rules from which privileges are derived

In the **Access** dialog box, click **Display extra protection** .

The **Extra Protection** dialog box appears, showing the rules that apply to a privilege being granted or denied.



Be aware that the **Access** dialog box and the **Extra Protection** dialog box may display different information.


- The **Access** dialog box displays information based on the current user and that user's group and role.
- The **Extra Protection** dialog box displays information based on the current user, without assessing the current user's group or role.

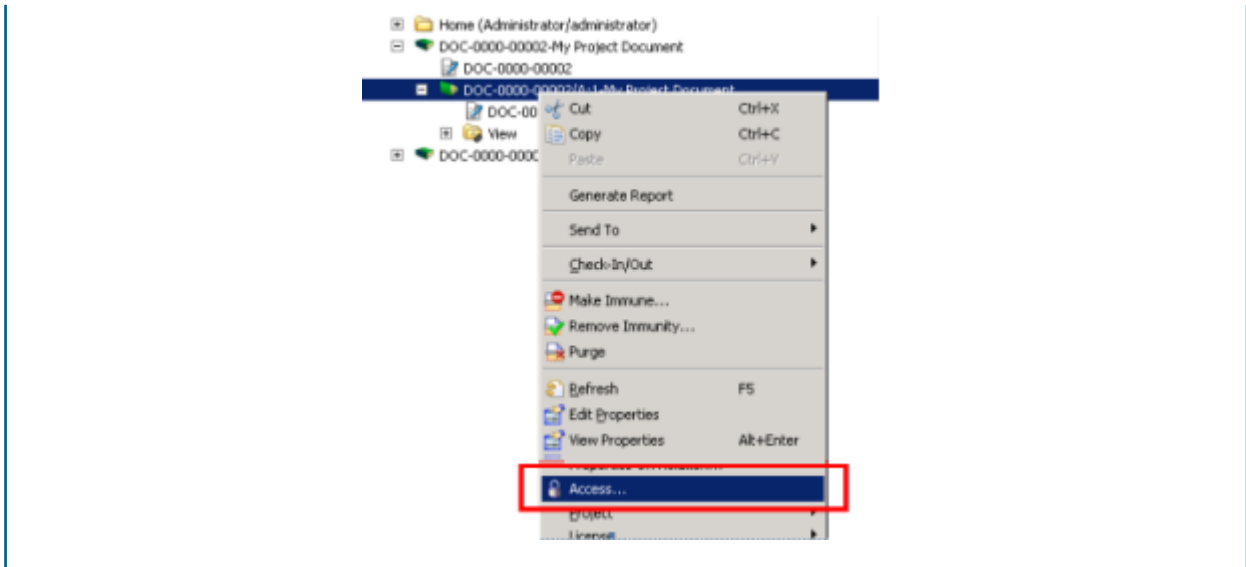
How do I view access privileges set for another user on an object?

You can view the access privileges set for another user on an object and see the access control lists (ACLs) and Access Manager rules that define the privileges.

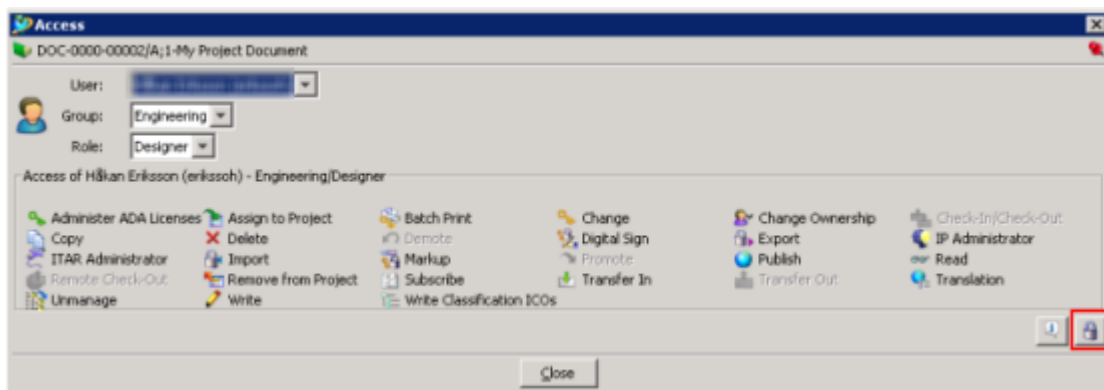
1. In My Teamcenter, select the object affected by the access rule and choose **View→Access**.


Tip:

You can also right-click the object and choose **Access** from the shortcut menu, or click  on the toolbar.

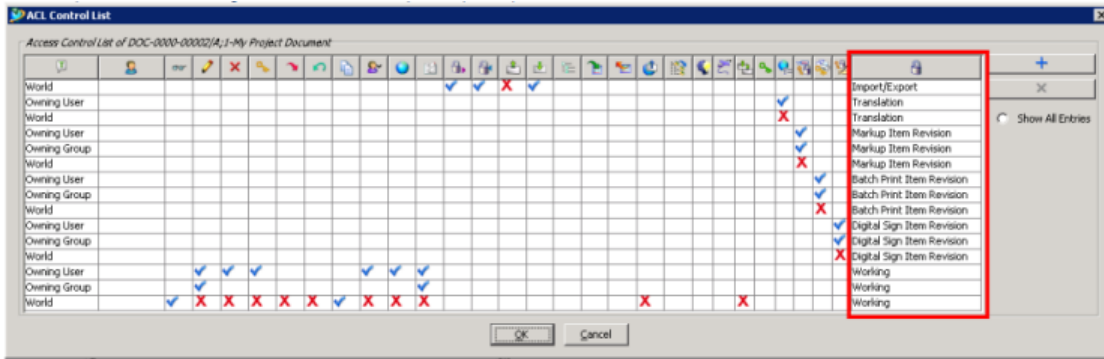


The **Access** dialog box appears, showing your privileges on the selected object.

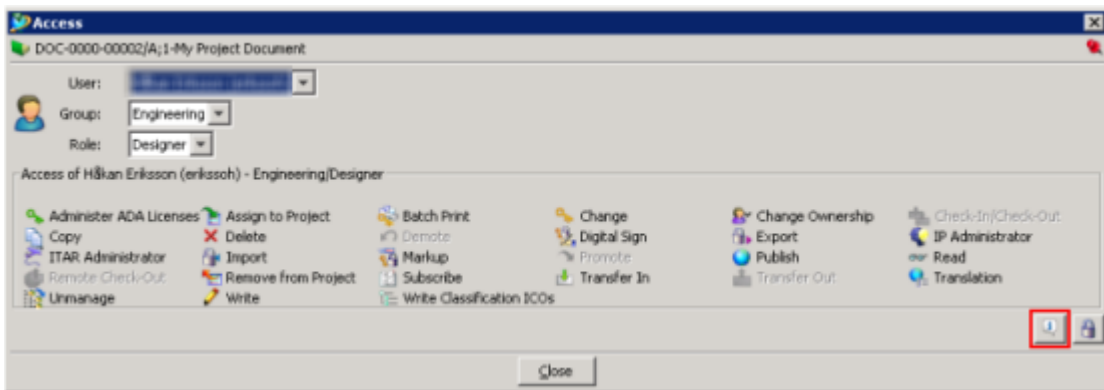


2. From the **User**, **Group**, and **Role** list, select another user, group, or role.
3. In the lower right corner of the **Access** dialog box, click .

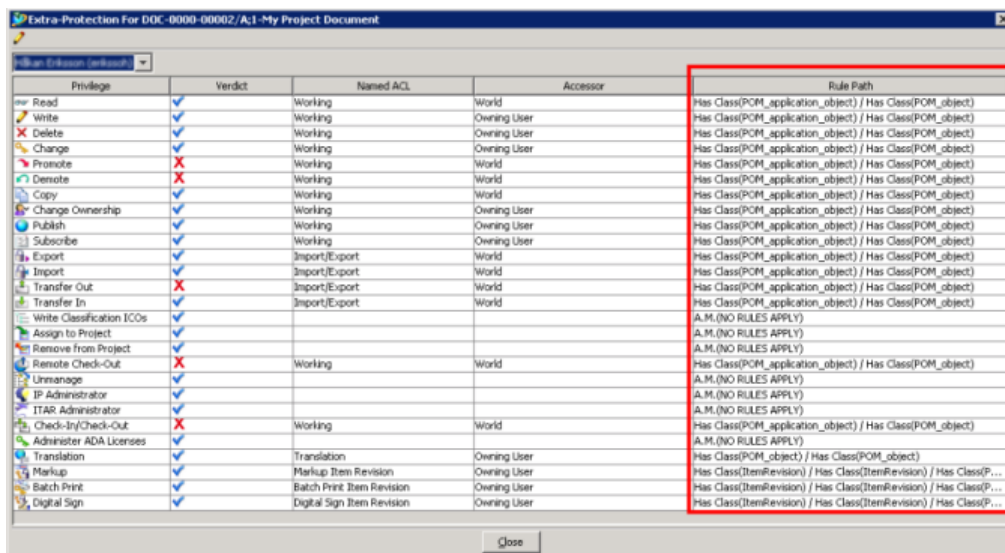
The **ACL Control List** dialog box appears.



- (Optional) Instead of just viewing this list, you can also return to the **Access** dialog box and click the **Extra Protection** button to show the rules that apply to a privilege being granted or denied.



The **Extra Protection** dialog box appears.




From this dialog box, you can easily see which branches in the Access Manager rule tree were effective when evaluating each privilege.

Note:

The **Access** dialog box and the **Extra Protection** dialog box may display different information.

- The **Access** dialog box displays information based on the current user and that user's group and role.
- The **Extra Protection** dialog box displays information based on the current user, without assessing the current user's group or role.



Add accessors and grant privileges

1. Select an object in a tree pane or component view and click **Access**  on the toolbar or right-click the object and choose **Access**.



The system displays the **Access** dialog box, showing the access properties assigned to the owner of the object.



Note:

Master forms inherit access privileges from the parent item or item revision. Therefore, changing access privileges to an item or item revision affects the privileges on the master form.

2. Click **Get access control list**  in the lower-right corner of the **Access** dialog box to display the **ACL Control List** dialog box.
3. Click **Add access control entry to ACL**  to add a blank row to the list.

The system displays a blank row at the bottom of the ACL list. You can click this button more than once to add multiple entries.

4. Select the accessor type, as follows:
 - a. Double-click the blank box in the **Type of Accessor**  column to display the list of predefined accessor types.
 - b. Choose the accessor type that you want to add to the list.
5. (Optional) Double-click the blank box in the **ID of Accessor**  column to access the list of predefined accessor IDs, and choose an ID from the list.


- Grant or deny privileges for the accessor by double-clicking in the column corresponding to the privilege you want to grant. Select  to grant a privilege or  to deny the privilege.

Note:

To clear a privilege box, double-click in the box and select the blank entry.

- Click **OK** to save the list.


Modify access privileges on an object you own

- Select an object in the tree or component view, and click **Access**  on the toolbar or right-click the object and choose **Access**.

The system displays the **Access** dialog box.

Note:

Master forms inherit access privileges from the parent item or item revision. Therefore, changing access privileges to an item or item revision affects the privileges on the master form.



- Click **Get access control list**  in the lower-right corner of the **Access** dialog box.

The system displays the **ACL Control List** dialog box.

- In the **ACL Control List** dialog box, choose the entry that you want to modify.

Note:

You can only change entries you have created or entries you have been given permission to change by the Teamcenter administrator.




- Grant or deny privileges for the type of accessor by double-clicking in the column corresponding to the privilege you want to modify.
 - Select the check mark  to grant a privilege.
 - Select  to deny the privilege.

Note:

To clear a privilege box, double-click in the box and select the blank entry from the list.

5. Click **OK** to save the list.

Remove access privileges from an object you own

1. Select an object in the tree pane, component view, or **Details** table and click the **Access** button  on the toolbar or right-click the object and choose **Access**.
2. Click **Get access control list**.  in the lower-right corner of the **Access** dialog box to display the **ACL Control List** dialog box.
3. Select the row with the access control entry (ACE) that you want to delete from the list and click the **Remove selected access control entry from ACL**.  button.

The object line is deleted from the **Access Control List**.

Repeat this step until you have deleted the ACEs that you want to remove.

4. Click **OK**.

Change ownership of objects

1. Select one or more objects in the tree pane or component view.
2. Choose **Edit**→**Change Ownership**.

The system displays the **Change Ownership** dialog box showing the selected objects and the names of the owners of the objects.

Note:

The **Change Ownership** command is used to change the ownership of objects and related component objects. You must have read and write privileges to the objects for which you are changing ownership.

3. To change ownership of only the objects displayed in the dialog box (no attachments or components), go to step 5.
4. (Optional) Change the ownership of component objects related to a selected object, as follows:

- a. Click **Explore Selected Components**  .

The system displays the component structure of the selected object in the **Explore** dialog box along with a pane for defining rules that determine which related objects are included.

- b. Select the related objects, using one of the following methods:

- By individual selection

Select the check box corresponding to the component in the tree.

- By selecting all components

Click **Select All Components** located beneath the tree.

- According to user-defined rules

The right pane of the **Explore** dialog box lists type and relation combinations that can be used to select components, as defined by your preference settings. Both the **Type** and **Relation** lists include the **Any** option, which allows you to select all instances of a specific object type, regardless of relation, or to select all instances of a specific relation, regardless of object type.

Apply rule filters, as follows:

- A. Click **Add a Rule (+)** to add a rule to the table.
- B. Choose a type and relation combination by double-clicking the boxes and selecting a value from the **Type** and **Relation** lists.
- C. Click **Update the selection in the tree based on rules** to update the selections in the tree.

Note:

Rules can be removed from the table by selecting the row and clicking **Remove selected rules**.

- D. Click **OK** to apply the filters to the objects in the **Explore** tree.

The system closes the **Explore** dialog box and displays the pane related to the original operation.

Note:

The selection rules are saved as a user preference.



- E. Click **OK** to accept the related objects and return to the original operation.
5. Select the new owner of the objects by clicking **New Owning User**.

The **Organization Selection** dialog box displays your site's organization tree.

6. Traverse the tree to locate and select the user who will be assigned ownership of the objects, and click **OK**.

The **Organization Selection** window closes and the system displays the name of the user that you selected on the **New Owning User** button in the **Change Ownership** dialog box.

7. Save the information in the database or cancel the change ownership operation.
 - Click **OK** to assign ownership to the new user and close the dialog box.

The  symbol in the right margin of the dialog box (across from the selected object) indicates that the change ownership process was successfully completed. If an error occurs during the ownership change process, the **error** icon  is displayed for that object. You can double-click the icon to display details about the error.

- Click **Cancel** to close the dialog box without changing ownership of the objects.

Managing items and revisions

Overview of items, item revisions, and item types

Items, item revisions, documents, parts, and designs are business objects, and as such, are fundamental data objects used to manage information in Teamcenter.

- *Items* are structures that are generally used to represent a product, part, or component.
- *Item revisions* are data objects used to manage changes (revisions) to items.

The **Item** type is the parent type for many objects, including document, part, and design types.

- A *document* in Teamcenter represents all revisions of a real-world document. This item type supports documentation for products, processes, standards, and other aspects of a business, typically from applications such as Microsoft Word, Microsoft Excel, and so on.

- A *part* is a business object in the product structure. Each part may have one or more CAD designs associated with it. The part is managed by the company's part releasing system; it is typically revised and releases separately from the associated design. A part may have one or more business owners.
- A *design* is a CAD design solution that implements a business part. Each part may be implemented by one or more CAD designs. Likewise, a CAD design may implement more than one part. Certain parts do not require a design solution, for example, paint and glue. A design may have one or more business owners.

Note:

Anyone who manages parts and designs separately must align the CAD designs and the BOM at appropriate times.

Items can contain other data objects including other items and folders. You can group and organize product information for each product, part, or component. An item always contains the same data objects, regardless of which user's workspace displays the item.

Note:

Some applications provide specific items. For example, the Teamcenter Simulation Process Management applications use **CAE Model** items, **CAE Geometry** items, and others. For information about application-specific items, see the relevant application documentation.

What are the differences between item revisions, item revision sequences, and dataset versions?

Revisions are related to objects such as documents, requirements, and items, which can be single parts or structures that represent a product, part, or component.

- When you create a new item or revise an item revision, a new item revision is created.
- Item revisions are used to manage changes (revisions) to your product information.
- Item revisions can have sequences, which provide additional management of progress within revisions.
- Dataset revisions are assigned when a new dataset is created and are visible as part of the item or item revision structure.

A *sequence* is an iteration of the object, based on checkout and check in, complete with properties and relations.

- When you create an item revision, an initial sequence, to which Teamcenter assigns an initial sequence ID, is also created. This sequence becomes the active, or default, sequence.

Sequences provide review points for checkout and checkin actions.

- Sequences are dissimilar from dataset versions in that sequences are not intended to support reversion.
- Sequences accumulate up to the value specified by the **TCDefaultKeepLimit** preference.

Sequences can be delete or purged if, for example, sequence immunity is used and the **TCDefaultKeepLimit** preference is reached.

- A sequence of a revision encompasses all information about the object.

A sequence records changes to a work-in-progress, but does not track incremental changes.

- Queries provided with Teamcenter return only the latest sequence.

Custom queries can be modified to do this by searching for the revision with the **active_seq** property set to **1**.

- Sequences are configured to be created by default. To prevent sequence creation, add **ItemRevision** to the value list for the **TCDefaultKeepLimit** preference.

Note:

Preventing sequence creation also disables the ability to cancel checkouts for **ItemRevision** objects.

- Sequence information is displayed based on the **DisplayName** business object constant. To prevent sequence display, modify the **DisplayName** business object constant to **\$item-id+""+\$revision_id+""+\$object_name** and deploy.

A *dataset* is a data object that manages data files created by other software applications.

- Each dataset references at least two other objects: a dataset type that contains a list of tools that can operate on the dataset, and a tool that is used to create or modify the dataset.
- Each dataset can manage multiple operating system files. Each operating system file is called a named reference.
- When you create a dataset, an initial version is created.





A *dataset version* is an iteration of the dataset file.

- A new dataset version is created when you modify and save a file associated with a dataset.

- Previous versions are retained in the database until you purge them, the version limit for the dataset is reached, or the default version limit, specified by the **AE_dataset_default_keep_limit** preference, is reached.
- To open a specific version of a dataset, use **File→Open With** and use the **Version** list in the **Open With** dialog box.

Basic item structure

An *item* in Teamcenter is a structure of related objects. The basic structure of any item consists of the following minimum objects:

 Item	Collects data that is globally applicable to all revisions of the item.
 Item Master (Form)	A form object that is often used to extend the stored property data for an item.
 ItemRevision	Collects data that is applicable to a single revision of the item.
 ItemRevision Master (Form)	A form object that is often used to extend the stored property data for an item revision.

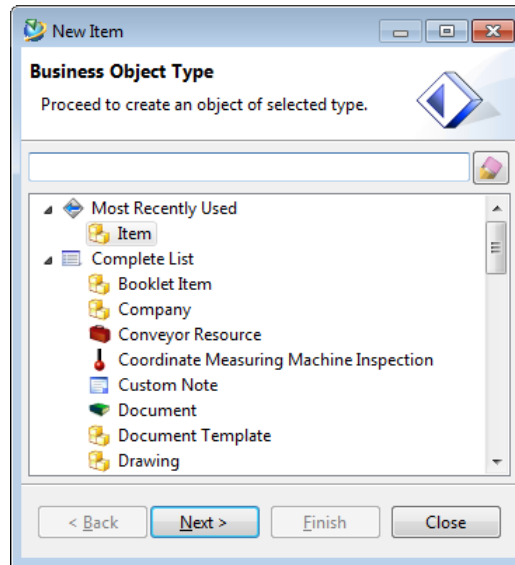
Create a new Teamcenter object using the File→New command

This example creates a new item.

The **New Item** dialog box provides a wizard-like tool for creating items, entering item and item revision attribute information, and assigning the item to a project.

1. Select a container for the item, such as a folder or another item.
2. Choose **File→New→Item** to create a new item.

The system displays the **New Item** dialog box.

**Note:**

The **Complete List** section also includes the most recently used objects.

The item types displayed in this dialog box are controlled by your administrator. You may be unable to create item types that are visible to you in your workspace.

If only one type can be selected, the **Business Object Type** dialog box is skipped and **Object Create Information** is displayed. The **Back** button is enabled to display the **Business Object Type** dialog box if needed.

3. Select the appropriate business object type.
4. Click **Next** to proceed.

The **Object Create Information** dialog box is displayed.

The screenshot shows the 'New Item' dialog box in Teamcenter. The dialog is titled 'Object Create Information' and 'Define business object create information'. It shows the 'Item' section under 'General' with fields for ID, Revision, Name, and Description. There are 'Assign' buttons for ID and Revision. A 'Unit of Measure' dropdown is also present. Below these are expandable sections for 'Additional Item Information' and 'Item Revision Information'. At the bottom, there is a checkbox for 'Open On Create' and navigation buttons: '< Back', 'Next >', 'Finish', and 'Close'.

Note:

If intelligent part numbering is configured, ID values are assigned automatically. You can specify additional properties required for ID generation, and then click **Finish** to create the item.

For example, intelligent part numbering can be configured to require certain properties.

This results in an item created with those properties in the item ID.

Newstuff
 > 0005-PointFixed TemperatureBonded-Test My Item

5. In the **Item Information** section:

- a. Enter an item ID and revision for the item, or click **Assign** to automatically generate the item ID and revision identifiers.

Note:

Leave the **ID** and **Revision** values blank to have the values automatically generated.

- b. Type a unique name for the item.
- c. (Optional) Type a description **Description** and choose a **Unit of Measure**.

Note:

The **Name** and **Description** boxes may contain initial values determined by property rules implemented at your site. You can replace such values, but you cannot specify a null value by clearing the box. If you clear the box, the initial value is reapplied to the property when you save the new item.

At this point, you have provided all of the information necessary to define the item.

- (Optional) Expand the **Additional Item Information** and **Item Revision Information** sections and define custom attributes, as implemented at your site.

Note:

Your administrator can create custom attributes (properties) to apply to the item or item revision as defined and implemented at your company.

- Click **Next** to move to the next step and further define the item, or click **Finish** to create the item immediately.
- (Optional) Provide additional information as needed in your environment. For example, if the **Define Workflow Information** pane is available, you can provide workflow information by selecting a process template list and a process assignment list.
- Click **Finish**.

Note:

The item is not created until you click **Finish**.

Note:

To create an alternate or alias identifier for the new item, select the item and choose **File→New→ID** to display the **New ID** dialog box.

If an administrator specifies **Item**, **Folder**, or **Form** as values for the **TC_Enable_legacy_create** preference, the legacy dialog boxes for creating those objects are displayed. The legacy dialog boxes for creating **Item**, **Folder**, or **Form** objects let you specify identifiers during creation of the objects.

Modeling business data

What are business objects?

Business objects are the fundamental objects that model business data.

Tip:

Business objects were formerly known as *types* in Engineering Process Management.

You can create an instance of any business object in the rich client by using the **File→New→Other** menu.

All available business objects are listed in this menu, including custom business objects created using the Business Modeler IDE.

Create a business object

Business objects are the fundamental objects that model business data.

Tip:

Business objects were formerly known as *types* in Engineering Process Management.

You can create an instance of any business object in the rich client by using the **File→New→Other** menu.

All available business objects are listed in this menu, including custom business objects created using the Business Modeler IDE.

1. In My Teamcenter, select the parent object for the business object.

For example, select a folder, an item revision, or an existing dataset to contain the new business object.

2. Choose **File**→**New**→**Other** to display the **New Business Object** dialog box.

or

In the **Summary** view, click the **Add New** button.

Note:

The location of the **Add New** button varies based on the object you select.

3. Select the type of business object you want to create.

Note:

Expand the **Complete List** object to view all available business objects.

4. Click **Next**.
5. Provide required information and click **Next** to populate any other associated fields as needed.
6. Click **Finish** to create the new business object, or click **Cancel** to exit without creating the new business object.

Relations

Item and item revision relations

There are typically many pieces of information that describe or are related to an item or item revision. Teamcenter uses relations to define the correlation between data objects and items or item revisions.

The display of related objects is controlled using the **Edit**→**Options** menu command.

Automatically defined relation types

Many item or item revision relations are automatically defined when you create or add certain objects to an item or item revision structure.

For example, when you add a new item revision to an item, the new item revision is automatically defined as a revision relation.

The automatically defined relation types are:

- Revision
- Item master and item revision master

- BOM view and BOM view revision
- Alternate ID
- **TC_validation**

If validation process is enabled at your site, this relation is established between the item revision and the **validation_master** form.

- **JTSESSION** and **3DMarkup**

These relation types apply to datasets.

- **IMAN_Drawing**

Specifies the relationship between an NX part and a drawing dataset.

Note:

Your site may be configured to automatically create relation types other than those listed here.

User-specified relation types

In addition to the automatically defined relation types, the user-specified relation types relate objects to items and item revisions.

These relationships are typically defined when you paste an object reference into an item or item revision using the **Edit→Paste** or **Edit→Paste Special** menu commands.

Note:

If your administrator has defined mandatory properties for the type of relation object you are creating, a dialog box lets you define attribute values for the objects.

Relation type	Description
Specification relations	<p>Detailed methods, designs, processes, and procedures used to satisfy requirements.</p> <p>Specification relationships can only be established with item revisions, not with items. Although requirements may remain fairly constant for a product (item), actual manufacturing methods, designs, processes and procedures may change drastically from model to model (item revisions).</p>

Relation type	Description
Requirement relations	<div style="border: 1px solid black; padding: 5px;"> <p>Note:</p> <p>The display name for this relation is Specifications. The internal name for this relation, as it appears in the Business Modeler IDE, is IMAN_specification.</p> </div> <p>Criteria that must be satisfied by the item or item revision. However, requirements often do not specify how the criteria should be satisfied.</p> <p>For example, an object related by a requirement relation might specify maximum weight of a component associated, but not how the component is constructed.</p> <div style="border: 1px solid black; padding: 5px;"> <p>Note:</p> <p>The display name for this relation is Requirements. The internal name for this relation, as it appears in the Business Modeler IDE, is IMAN_requirement.</p> </div>
Attaches relations	<p>The Attaches relation is the default relation for referencing a dataset to a document revision. These relations are created between document revisions and datasets.</p> <ul style="list-style-type: none"> • When datasets are referenced to documents with the Attaches relation, control of the dataset is delegated to the referencing document revision. View, edit, check out, check in, and delete actions performed against the dataset initiate the same action against the attaching document revision. • When a derived dataset is checked out, the document revision to which it is attached is also checked out. This creates a new sequence of the document revision without the derived dataset attached to the new sequence. The derived dataset is not related to the new sequence of the document revision because derived datasets are specifically generated by the system to represent the sequence to which they are attached. The derived dataset file remains related to the previous sequence of the document revision. If implicit checkout is enabled, you can avoid the checkout of the document revision by using a different relation, such as Manifestation, for derived datasets. <div style="border: 1px solid black; padding: 5px;"> <p>Note:</p> <p>The Attaches relation can be created for any item revision.</p> </div>

Relation type	Description
Manifestation relations	<div style="border: 1px solid black; padding: 5px;"> <p>The display name for this relation is Attaches. The internal name for this relation, as it appears in the Business Modeler IDE, is TC_Attaches.</p> </div> <p>Nondefining snapshots of a particular aspect of an item or item revision at a particular moment in time.</p> <p>For example, numerically controlled (NC) program files are a common manifestation. Consider that they represent one aspect of an item revision (for example, machining information) and that this information is only accurate so long as the item revision does not change. If the item revision changes, the NC program files may no longer be accurate and may need to be re-created.</p> <div style="border: 1px solid black; padding: 5px;"> <p>Note:</p> <p>The display name for this relation is Manifestations. The internal name for this relation, as it appears in the Business Modeler IDE, is IMAN_manifestation.</p> </div>
Reference relations	<p>General nondefining relationships of data objects to items or item revisions. This relation type can be thought of as a miscellaneous relation type.</p> <p>Typical examples of reference relations are white papers, field reports, trade articles, customer letters, and lab notes.</p> <div style="border: 1px solid black; padding: 5px;"> <p>Note:</p> <p>The display name for this relation is References. The internal name for this relation, as it appears in the Business Modeler IDE, is IMAN_references.</p> </div>
Alias relations	<p>Specifies the relationship between an item or item revision and an identifier object. It signifies how an alias is defined.</p> <div style="border: 1px solid black; padding: 5px;"> <p>Note:</p> <p>The display name for this relation is Alias IDs. The internal name for this relation, as it appears in the Business Modeler IDE, is IMAN_aliasid.</p> </div>

Note:

Some relations may not display in the **My Teamcenter Impact Analysis** view or the **Relation Browser** application views unless the relationship is added to a preference.

Controlling revision display

Item revision display rules

Display rules affect the My Teamcenter tree display.

Numerous revisions of a single item can clutter the display of product information in the Teamcenter tree. To make the tree more manageable, the display of item revisions can be controlled based on display rules. Display rules can be single or compound, and separate display rules can be applied to each type of item. Rules are composed of four components, **Rule**, **Relation Operator**, **Condition**, and **Limit**.

In addition, user-defined rules can be created to suppress the display of specific types of item revisions based on a property, such as a naming schema. Item revisions can be displayed in ascending or descending order. When using compound rules, the order is applied to each rule condition, rather than to the entire rule. Ascending and descending ordering can also be applied when all revisions are displayed.

Item revisions that do not match the filtering criteria are stored in the **More** folder under the item.

Note:

Click the **More** folder to display the list of item revisions. You can select an item revision from the list and the system opens it in a separate tab in the My Teamcenter window.

Set an item revision display rule

1. Choose **Edit→Options**.

The **Options** dialog box is displayed.

2. Expand the **General** folder and select the **Item** button.

The item options are displayed in the right pane of the dialog box.

3. Click the **Display** tab.

The revision display filter options are displayed.

4. Select an item type from the **Select item type** list.

Note:

Each item type has its own display rule. The display rule is for the selected item type only, and are not inherited by child types.


5. Select a display order option, either **Ascending** or **Descending**.

This option affects the display of item revisions based on creation date and revision rule precedence.

6. Select **Show displayable revisions only** to create a display rule.
7. Click **Add (+)** to add a rule row.

The system adds a row to the table.

Tip:

Click **Remove (-)** to remove a selected row from the table, or click **Clear**  to clear all rows from the table.

8. Select an option from the **Rule** list, either **Working**, **In-Process**, **Release Status**, or **Configured by**.

Tip:

To access the **Rule** list, double-click the box in the **Rule** column for the applicable row.

Working	Displays item revisions that are neither in a job process (in-process) nor released.
In-Process	Displays item revisions that are part of a job process.
Release Status	Displays item revisions according to their release status, as defined by the specified condition and relational operator.
Configured by	Displays item revisions according to revision rules, as defined by the specified condition.

9. As applicable, select a relational operator and condition corresponding to the selected rule.
 - Relational operators apply only to the **Release Status** rule.
 - **Condition** applies only to the **Configured by** or **Release Status** rule.

Note:

The **Condition** list includes all revision rules and release statuses employed at your site, for the selected rule.

10. (Optional) Enter an integer in the **Limit** box, representing the number of matching item revisions to display.

Note:

An integer greater than one is not valid for some rules and conditions. In that case, you cannot change the value in the **Limit** box.

11. (Optional) Use the up-arrow and down-arrow buttons to set the precedence of the display rules in the table.
12. Click **OK** to create the display rule and exit the dialog box or click **Apply** to create the display rule and retain the dialog box.

Note:

You can use preferences to display specified revisions.

For example, set the following user preferences as indicated to display the last two revisions under an item type:

- **Item_rev_display_all = false**
- **Item_rev_display_order = 0**
- **Item_rev_display_rule =**
 4: :Any Status; No Working:1
 4: :Latest by Creation Date:1
- **Item_DefaultChildProperties = displayable_revisions**

Note:

You can create a group-level revision display rule applicable to all users under that particular group.

1. As an administrator:

- a. Create the following preference instances with **Protection Scope** set to **Group**:
 - **Item_rev_display_all**
 - **Item_rev_display_order**
 - **Item_rev_display_rule**
 - b. Edit the **Item_DefaultChildProperties** preference to have **Protection Scope** set to **Group**.
2. Log in as the group administrator and choose **Edit**→**Options**.
 - In the **Options** dialog box, choose **General**→**Item**.
 - Enable **Show displayable revisions only**, and then specify the rule.
 3. For the users in the group, delete any user instances of these preferences:
 - **Item_rev_display_all**
 - **Item_rev_display_order**
 - **Item_rev_display_rule**
 - **Item_DefaultChildProperties**

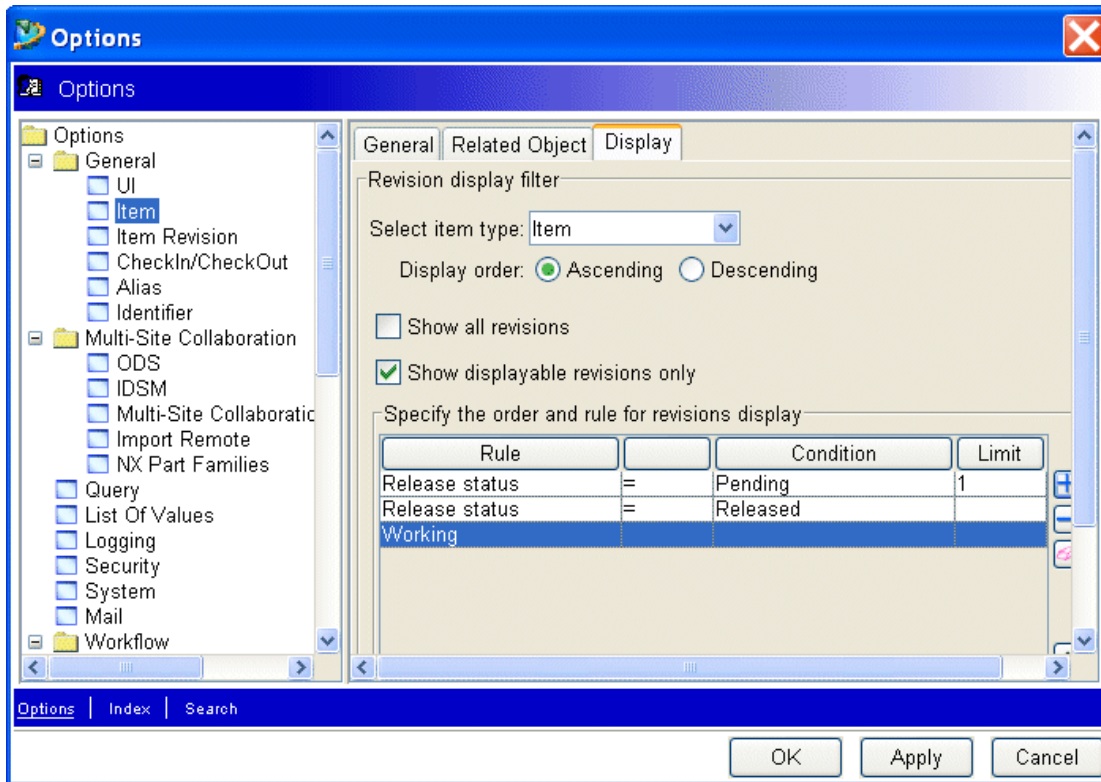
Display rules example with equal to status

This example assumes that item number 000509 has numerous associated revisions.

Revision	Status
000509/A	Release status: Pending
000509/B	Release status: Pending
000509/C	Release status: Pending
000509/D	Release status: Released
000509/E	Release status: Released
000509/F	In-Process
000509/G	Working
000509/H	Working

Without applying display rules, all of these revisions appear under the item in the My Teamcenter tree display.

The image shows the rules used to display (in ascending order) only the latest released item revision with status equal to **Pending**, all item revisions with status equal to **Released**, and the latest **Working** revision in the My Teamcenter tree for the **Item** item type.

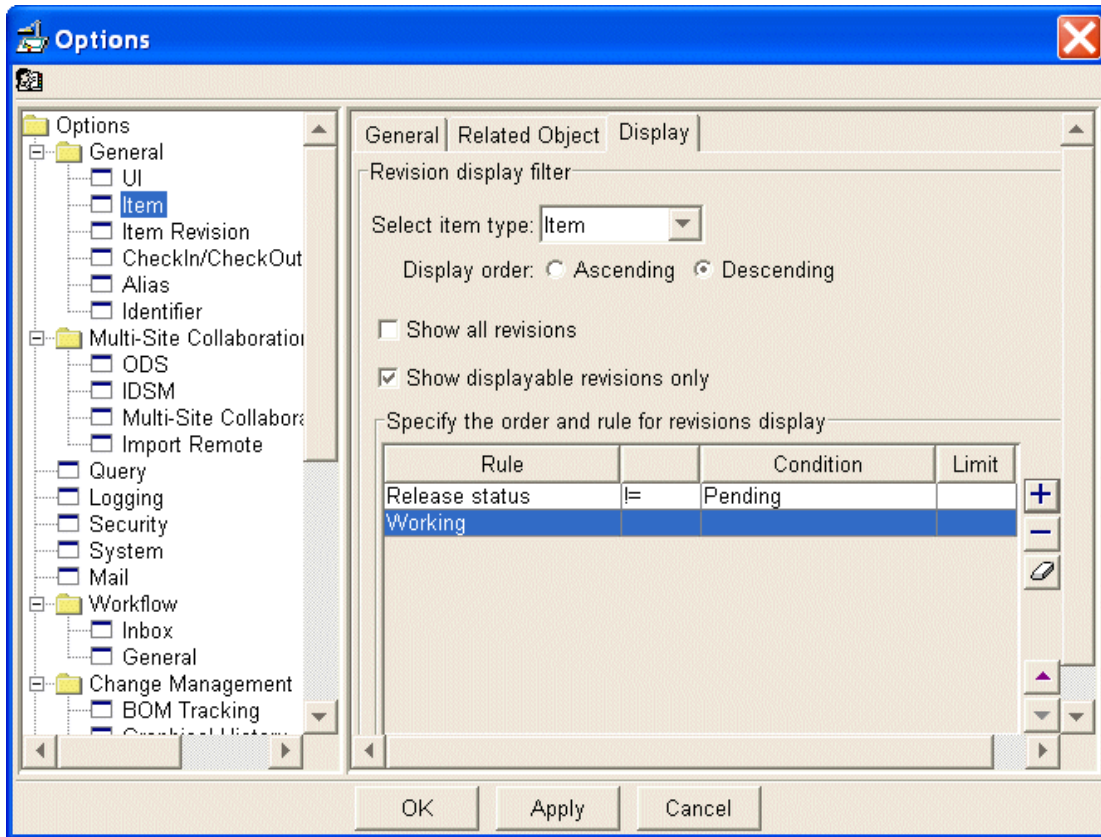


Revision	Status
000509/C	Release status: Pending
000509/D	Release status: Released
000509/E	Release status: Released
000509/H	Working

The remaining revisions are placed in the **More** folder under item **000509**.

Display rules example with not equal to status

The following image shows the rules used to display all released item revisions with status *not equal to* **Pending** and revisions that are **Working**. The display order is descending.



When the rules in the display rules example with not equal to status image are applied, the system displays the revisions shown in the following table.

Revision	Status
000509/E	Release status: Released
000509/D	Release status: Released
000509/H	Working
000509/G	Working

The remaining revisions shown in display rules example with not equal to status are placed in the **More** folder under item **000509**.

Create a user or group preference to override a saved query revision rule

1. Log on to the rich client using the user or role you want to be able to override a saved query revision rule.
2. In My Teamcenter, choose **Edit**→**Options** to display the **Options** dialog box.

- In the **Options** dialog box, click **Search** and use the **Search on Keywords** box to find the site preference for which you want to create a user or group preference, for example, **TC_QRY_Item Revision – Latest Working_REVRULE**.

Note:

To remove the revision rule, you can specify **None** as the preference value.

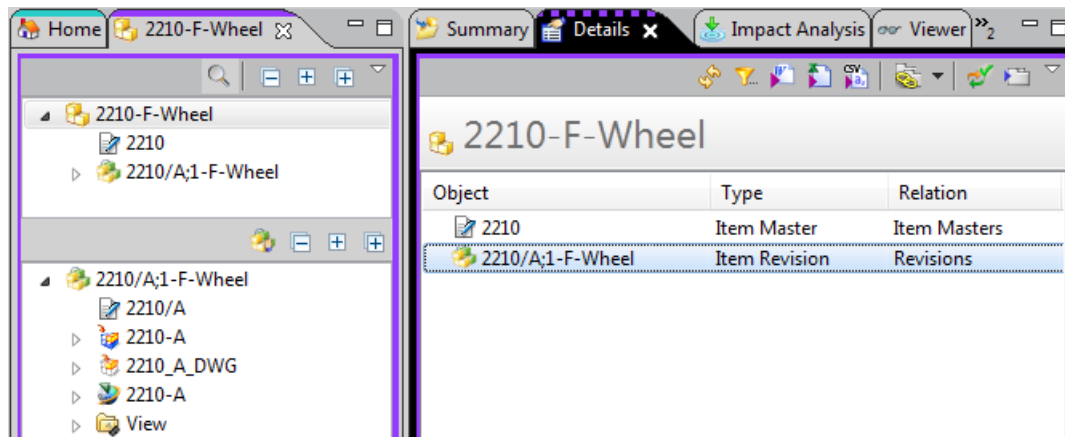
- Click **New**.
- Use the same name as the site preference and select the scope, and provide the desired revision rule.
- Click **Create**.

There are now two preferences for the saved query, one governing the site and another for the selected scope applicable to the group or user that created the new preference.

Open items and item revisions in My Teamcenter

Opening an item or item revision in My Teamcenter allows you to display the object data in a tri-pane window.

In the tri-pane window, you can apply revision rule filters to sort through the item revisions generated during the design process.



The tri-pane window displays the **Item** tree (upper-left) and **Item Revision** tree (lower-left), as well as the standard panes and views (right).

- When you open an item, the item and all its related item revisions are displayed in the **Item** tree, and the latest item revision is displayed in the **Item Revision** tree.

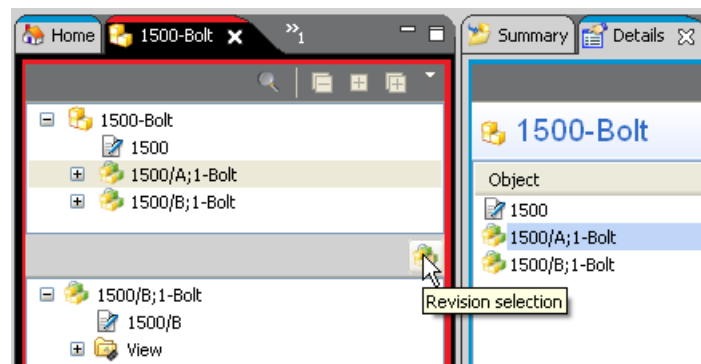
- When you open an item revision, the associated item and all related item revisions are displayed in the **Item** tree, and the item revision that you opened is displayed in the **Item Revision** tree.


To open an item or item revision in My Teamcenter:

1. Select an item or item revision in the My Teamcenter tree.
2. Choose **File**→**Open**.

The selected object appears in the tri-pane window.


Filter the item revision display in My Teamcenter



Use **Revision selection**  in My Teamcenter to filter the item revision display.

The item revision display can be filtered by revision rules and by released, in-process, or working revision status.

To filter the item revision display in My Teamcenter:

1. Select an item or item revision in the My Teamcenter tree.
2. Choose **File**→**Open**.
3. Select the item or an item revision from the tree in the upper-left or lower-left pane in the tri-pane window.
4. Click **Revision selection**  on the toolbar between the upper and lower panes.

The system displays the **Revision Selection** dialog box.

5. Select the filter to be applied to the display list using **Released**, **In-Process**, or **Working**, or select a revision rule from the **Revision rule** list.

The item revisions matching the filtering criteria are displayed in the dialog box, arranged from latest to earliest revision.

6. Select an object in the **Revision Selection** list to display it in the **Item Revision** pane.

Copying related objects

Defining attached data when revising

When you create item revisions using the **Save As** and **Revise** menu commands, you can copy objects related to the original item revision forward to the new item revision, as follows:

- You can selectively copy the objects, regardless of relation type.
- You can copy the object references from one item or item revision to another.
- You can copy objects from one item or item revision to another as new objects rather than as references to objects.

Objects that can be copied as new objects include:

- Datasets
- Forms
- Folders
- BOM view revisions
- Item revisions

Rules for copying related objects

The following rules apply to copying related objects from one item revision to another:

- Item revision masters and BOM view revisions cannot be copied as references.
- Folders can only be copied as references. They cannot be copied forward as objects.
- Deep copy rules determine which related objects are copied when a specific item revision type is used as the basis for a new revision. If these rules are implemented at your site, it is possible that you cannot select or deselect objects to be copied forward, depending on how the rules are implemented.
- Your administrator can also implement rules to copy secondary datasets to a new revision when the primary dataset is copied forward.

Note:

Secondary datasets are those related to a particular dataset type by a specific relation type.

- Classification objects (ICOs) are copied by default. If you do not want this behavior, your administrator must change it. ICOs cannot be copied as references.

Define attached data for related objects

1. With an item revision selected, choose **File**→**Revise** to display the **Revise** dialog box.
2. Click the **Define Attached Data** link in the left pane of the **Revise** dialog box.

The system displays the **Define Attached Data** form in the right pane of the dialog box.

- The left side of the form displays the **Source** tree containing the objects related to the selected item revision.

Note:

The symbols to the right of the objects indicate the default copy option for that object. The default copy options are derived from site rules and may be overridden depending on site implementation.

- The right side of the pane displays the **Destination** tree containing the resulting item revision with the objects copied according to the default copy option.
3. (Optional) To override the copy option for an object, click the button to the right of the object and select a different copy option from the **Copy Options** menu.

Tip:

If the button is disabled, you do not have permission to change the copy option for that object.

The following deep copy options can be applied to related objects:

Copy as Object	Creates a new object of the same type and relation to the parent object. Objects created by this method are totally independent of the parent object. Therefore, any changes to the copied object are not reflected in the original object.
	Copied objects appear in bold in the Destination tree and can be renamed.
Copy as Reference	Copies the object as a reference to the original object. All changes to the reference copy affect the original object.

	The names of attachments that are copied as references cannot be modified.
Don't Copy	Allows you to selectively copy objects from one revision to another. Objects that are designated as Don't Copy appear with a line through them in the Destination tree.
Relate to Latest	Allows you to relate the selected object to the latest item revision with an Is Represented By relation.
Revise and Relate to Latest	Allows you to revise the selected object and relate the new object revision to the latest item revision with an Is Represented By relation.

Note:

If the **Relate to Latest** or **Revise and Relate to Latest** option is enabled, it is a *required* action. These options are only available if you are revising an object, not when you are performing a **Save As** action.

The actions performed when you select these options are configured by your administrator using the Business Modeler IDE. For example, they may allow you to relate a part object to the latest item revision of the corresponding design, or to revise the part object and relate it to the latest item revision of the design.

4. (Optional) Rename the related objects.

The names of the attachments that are copied as objects are generated at the server level and may be overridden, depending on the site implementation, as follows:

- a. Select the object in the **Destination** tree.
 - b. Triple-click or press the F2 key.
 - c. Type the new name and press the Enter key.
5. Click **Next** to assign the revision to a project or click **Finish** to create the new item or item revision.

Creating items from existing items

Using Save As to create new items

You can create new items from existing items or item revisions.

The **Save As** menu command creates new items from existing items or item revisions. The copy options for the objects related to the item revision differ depending on whether an item or item revision is selected as the basis for the new item.

Note:

By default, when you use **File**→**Save As** to create an object, you must provide or assign new values required for the item ID and revision ID but not for **Name**. If you do not supply a new value for the name, the value from the revision selected for the **File**→**Save As** command is copied to the new item and item revision.

Administrators can use the Business Modeler IDE to configure **Name** as required input for **Save As**.

- When you use an item as the basis, most of the objects related to the selected item revision are copied as references. The exceptions are the item revision master and BOM view revision. These are copied as new objects.

Caution:

If your administrator has set a deep copy rule for a specific item revision type, you must select the item revision (rather than the item) when using the **Save As** command.

- When you use an item revision as the basis, you have the option to copy the related objects as references, as new objects, or not to copy the selected objects.

Note:

If your administrator has set a deep copy rule for an item revision type, that rule does not affect associated classification objects in the legacy **Save As** dialog box. For revising, copying, or with the **Save As** menu command, the behavior for classification objects is controlled by the **ICS_ico_action_after_saveas** preference setting.

Create a new item based on an existing item

1. Select an item in the tree or **Details** table to be the basis of the new item.
2. Choose **File**→**Save As**.

The system displays the **Save Item As** dialog box.

3. Click **Assign** to automatically generate the next available item ID and revision, or manually enter an item and revision ID.

Note:

The **Assign** button is available only if naming rules and automatic generation have been implemented for the selected object type.

4. (Optional) Enter a description of the new item.

Note:

The unit of measure and item type are carried over from the original item and cannot be modified.

5. (Optional) Click **Next** to display the **Define Attached Objects** page, which lets you define how attached objects are copied and related to the new item revision.

For each attached object, click the **Copy Option** value and select the appropriate option from the list.

Note:

The objects related to the selected item revision, with the exception of the item revision master and BOM view revision objects, are copied to the new item revision as references.

You can use the **Define Attached Data** option to selectively choose whether to copy objects related to the item revision as references, new objects, or not copy the related objects.

6. (Optional) Click **Next** to display the **Related Objects information** page, where you can provide information such as project identifiers, user data, and serial numbers.
7. Click **Finish** to create the copy.

The new item appears in your **Newstuff** folder.

Note:

To create additional identifiers and specify display options for the newly created item, select it and choose **File→New→ID**.

Create a new item revision based on an existing item revision

1. Select an item revision in the tree or **Details** table to be the basis of the new item and item revision.
2. Choose **File→Save As**.

The system displays the **Save ItemRevision As** dialog box.

3. Enter the revision identifier or click **Assign** to automatically generate the revision value.

Note:

The **Assign** button is available only if naming rules and automatic generation have been implemented for the selected object type.

4. (Optional) Enter a new name for the new item revision.
5. (Optional) Enter a description of the new item.
6. Select **Check-out?** to check out the item when it is created.
7. (Optional) Click **Next** to display the **Define Attached Objects** page, which lets you define how attached objects are copied and related to the new item revision.

For each attached object, click the **Copy Option** value, such as **Reference Copy** or **Object Copy**, and then select the appropriate option from the list.

Note:

The objects related to the selected item revision, with the exception of the item revision master and BOM view revision objects, are copied to the new item revision as references.

You can use the **Define Attached Data** option to selectively choose whether to copy objects related to the item revision as references, new objects, or not copy the related objects.

8. (Optional) Click **Next** to define attached objects, if allowed.

Note:

The objects related to the selected item revision, with the exception of the item revision master and BOM view revision objects, are copied to the new item revision as references.

9. (Optional) Click **Next** to provide related objects information such as project identifiers, user names, and serial numbers.

Note:

The objects related to the source item revision are copied to the new item revision using the default copy option defined for the related object type. To select a different copy option for the applicable related objects, click the **Define Attached Data** link in the left pane of the **Save As** dialog box.

10. Click **Finish** to create the copy.

The new item appears in your **Newstuff** folder.

Note:

To create additional identifiers and specify display options for the newly created item revision, select it and choose **File→New→ID**.

Creating a new revision

Using Revise to create new revisions

You can create new revisions of an item using the **Revise** menu command and dialog box.

The **File→Revise** menu command creates new revisions of an item, including copying related objects and object references to the new revision.

Note:

To create a new dataset of an item revision and its components without generating a new revision, use the **Tools→Baseline** menu command.

The **Revise** dialog box provides a wizard-like tool for:

- Creating item revisions.
- Entering item revision attribute information.
- Creating alternate identifiers for the item revision.
- Assigning the item revision to a project.
- Defining options for displaying the item and alternate identifiers.

Mandatory steps required to create a new revision are indicated by a red triangle. Once the mandatory steps are performed, you can continue through the remaining steps in order, select individual steps from the list, or exit the wizard.

- You do not have to work through the steps sequentially, nor is it necessary to complete all of the steps.
- If mandatory item revision master attributes are defined for the item business object, values must be entered before the system can create the item.

Note:

The **Name** and **Description** boxes may contain an initial value determined by property rules implemented at your site. You can replace this value, but you cannot specify a null value by clearing the box. If you clear the box, the initial value is reapplied to the property when you save the new item revision.

The **Revision_Name_Based_On_ItemRevision** site preference specifies whether revision names displayed in the rich client **Revise** dialog box are based on item revision names or item names. The default behavior creates revision names based on item revision names.

Create a new revision of an item

1. Select an item revision in the tree or **Details** table to be the basis of the new revision.

Note:

To create a revision of an item, you must have write privileges to the item.

2. Choose **File**→**Revise**.

The system displays the **Revise** dialog box.

3. Enter the revision identifier or click **Assign** to automatically generate the revision identifier. The **Assign** button is available only if naming rules and automatic generation have been implemented for the selected object type.

Tip:

It may be necessary to resize the dialog box to view the **Assign** button.

4. (Optional) Enter a description of the new revision.

Note:

The unit of measure is carried over from the original item and cannot be modified.

At this point, you have provided all of the information necessary to create the item revision.

5. Click **Next** to move to the next step and further define the item revision or click **Finish** to create the item revision immediately.

Tip:

The item revision is not created until you click **Finish**. If mandatory item revision master attributes are defined for the item type, you must click **Next** and enter attribute information before you can click **Finish**.

Add item and item revision information to a new object

Note:

Use this procedure to add information stored on the item master and item revision master form for attributes relevant to the object type.

1. Click the **Enter Additional Item Information** or **Enter Additional Item Revision Information** link in the left pane of the dialog box.

Note:

If the **Enter Additional Item Information** or **Enter Additional Item Revision Information** links are unavailable, these forms are disabled for the business object.

The system displays the input boxes in the right pane of the dialog box. Mandatory attributes are indicated by a red asterisk in the upper-right corner of the box.

2. Fill in the attribute information as needed or required.
3. Click **Next** to continue to the next step or click **Finish** to create the item or item revision immediately.

Attach files and define workflow information

Depending on choices made by the administrator for the IRDC, revisions controlled by IRDC may require the following input during creation:

- **Enter Attach Files Panel Information**

Select files to attach to the revision.

- **Define Workflow Panel Information**

Select a process template list and a process assignment list.

Note:

You can see whether a revision is under IRDC control by adding the **Item Revision Definition Configured?** column to the **Details** table.

Define the open, display, and checkout options for a new object

1. Click the **Define Options** link in the left pane of the dialog box.

The system displays the open, display, and checkout options.

2. Select **Show as new root** to open the item in a component view when it is created.
3. If you created an alternate identifier for the item, you can use the alternate identifier as the default display object. Select **Use item identifier as default display** and **Use revision identifier as default display** to set the alternate identifier as the default display object.
4. Select **Check Out Item Revision on Create** to put a checkout lock on the associated item revision when the item is created.

Tip:

To remove the checkout lock from the item revision after the item is created, select the item revision object and choose **Tools→CheckInOut**. You can either check in the item revision or cancel the checkout.

5. Click **Finish** to create the new item or item revision.

Tip:

To set other item options, choose **Edit→Options**.

Rename an item or item revision

You can change the item ID or name of an item or item revision.

1. Right-click the item or item revision and choose **Properties** or choose **View→Properties**.

The **Properties** dialog box appears.

2. Click the **Check-Out and Edit** button.

The **Check Out** dialog box appears.

3. Click **Yes** to verify the checkout.

The **Edit Properties** dialog box appears.

4. In the applicable boxes, type a new name, revision, or description for the checked out object.
5. Click **Save** to save the changes and retain the dialog box. Or, click **Check In** to save the changes and close the dialog box. Or, click **Cancel Check-Out** to cancel the checkout without saving the changes and close the dialog box.

Note:

If you click **Save**, then **Cancel Check-Out**, the changes are reverted and the checkout status for the object is cancelled.

If you click **Save**, this does not check in the object. You must click **Check-In** to complete the change.

Deleting items and item revisions



Deletion rules

- An item can be deleted along with its entire structure (all of its related child items and item revisions).
- Items and item revisions can also be deleted individually, along with their related components such as forms and datasets.
- The **TC_auto_delete_folder_references** preference value specifies whether to display an error message when an object being deleted is referenced in other folders. By default, no error message is displayed.

Delete an item

1. Select the item in the tree and click **Delete** on the toolbar or choose **Edit→Delete**.


The system displays a confirmation message in the **Delete** dialog box.

2. (Optional) Click the **Explore Selected Component(s)** button  to choose which components to delete.
3. (Optional) Click the **Delete item and all child items below it** button  to delete the item and all components in the item structure.
4. Click **OK** to delete the item and related revisions and components, or click **Cancel** to cancel the delete operation.

Delete an item revision

1. Select the item revision in the tree and click **Delete** on the toolbar or choose **Edit→Delete**.

The system displays a confirmation message in the **Delete** dialog box.

2. (Optional) Clear the **Delete All Sequences** check box.
 - When the check box is cleared, only the latest sequence of the item revision is removed by the delete operation.
 - When the check box is selected, all sequences of the item revision are deleted by the delete operation.
3. (Optional) Click the **Explore Selected Component(s)** button  to choose which components of the item revision to delete.
4. Click **OK** to delete the item revision, sequences, and related components or click **Cancel** to cancel the delete operation.

Delete an item and selected components

1. Select the item in the tree and click **Delete**  on the toolbar or choose **Edit→Delete**.

The **Delete** dialog box appears.

2. In the **Delete** dialog box, click **Explore Selected Component(s)**  .

The **Explore** dialog box appears.

The system displays the component structure of the selected object in the **Explore** dialog box along with a pane for defining rules that determine which related objects are included.

3. In the **Explore** dialog box, select the related objects, using one of the following methods:

- By individual selection
 - a. Double-click the top-level object to expand the tree and view the object components.
 - b. Select the check box corresponding to the component in the tree.

- By selecting all components

Click the **Select All Component(s)** button located beneath the tree.

- According to user-defined rules

The right pane of the **Explore** dialog box lists type and relation combinations that can be used to select components, as defined by your preference settings. Both the **Type** and **Relation** lists include the **Any** option, which allows you to select all instances of a specific object type, regardless of relation, or to select all instances of a specific relation, regardless of object type.

Apply rule filters, as follows:

- Click **Add a Rule (+)** to add a rule to the table.
- Choose a type and relation combination by double-clicking the box under each column and selecting a value from the **Type** and **Relation** lists.

Tip:

Expand the dialog box to view the entire name of the type and relation options.

- Click **Update the selection in the tree based on rules** to update the selections in the tree.

Note:

Rules can be removed from the table by selecting the row and clicking **Remove selected rules**.

- Click **OK** to apply the filters to the objects in the **Explore** tree.

The system closes the **Explore** dialog box and displays the pane related to the original operation.

Note:

The selection rules are saved as a user preference.

- Click **OK** to accept the related objects and return to the original operation.
- Click **OK** to delete the item and selected components or click **Cancel** to cancel the delete operation.

Deleting an item and all child items and item revisions

You can select a parent item and delete all of its child items and item revisions. However, to delete an entire structure, the item and its components must be deemed candidates for deletion based on the following criteria:

- To maintain referential integrity, the item and its revisions cannot be referenced by any other occurrences outside the structure. However, they can be referenced by any view of any revision of any item in the structure.
- You must have the privileges required to delete the item.
- Neither the item nor any of its revisions can be checked out.

Delete an item and all of its child components

1. Select the item in the tree and click **Delete** on the toolbar or choose **Edit→Delete**.

The **Delete** dialog box appears.

2. In the **Delete** dialog box, click **Delete item and all child items below it** .

The system builds a representation of the structure and analyzes the components to determine if they are candidates for deletion.

Note:

This process can take a significant amount of time depending on the size of the structure. You can stop the process by clicking **Abort**.

When the process is complete, the **Delete Below** dialog box appears.

- The tree in the left pane displays the item/item revision structure and related components. Items and item revisions are preselected for deletion.
- In addition, components, such as datasets and forms, may also be preselected for deletion based on the type/relation combinations set by your user preferences.

Note:

You cannot delete an entire product structure using the **Delete item and all child items below** option if the product structure has multiple occurrences of one or more items.

You can click the **Select all component(s)** button in the **Delete below** dialog box and ensure the entire product structure is selected before proceeding. The loading icon in the **Delete below** dialog box disappears once the entire product structure is selected.

3. (Optional) Select components for deletion as follows:
 - By individual selection

Select the check box corresponding to the component in the tree.

- By selecting all components

Click the **Select All Component(s)** button located beneath the tree.

- According to user-defined rules

The right pane of the dialog box lists type and relation combinations that can be used to select components, as defined by your preference settings. Both the **Type** and **Relation** lists include the **Any** option, which allows you to select all instances of a specific object type, regardless of relation, or to select all instances of a specific relation, regardless of object type.

Apply rule filters, as follows:

- a. Click **Add a Rule (+)** to add a rule to the table.
- b. Choose a type and relation combination by double-clicking the box under each column and selecting a value from the **Type** and **Relation** lists.

Tip:

Expand the dialog box to view the entire name of the type and relation options.

- c. Click **Update the selection in the tree based on rules** to update the selections in the tree.

Note:

Rules can be removed from the table by selecting the row and clicking **Remove selected rules**.

- d. Click **OK** to apply the filters to the objects in the tree.

The system closes the dialog box and displays the **Delete** dialog box.

Note:

The selection rules are saved as a user preference.

4. Click **OK** to delete the item and selected components or click **Cancel** to cancel the delete operation.

Managing datasets

Datasets and dataset files

Datasets manage data files, called named references, created by other software applications. When you double-click a dataset to open it, the system launches the software application associated with the dataset instead of expanding a container.

Note:

To edit, import, export, cut, paste, or delete files from a named reference, you must first check out the dataset.

When your administrator configures Teamcenter for your enterprise, other software applications can be encapsulated. These application data files can then be managed from inside a Teamcenter session. If your administrator has encapsulated other software applications (Microsoft Word, Microsoft Excel, and so on), those icons also appear in Teamcenter.

Your administrator can also configure Teamcenter document management functionality to simplify interactions with datasets by configuring behaviors for rendering, printing, and marking up documents, and for generating thumbnail images.

Dataset versioning and identification

Dataset versions, revisions, and identifiers

Dataset versions are created when an encapsulated software application is run during a Teamcenter session. At that time, save commands are intercepted and new versions of the dataset are created, rather than allowing the software application to overwrite the dataset.

Teamcenter continues to manage multiple dataset versions until the version limit is reached. The version limit provides a practical way to specify the maximum number of dataset versions that are stored in the database.

Note:

The default version limit is typically specified by your administrator, using the **AE_dataset_default_keep_limit** preference.

- After you create a dataset, you can change the dataset version limit by changing the **Version limit** property.
- You cannot define the default version limit for an individual dataset type. The **AE_dataset_default_keep_limit** preference sets the same limit for all dataset types.

When the version limit is exceeded, the earliest version of the dataset is purged from the database in order to make room for this new version. Such versions can be used to revert to a previous version of the dataset and they can also be used as the basis for creating a duplicate of a dataset.

Dataset identification, if implemented at your site, is used to assign a unique identifier and revision to a dataset. This identifier and revision can be used to track changes to a dataset and to query the database for a specific dataset or datasets. Unlike dataset versions, which are created when saving data in the encapsulated application and purged when the version limit is reached, dataset IDs and revisions are assigned when a new dataset is created and are visible as part of the item or item revision structure.

You can use the **Purge** command on the **Edit** menu to completely and permanently remove old versions of a dataset from the database. You can select whether to purge all old versions or specific versions of a dataset. To purge a dataset, you must have read, write, and delete privileges on the versions of the dataset that you want to purge.

Note:

Versions are iterations of dataset files. Versions do not behave like sequences, which are iterations within revisions.

Display the latest version of a dataset

1. Select the dataset in the tree or **Details** table.
2. Choose **Edit→Latest**.

Note:

By default, the **Edit→Latest** menu command is not displayed. To enable site-wide display of this command, the administrator must set the site preference **TC_suppress_Edit_Latest_Menu** to **True**.

The system displays the **Latest** dialog box.

3. Click **Yes** to retrieve the latest version of the selected dataset or click **No** to cancel the operation and close the dialog box.

Protection against deleting UGMASTER and UGALTREP datasets

UGMASTER and **UGALTREP** datasets attached (by a specification relation) to an item revision that is used in an assembly cannot be deleted.

When you attempt to delete a **UGMASTER** dataset, the system displays the following message:

UGMASTER is in an Item used in an assembly, so may not be removed.

When you attempt to delete a **UGALTREP** dataset, the system displays the following message:

UGALTREP is in use in a UG/Manager assembly, so may not be removed.

Note:

The exact use of **UGMASTER** and **UGPART** datasets is highly dependent on how your enterprise uses various features of NX and is beyond the scope of this discussion. Refer to the NX Help for additional information about **UGMASTER** and **UGPART** behavior and usage.

Modify a file associated with a dataset

1. Double-click the dataset in the tree or **Details** table.

The system launches the application tool defined for the dataset type.

2. Modify the contents of the dataset, and click **Save** to create a new dataset version.

Note:

Files associated with datasets can be modified from within Teamcenter. When modifications are saved in the native application, a new version of the dataset is created in Teamcenter.

View named references

Datasets are often used to manage several different types of files. These files are the named references of the dataset. Datasets are the only data objects that use named references.

Caution:

Using the **Open** button in the **Named References** dialog box is not recommended for opening dataset part files.

1. Select the dataset in the tree or **Details** table.
2. Choose **View** → **Named References**.

The system displays the **Named References** dialog box, listing all the named references of the selected dataset.

3. (Optional) Cut, copy, paste, upload, and download named reference files, or edit the name of the reference file.

Note:

If the dataset is checked out, **Upload** is enabled.

If an empty dataset is opened, a zero-length file is created as a named reference. The name of this file is based on the dataset name, and hyphens in the dataset name are converted to underscores. This is the only time that such a conversion takes place. For example, when a file is imported as a named reference, any hyphens in the file name remain and are not converted to underscores.

Creating datasets

Dataset creation methods

To create data that defines a part or product that is managed by Teamcenter, you must relate that data to a dataset. To do this, you can:

- Create a new dataset in Teamcenter, and then create the supporting data.
- Create data, and then import it into Teamcenter and relate it to an existing dataset.

You can create a dataset using one of the following methods:

- By using menu commands
- By dragging a file from an operating system file manager onto a Teamcenter folder, an item, or an item revision

In addition to being able to select dataset type before you import files, you can also select files to import before selecting a dataset type.

This applies to the **New Dataset** dialog box displayed by the **File→New Dataset** menu command and to the **Enter Attach Files Information** pane displayed by **File→New** wizards, such as the **New Item** wizard.

- When you select a dataset type, and then click **Import**, only the files that match the selected dataset type are displayed.
- When you select **Import** first, only the dataset types that match the selected file name extensions are available.

If you select a dataset type that contains more than one named reference that matches the available file extensions, the **Select Reference Type** dialog box is displayed.

- To use the Shift key for multiple file selection, the site must implement the **com.teamcenter.rac.common.filesSelector** extension.

- To exclude wildcard matching, set the **TC_Dataset_Import_Exclude_Wildcard** preference to **TRUE**.

Note:

When the **TC_Dataset_Import_Exclude_Wildcard** preference is set to **TRUE**, a dataset type is not listed in the types list if it has only one named reference defined and if that is associated with a *.* file format.

Naming rules that control the format of the dataset ID, name, and revision number may be in effect at your site. These rules are managed by your administrator using the Business Modeler IDE application.

Note:

A Microsoft Office dataset file created in Teamcenter is created as a plain text file. The first time you save the file you are prompted to convert the file to the standard format.

Create a new dataset

- Select the folder, item, or item revision under which the new dataset will reside.
- Choose **File**→**New**→**Dataset** or press Ctrl+D.

The **New Dataset** dialog box appears.

Note:

You can create a new dataset from a file by using the **Import** option in the **New Dataset** dialog box.

To have the Teamcenter rich client display custom datasets in the list of available dataset types, an administrator must add **Dataset** to list of valid values for the **TYPE_DISPLAY_RULES_list_types_of_subclasses** preference.

- Type a descriptive name (up to 128 ASCII characters) in the **Name** box.

This name is used as a label in the object area.

Tip:

It is good practice to keep the names short so that you can see the entire name in the My Teamcenter tree.

- (Optional) Type a description (up to 240 ASCII characters) to help identify this dataset in the **Description** box.

5. If required, assign a dataset ID by typing a unique identifier in the **Dataset ID** box, or click **Assign** to automatically generate the next available dataset ID.

Note:

The dataset ID option is only displayed if your site has implemented dataset identification, which is controlled by the **AE_dataset_id_usage** site preference.

6. If required, assign a revision ID for the dataset by typing a revision identifier in the **Revision ID** box, or click **Assign** to automatically generate the next available revision ID. Revision IDs distinguish one revision of a dataset from other revisions of the same dataset.

Note:

The revision ID option is displayed only if your site has implemented dataset identification, which is controlled by the **AE_dataset_id_usage** site preference.

7. Select a dataset type from the **Type** bar by clicking the icon.

If the type names are truncated, click the arrow located in the upper-left corner of the **Type** bar, and then select a type from the list.

The **Type** bar displays the dataset types that you use the most.

If you do not see the type you are looking for, click **More** to display all defined dataset types.

Note:

The dataset types displayed in this dialog box are controlled by your administrator. Therefore, you may be unable to create dataset types that are visible to you in your workspace.

8. Select the **Tool Used** option to edit the dataset file if more than one option is available.
9. To select a file, click **Select an import file ...** to the right of the **Import** box.

The **Upload File** dialog box appears.

10. Navigate to the file to be imported, select the file, and click **Upload**.

The system closes the **Upload File** dialog box, and the path to the file appears in the **Import** box.

Note:

The type of file that you import must match the dataset type selected in step 7.

11. Select **Open on Create** to launch the tool associated with the dataset and immediately open the file upon creation.
12. Complete the procedure:
 - To close the dialog box without saving the information you entered click **Cancel**.
 - Click **OK** or **Apply** to save the information in the database.

The **Paste** dialog box appears.

Note:
Clicking **Stop** ends the dataset creation process.

The new dataset object appears in your My Teamcenter tree.

If you select the **Open on Create** option, the system launches the tool associated with the dataset and opens the file.

Create a new dataset by drag-and-drop

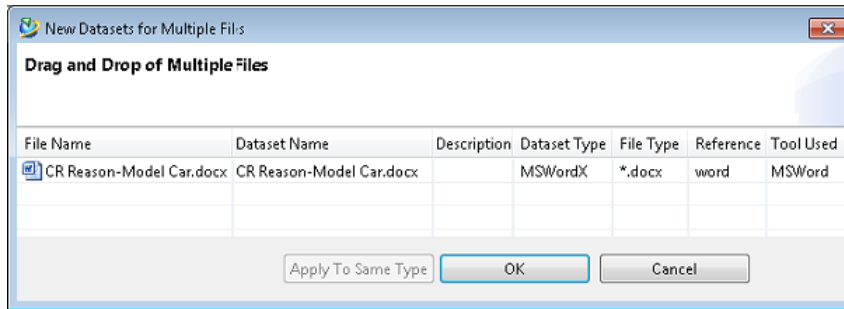
Note:

To drag and drop a file onto a Teamcenter object, you must have write permission on the object. Otherwise, a dataset won't be created on the object.

- When the **AE_allow_relate_dataset_to_newstuff_folder** preference does not exist or set to **false**, no dataset is created.
- When the **AE_allow_relate_dataset_to_newstuff_folder** preference is set to **true**, a dataset with the named reference file attached is created in your **Newstuff** folder.

1. In a Teamcenter component hierarchy view, folder view, or table, display the folder, item, or item revision under which the new dataset will reside.
2. In a file system window, select the file to add and drag it over the Teamcenter folder, item, or item revision.

The **New Datasets for Multiple Files** dialog box is displayed.



3. (Optional) Edit information as needed.

- Accept the name or type a descriptive name (up to 128 ASCII characters) in the **Dataset Name** box.

This name is used as a label in the object area. It is good practice to keep the names short so that you can see the entire name in the My Teamcenter tree.

- Type a description (up to 240 ASCII characters) to help identify this dataset in the **Description** box.
- Change the values in the **Dataset Type**, **Reference**, and **Tool Used** boxes.

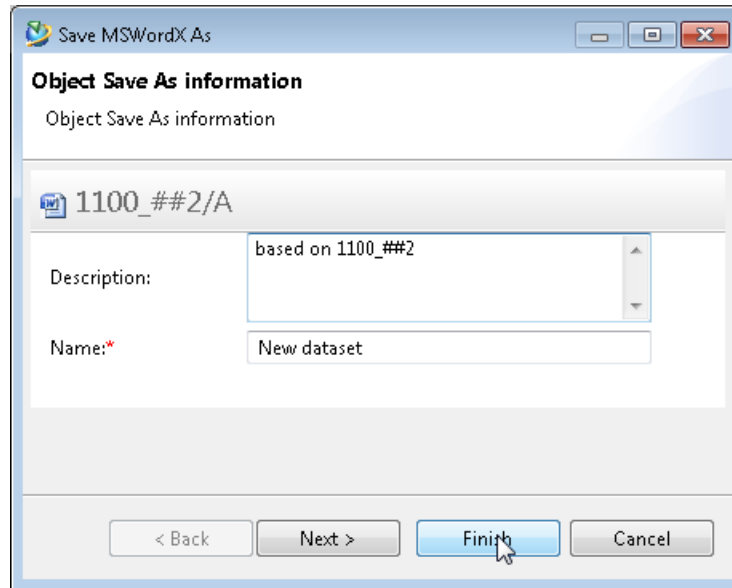
4. Click **OK**.

The system displays the new dataset object under the drop-target object.

Use Save As to create new datasets or dataset revisions

Using the **Save As** command on the **File** menu, you can create a new dataset based on another dataset.

If dataset identification is implemented at your site, you can use this command to create a revision of a dataset. You can use the **AE_dataset_id_usage** preference to enable dataset identification.

**Caution:**

When using the **Save As** command to duplicate a dataset, the new dataset is of the same type and uses the same software application (tool) as the original dataset. You cannot change these characteristics during this procedure. You can, however, specify which version of the dataset to duplicate. Therefore, it is important to understand the difference between dataset versions and dataset identification and revision.

Create a dataset based on another dataset

1. Select the dataset you want to duplicate.
2. Choose **File**→**Save As**.

The system displays the **Save As** dialog box for the dataset type.

3. (Optional) Type a description (up to 240 ASCII characters) in the **Description** box to help identify this dataset.
4. Leave the name value as it appears, or type a descriptive name (up to 132 ASCII characters) in the **Name** box.

Note:

You can also create a new dataset from a file by using the **Import** option in the **New Dataset** dialog box.

5. Assign a dataset ID by typing a unique identifier in the **Dataset ID** box, or click **Assign** to automatically generate the next available dataset ID.

Note:

The **Dataset ID** option is displayed only if your site has implemented dataset identification. Dataset identification is controlled by the **AE_dataset_id_usage** site preference.

- Assign a revision ID for the dataset by typing a revision identifier in the **Revision ID** box, or click **Assign** to automatically generate the next available revision ID. Revision IDs distinguish one revision of a dataset from other revisions of the same dataset.

Note:

The **Revision ID** box is displayed only if your site has implemented dataset identification. Dataset identification is controlled by the **AE_dataset_id_usage** site preference.

- Click **Finish** to save the information in the database.

Open a specific version of a dataset

- Select the dataset in the tree or **Details** table.
- Choose **File**→**Open With**.

The **Open With** dialog box appears.

- Select the version of the dataset that you want to open from the **Version** combo box.
- Expand the **Tools** node in the tree to see the dataset files, and select the file that you want to open.
- Click **OK**, **Apply**, or **Cancel**.

Open a dataset using a tool other than the tool defined for the dataset type

- Select the dataset in the tree or **Details** table.
- Choose **File**→**Open With**.

The system displays the **Open With** dialog box.

- Select a file under the tool you want to use to open the dataset file. Expand the **Tool** node in the tree to see the dataset files.
- Click **OK**, **Apply**, or **Cancel**.

Note:

If you choose **File→Open With** and attempt to open a text file with Microsoft Word, Teamcenter displays an error.


Use Notepad, Wordpad, or another text editor to open text files.

Open an NX dataset

1. Select the dataset or item revision with which the dataset is associated from the tree or **Details** tabbed page.
2. Click **Open in NX** on the toolbar or choose **File→Open in NX**.

The system launches NX and displays your data.

Open a Solid Edge dataset


1. Select the dataset or item revision with which the dataset is associated from the tree or **Details** tabbed page.
2. Click **Start/Open in Solid Edge**  on the rich client toolbar or choose **File→Open in Solid Edge**.

The system launches Solid Edge and displays your data.

Note:

Display of the **Start/Open in Solid Edge**  button and the **File→Open in Solid Edge** command are specified by the **Show Open in Solid Edge command** option and the related **SEEC_TcClient_Enable_Open_Cmd** preference.

Solid Edge options

Option	Purpose
Show Open in Solid Edge command	Displays the Start/Open in Solid Edge button  on the rich client toolbar. Preference name: SEEC_TcClient_Enable_Open_Cmd .

Prune named references from datasets

You can remove named references from datasets using the rich client **Prune** command in My Teamcenter or, if you are an administrative user, by using the **prune_named_references** command line utility.

Note:

You cannot prune objects unless you have delete permissions on the objects.

If a dataset contains no named references after a pruning, the dataset is deleted.

1. From the **Search**  view, click **Select a Search**  and select the **ImanFileNamedRefsQ** query.

This loads the **ImanFileNamedRefsQ** query in the **Search** view.

2. Provide values for **Original File Name**, **Type**, **Last Modified Date**, and **Name**.

Name is the dataset type. **Type** is the parent business object, such as **ItemRevision**.

3. Click **Execute Search** .

4. In the **Search Results** view, select the named references you want to delete.

5. Choose **Edit**→**Prune**.

The **Prune** command is available only when one or more named references are selected.

The **Prune Named References** confirmation dialog box is displayed.

6. Click **OK** to prune the named references or click **Cancel** to close the dialog box without pruning.

Deleting datasets

Dataset deletion considerations

Selecting a data object and choosing **Delete** from the **Edit** menu completely and permanently removes that object from the database. Once a data object is deleted, it cannot be recovered. Therefore, you are always prompted to confirm that you really want to delete the object. You must have read, write, and delete privileges on an object that you want to delete.

Delete all references

Before you can delete an object from the database you must remove all of its references.

1. Use the search feature or **Referencers** pane to find the references that you want to delete.
2. Select the references that you want to delete.
3. Choose **Edit→Delete**.

Delete all versions of a dataset

1. Select the dataset.
2. Choose **Edit→Delete** or click **Delete**.

Purge previous versions of a dataset

Caution:

This procedure purges all versions of a dataset with the exception of the current version. The purge action cannot be reversed.

1. Select the dataset in the tree or **Details** table.
2. Choose **Edit→Purge**.

The system displays the **Purge** dialog box.
3. Click **Yes** to purge all other versions of the dataset or click **No** to cancel the operation and close the dialog box.

Named references

Uploading and downloading named references

Use the **Upload** and **Download** buttons in the **Named References** dialog box to upload a file as a named reference to a dataset or to download a copy of a named reference file to a location within your operating system directory.

Teamcenter uses datasets, named references, and dataset tools:

- *Datasets* are data objects that manage data files (operating system files) created by other software applications. Each dataset can manage multiple operating system files as separate named references.
- *Named references* are Teamcenter objects that relate to a specific data file. In other words, a named reference is a file attached to a dataset. For example, you create and select a dataset in the rich client, right-click to display the shortcut menu, and choose **Named References**. You can then click **Upload** to associate files to the dataset object.

Note:

Administrators define named references in the Business Modeler IDE dataset type **References** tab.

Administrators can use the **Fnd0DatasetFileExtensionRestrict** business object constant in the Business Modeler IDE to prevent certain file types from being uploaded to a dataset.

When you upload a file in the rich client, you select the dataset type along with the file that you want to upload.

The named reference includes:

- Reference name

The reference type associated with the named reference.

- File type (**File of type** on the **Add File** dialog box)

The file type, such as ***.gif**, ***.***, and ***.doc**.

- File format (**File Type** on the **Add File** dialog box)

BINARY, **TEXT** or **OBJECT**.

Note:

The file format is either **BINARY** or **TEXT**.

- The rich client lets you upload and attach multiple files of the same reference type to a dataset object. If you then double-click the dataset, only the first file is opened. To view, open, or download the named references of a dataset from the rich client, select the dataset and choose **View**→**Named References**, or right-click and choose **Named References**. The **Named References** dialog box lets you upload additional files, download attached files, and open attached files.
- Editing an open file and uploading new files are supported when the dataset is checked out. When the **TC_Auto_Checkout preference** is set to **ON**, the **Open** command automatically checks out the dataset and lets you edit files. To upload a file, you must first check out the dataset, regardless of the **TC_Auto_Checkout** preference setting.
- A *dataset type* must have at least one named reference associated with it. A named reference defines the file information that can be added to this dataset type.
- A *dataset tool* represents a software application, such as Microsoft Word or Adobe Acrobat. You associate a tool with a type of dataset so you can open the dataset file from Teamcenter. A dataset type contains a list of tools that can operate on the dataset. This list is known as the *dataset references*.

- A *tool action* specifies Teamcenter activity for a dataset. Tool actions are defined on the dataset type and usually at least the **Open** action is defined. When no tool actions are defined for a dataset, an error message is displayed when you try to open the dataset in Teamcenter.

Note:

Administrator users can add named references using the **import_file** utility.

You can also use the Data Share Manager to asynchronously upload and download files. Supported on the rich client, the Data Share Manager is a separate executable with its own user interface that lets you view large file uploads and downloads, and manage them by pausing, resuming, or canceling the processes.

Upload a named reference file

1. Select the dataset with which you want to associate the uploaded reference file from the tree or **Details** table.

Note:

The dataset must be checked out to upload a named reference.

You can attach multiple files to a single dataset, but Teamcenter does not allow two files with the same name in one dataset. If there is a conflict with an existing file name, the duplicate file name may be changed internally by Teamcenter or an error message may be displayed.

2. Choose **View**→**Named References**.

The system displays the **Named References** dialog box, listing the properties of each file currently referenced by the dataset.

If the dataset is checked out, **Upload** is enabled.

3. Click **Upload**.

The system displays the **Upload File** dialog box.

4. Select the type of file to be uploaded. (This list of references is defined by your administrator as part of the dataset type definition process.)

5. Navigate to the file to be uploaded, select the file, and click **Upload**.

The system closes the **Upload File** dialog box, and the file is displayed in the list of named references.

6. After you finish adding files, click **Close** to exit the dialog box.

Download a named reference file

1. Select the dataset from which you want to export the reference file.
2. Choose **View**→**Named References**.

The system displays the **Named References** dialog box, which lists the properties of each file currently referenced by the dataset.

3. Select the rows containing the reference files to be exported and click **Download**.

The system displays the **Downloading File** dialog box.

4. Click **OK** to download the files to the specified directory.

A copy of the file is downloaded to the selected directory.

5. Click **Close** to exit the dialog box.

Translating dataset files

Requirements for translating

The **Translation** menu is displayed when Dispatcher is installed and configured. Many translation options can be configured.

Some CAD authoring tools require different translators for 3D (part) and 2D (drawing) engineering data. Typically, to support the full range of translations for a given CAD tool, you must install, configure, and enable both the part and the drawing translators for that tool.

Administrators can also configure Teamcenter document management for rendering, printing, and marking up documents, and for generating thumbnail images.

Create translation requests in My Teamcenter or from the command line

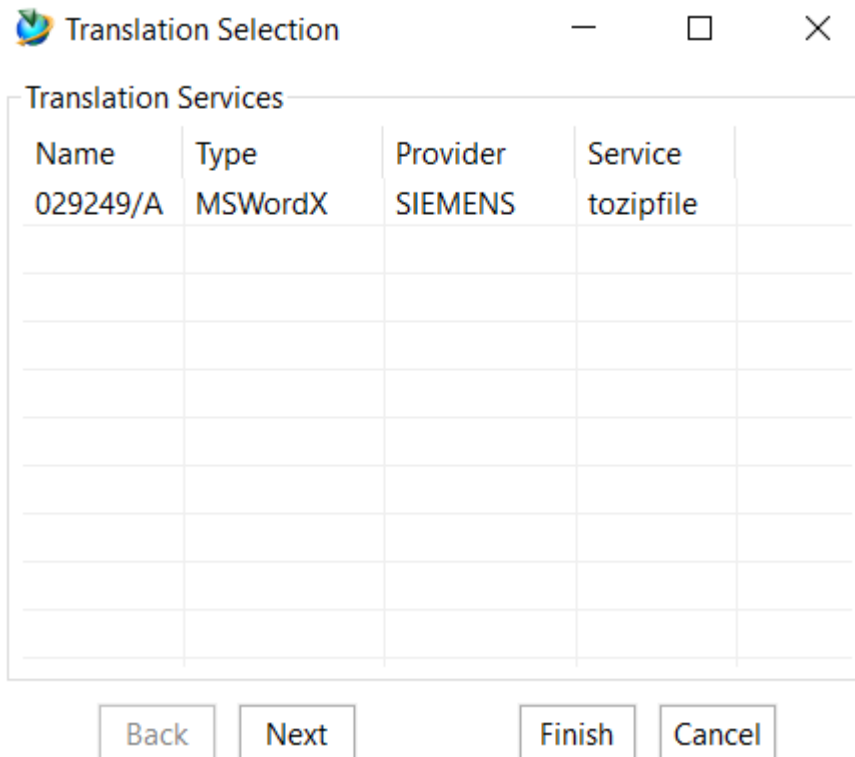
You can create translation requests in **My Teamcenter** or from the **command line**.

Create translation requests in My Teamcenter

1. In the navigation pane, select one or multiple datasets, item revisions, or structure context objects for translations.
2. Choose **Translation**→**Translate**.

The **Translation Selection** dialog box shows the selected objects for translation.

3. In the **Translation Selection** dialog box, choose appropriate values from the **Provider** and **Service** lists.



4. Click **Finish** to start the translation of all the objects.
The default translator arguments are used for the translation.
5. If you want to specify translator arguments and other properties, click **Next**.
Teamcenter shows the **Translation Selection** dialog box for the service.

029249/A: MSWordX: SIEMENS: tozipfile

Translation Arguments

Key	Value
RevisionValue	Working

Priority and Time Properties

Time

Priority

Back Next Finish Cancel

6. In the **Translation Arguments** section, you add, modify, or delete **Key** and **Value** arguments.
7. In the **Priority and Time Properties** section, you can set the following options:
 - a. **Time**

Choose the time for the translation to start.

Click the **Admin Time and Date properties** button to display the **Date and Time** dialog box.

Date and Time

Month Day Year

Hour Minute

OK Cancel

In the **Date and Time** dialog box, type the translation start time and click **OK**.

b. **Priority**

Choose the priority for the translation task.

c. **Repeating**

Choose this option if you want to repeat the translation.

Note:

The **Repeating** option does not appear by default. You must set the **ETS.Repeating_UI.<ProviderName>.<ServiceName>** preference to **TRUE** to display the repeating tasks functionality.

Note:

To avoid unpredictable behavior, the (time) interval in repeating tasks must be greater than the translation time.

8. Click **Finish** to start the translation.

If there are other objects for translation, they are translated with the default values.

9. If you want to specify translator arguments and other properties for the remaining objects, click **Next**.**Create translation requests from the command line**

You can create a translation request from the command line by using the **dispatcher_create_rqst** utility. This utility is located in the **TC_ROOT/bin** directory.

You can get the usage details of this utility by typing the following on the command line:

```
dispatcher_create_rqst -h
```

Translate assemblies to JtSimplification format

JtSimplification datasets let you visualize complex models from the Teamcenter managed environment without the performance impact associated with loading each part in the assembly.

- At each subassembly and at the top-level assembly, a simplified version of the geometry is created, which loads much faster than standard JT data.
- When you display a **JtSimplification** dataset, the simplified data is automatically loaded and displayed.

- Full geometry is loaded incrementally as you expand the model structure in the assembly tree, or when you hold the Shift key and select in the viewing window.

The **Simpngen** translator lets you create **JtSimplification** datasets.

1. In My Teamcenter, select an item revision.
2. Choose **Translation**→**Translate**.
3. In the **Translation Selection** dialog box, select the **simpngen** service, and then click **Next**.
4. In the **Translation Arguments** section, configure the revision rule.
5. In the **Priority and Time Properties** section, specify the appropriate values for translation time, priority, and translation repeating schedule options.
6. Click **OK** to start the translation.
7. (Optional) Choose **Translation**→**Administrator Console - All** to see the progress of the translation.
8. After the translation is complete, the translated file appears in the item revision.

Note:

The **VIS_simpngen_admin_group** site preference specifies user group authority to run the **Simpngen** translator from the Teamcenter **Translation** menu.

Harvest MMV data from JT models

An MMV dataset consists of a spatial hierarchy of a model, which is harvested from JT data using the Teamcenter Dispatcher **mmvindexgen** translator. You can use the My Teamcenter **Translation** menu to automate the generation of the spatial index on a recurring basis, in order to capture design changes over the course of the product lifecycle.

Siemens Digital Industries Software recommends that you set the translator to run daily, during a time of non-peak Teamcenter user activity. The performance of the harvester depends on many factors, such as model size and database speed. In determining the frequency in which to run the harvester, you should determine the amount of time that it takes to run. For example, if it takes more than one hour to run, you should not set it to run every hour.

Note:

If you want to verify the translator is working properly, you do not need to run Dispatcher to see if MMV is running correctly. Just open the *Module\Translators\mmvindexgen* directory in

a command window and run the *mmvindexgen.bat* file from the command prompt. For more information about running the translator, run *mmvindexgen.bat -help* instead.

1. Ensure that the Teamcenter **mmvindexgen** translator is installed and properly configured.
2. In My Teamcenter, select the item revision containing the JT model from which you want to generate MMV data.
3. Choose **Translation**→**Translate**.
4. In the **Translation Selection** dialog box, select the **mmvindexgen** service, and then click **Next**.
5. In the **Translation Arguments** section, configure the revision rule.
6. In the **Priority and Time Properties** section, specify the appropriate values for translation time, priority, and translation repeating schedule options.
7. Click **OK** to start the translation.
8. (Optional) Choose **Translation**→**Administrator Console - All** to see the progress of the translation.

After the translation is complete, the spatial index file appears in the item revision.

If the **mmvindexgen** translator fails when running under Dispatcher, consult the log file that is produced from *harvest_mmv_index*. Once you have corrected the error, run the translator on the command line to ensure it runs properly.

Translate CAD files

1. In My Teamcenter, select an item revision.
2. In the item revision, select a CAD dataset and choose **Translation**→**Translate**.
3. In the **Translation Selection** dialog box, select the appropriate values for the **Provider** and **Service** lists.
4. Select the translation time, priority, and translation repeating schedule options from the **Date and Time Properties** section.
5. Click **OK** to start the translation.
6. (Optional) Choose **Translation**→**Administrator Console -All** to see the progress of the translation.
7. After the translation is complete, the translated CAD file appears in the item revision.

If your site has the Teamcenter lifecycle visualization embedded viewer installed, you can view the translation result in the **Viewer** data pane in My Teamcenter or in the **Viewer** tab in Structure Manager.

Translate CAD files to PCB neutral formats

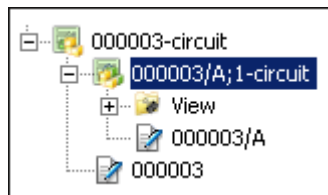
Note:

For complete details about translation services, see Dispatcher — Deployment and Administration.

1. From My Teamcenter, select the **Home** folder to create a new subfolder.
2. Choose **File→New→Folder** and in the **New Folder** dialog box, enter a name for the folder, for example, *my_pcb_folder*.

The new folder appears within the **Home** folder structure.

3. Select the new folder to create a new item.
4. Choose **File→New→Item** and in the **New Item** dialog box, select **PCBCircuit**.
5. In the **New Item** dialog box, click **Next**, and then click **Assign** to name the new item, for example *circuit*, and then click **Finish**.
6. Click **Close**.
7. Expand the *my_pcb_folder* folder and select the *circuit* item revision.

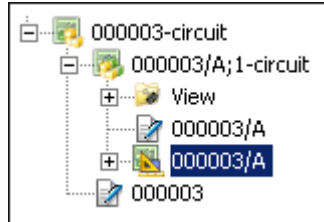


Note:

The *my_pcb_folder* folder and *circuit* item revision are sample names.

8. Choose **File→New→Dataset** and in the **New Dataset** dialog box, select **EDAGenPCBCAD** as the type for the new dataset.
9. Select **Import** to import your CAD-specific PCB file.
10. In the **Import File** dialog box, select the CAD file you want to import into My Teamcenter and then click **Import**.

11. Click **OK** to close the **New Dataset** dialog box and your file is imported as the new dataset type.
12. Select the imported revision and choose **Translation Services**→**Translate** to translate your CAD file to the PCB neutral file type XFATF. Select the newly created **EDAGenPCBCAD** dataset.



13. In the **Select translator for dataset** dialog box, in the **Provider** section, select **UGS**.
14. In the **Translator** section, select a translator that can translate your native CAD file.
15. Click **OK** to start the translation process.
16. (Optional) Choose **Translation**→**Request Administration Console** to see the progress of the various translation stages.
17. (Optional) In the **Translation Request Administration** dialog box, type an asterisk in the **Service** section and then click **Query**.

Note:

The asterisk is a wildcard symbol.

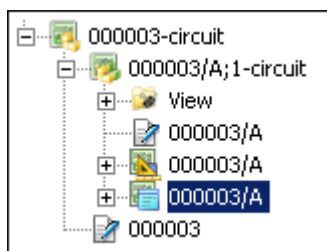
18. Select the desired **gencad** item and click **Refresh**. Close this dialog box when the translation is finished.

Note:

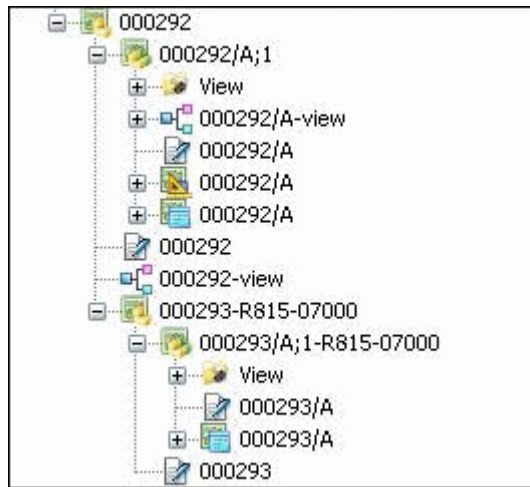
The **gencad** translator is one of about 40 PCB CAD translators supported by the software.

19. To display the new XFATF file, select the **circuit** node, right-click and choose **Refresh**.

The XFATF item revision appears in the **Demo** folder.



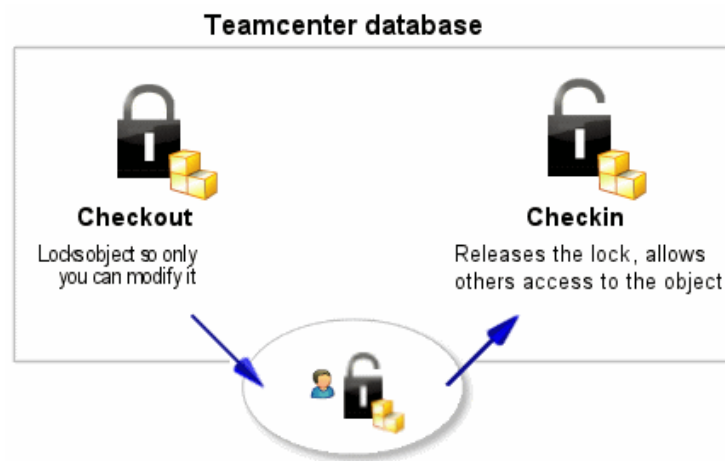
20. If the CAD file in a **PCBCircuit** item contains multiple PCB designs (for example, panelized circuits), after translation the child items of the **PCBCircuit** item are created. Each child item contains translated version of an individual PCB design.



Checking out and checking in Teamcenter data

Checkout and checkin basics

You can check objects into and out of the Teamcenter database, reserving exclusive access and preventing the data from being modified by other users.



- The **Check-Out** option locks an object in the database so that only you can modify it.
- The **Check-In** option releases the lock, allowing other users to access the object.
- Only your administrator can circumvent the security that the checkout function provides.

A checkout is either *explicit* or *implicit*.

- *Explicit* checkout occurs when you use a menu command or button to check out an object. You must then choose to check in the object when you are finished with your modifications.
- *Implicit* checkout occurs when you double-click to open a dataset from the rich client. Implicit checkout only occurs if the object is not already checked out. Checkin occurs automatically when you close the document.

The following objects can be checked into and out of the database:

- Folders
- Items and item revisions
- Datasets
- Forms
- BOM views and BOM view revisions

Explicit checkout

When you check out an object by using the **Check-In/Out** commands on the **Tools** menu, or when you use **Check-Out and Edit** in a view, you explicitly check out the object from the database. Explicit checkout ensures exclusive modification access to an object.

You define the checkout directory by choosing **Edit→Options** and setting the **General Check-In/Check-Out** options.

You can set the **Export files on checkout** option to **YES** to lock the dataset for everyone, including the person who holds the checkout.

- When a dataset is checked out during export, the named references are downloaded to a local operating system directory and can be modified locally outside of the Teamcenter environment.
- When the dataset is checked into the database, any modifications to the named reference files are automatically uploaded to the database.

Note:

If your site has the **TC_Auto_Checkout** preference set to **OFF** but you want to download a dataset named reference file to modify outside Teamcenter, you must use **Export files on checkout** to be able capture those modifications in Teamcenter. When the modifications are complete, use Teamcenter to check in the downloaded dataset file.

To explicitly check out an object, the following conditions must be met:

- The object must not be checked out by another user.
- You must have write access to the object.
- The object cannot be archived.

Implicit checkout

When you double-click a dataset object in Teamcenter, the system automatically creates an implicit checkout to ensure that two processes are not allowed to simultaneously update the dataset.

Implicit checkout differs from explicit checkout in the following ways:

- Implicit checkout is automatic and occurs when you open a dataset for modification. When the modifications are completed, the dataset is automatically checked back into the database.
- If you and another user simultaneously edit an object with implicit checkout, the **TC_overwrite_protection** preference setting determines whether a save by the second user overwrites changes saved by the first user to save, or whether the second user to save must redo changes.
- You cannot use a menu command to initiate an implicit checkout operation.
- Implicit checkout actions are not logged in a history file.
- Users included on notification lists are not notified when implicit checkout takes place.
- An implicit checkout in the **Viewer** view is released when you select a different object while the **Viewer** view is active. The checkout lock is not released if you only select another view such as the **Summary** or **Details** view.

Note:

The implicit checkout lock is released automatically when you return to **Viewer** and close the object, or select another object to open in the **Viewer** view.

- Implicit checkout of datasets other than **UGPART** and **UGMASTER** datasets can be customized by setting the **TC_Auto_Checkout** user preference. Implicit checkout of **UGPART** and **UGMASTER** datasets is controlled entirely by Teamcenter Integration for NX.

Note:

When the **TC_Auto_Checkout** user preference is enabled, an implicit checkout occurs for an item revision with a Microsoft Word dataset that is opened in the **Viewer** view in My Teamcenter. If the item revision is sent to Structure Manager and the dataset is checked in from the **Data** panel, and if you then return to the **Viewer** view in My Teamcenter, the old checked-out version appears. Close the object or select another object to update the display and show the dataset file as the correct checked-in version.

The **TC_Enable_Implicit_CO** preference specifies whether implicit checkout, save, and checkin are enabled in My Teamcenter in the **Properties** dialog box, form dialog boxes, **Viewer** view, the **Details** view, and the **Summary** view, and also in the **BOM Window** view in Systems Engineering and Requirements Management and Microsoft Office Live applications. The **TC_overwright_protection** preference value determines whether you are notified of concurrent changes by other users.

On the **Viewer** view and **Summary** view, click **Save Changes** to perform the implicit checkout.

Note:

Explicit checkout occurs when you use a menu command or button to check out an object.

Implicit checkout occurs when you open an object from Teamcenter, typically by selecting the object when the **Summary** view or **Viewer** view is active, by double-clicking a form object, or by displaying properties for a selected object. Implicit checkout does not occur when the object is already checked out or when multiple objects are selected.

If you have an object checked out through an implicit checkout, and you try to check out the object with an explicit checkout, a message is displayed to warn you that any changes you made in the implicit checkout will be lost if you continue.

When the **TC_Enable_Implicit_CO** preference is set to true, implicit checkout is available in the **Summary** view, **Viewer** view, properties dialog boxes, and in form dialog boxes in My Teamcenter. For example, with the **TC_Enable_Implicit_CO** preference enabled:

- When an object is checked in, the **Properties** dialog box displays **OK**, **Apply**, and **Cancel**, and you can make modifications in this dialog box.
 - Click **Apply** to automatically check out the object, save it, and check it in.
 - Click **OK** to automatically check out the object, save it, check in the object, and close the dialog box.
- When you already have the object checked out, the **Properties** dialog box displays **Save**, **Check-In**, **Cancel Check-out**, and **Close**.
- When an object is checked out by another user, the **Properties** dialog box displays **Close**.

- When you modify properties in My Teamcenter or Systems Engineering in the rich client, the **Save Properties** progress dialog box may be displayed.

Note:

When the **TC_Enable_Implicit_CO** is set to false, older versions of Teamcenter, such as version 9, allowed you to check-out a workflow job and change the job name. In newer versions of Teamcenter, you can no longer change the job name with this preference set to false. It must be set to true in order to change the job name.

Identify the checkout owner of an object

1. Right-click the object and choose **Properties**.

The **Properties** dialog box appears.

2. Click the **Reservation** link located in the lower-left portion of the dialog box.

The **Checked Out by** box displays the name and site of the user who has checked out the object.

Check out an object

1. Select objects in the My Teamcenter tree or a BOM line in Structure Manager.

Note:

If you use this option to check out a replica item revision from a remote site and add data to the item revision prior to checking it back in, the system perceives the new data as being owned by the site that owns the item revision rather than being owned by the local author.

2. Choose **Tools**→**Check-In/Out**→**Check-Out**.

The system displays the **Check-Out** dialog box.

3. If you want to check out only those objects displayed in the dialog box (no attachments or component objects), go to step 5.

4. (Optional) Check out component objects or attachments along with the selected objects.

- a. Click **Explore Selected Component(s)**  .

The system displays the component structure of the selected object in the **Explore** dialog box along with a pane for defining rules that determine which related objects are included.

- b. Select the related objects, using one of the following methods:

- By individual selection

Select the check box corresponding to the component in the tree.

- By selecting all components

Click **Select all component(s)**  located beneath the tree.

- According to user-defined rules

The right pane of the **Explore** dialog box lists type and relation combinations that can be used to select components, as defined by your preference settings. Both the **Type** and **Relation** lists include the **Any** option, which allows you to select all instances of a specific object type, regardless of relation, or to select all instances of a specific relation, regardless of object type.

Apply rule filters, as follows:

- A. Click **Add a rule (+)** to add a rule to the table.
- B. Choose a type and relation combination by double-clicking the boxes and selecting a value from the **Type** and **Relation** lists.
- C. Click **Update the selection in the tree based on rules** to update the selections in the tree.

Note:

Rules can be removed from the table by selecting the row and clicking **Remove selected rules**.

- D. Click **OK** to apply the filters to the objects in the **Explore** tree.


The system closes the **Explore** dialog box and displays the pane related to the original operation.

Note:

The selection rules are saved as a user preference.

- E. Click **OK** to accept the related objects and return to the original operation.

5. Click **Yes** (in the **Check-Out** dialog box) to check out the selected objects.

The button in the right margin of the dialog box (opposite the object) indicates whether the process was successfully completed. If an error occurs during the process, **Error**  is displayed for that object. You can double-click the error button to display details about the error.

Check in an object

1. Select one or more objects that are currently checked out or select a checked-out part or assembly represented by a BOM line in Structure Manager.


The **Check-In** option unlocks objects in the database, including assemblies in Structure Manager, that were previously checked out.

Note:

If you use this option to check in a replica item revision and have added data to the item revision prior to checking it back in, the system perceives the new data as being owned by the site that owns the item revision rather than being owned by the author at the local site.

2. Choose **Tools** → **Check-In/Out** → **Check-In**.

The **Check-In** dialog box appears.

3. If you want to check in only those objects displayed in the dialog box (no attachments or component objects), go to step 5.
4. (Optional) Check in component objects or attachments along with the selected objects.
 - a. Click **Explore Selected Component(s)**  .


The system displays the component structure of the selected object in the **Explore** dialog box along with a pane for defining rules that determine which related objects are included.

- b. Select the related objects, using one of the following methods:

- By individual selection

Select the check box corresponding to the component in the tree.

- By selecting all components

Click **Select all component(s)**  located beneath the tree.

- According to user-defined rules

The right pane of the **Explore** dialog box lists type and relation combinations that can be used to select components, as defined by your preference settings. Both the **Type** and **Relation** lists include the **Any** option, which allows you to select all instances of a specific object type, regardless of relation, or to select all instances of a specific relation, regardless of object type.

Apply rule filters, as follows:

- A. Click **Add a rule (+)** to add a rule to the table.
- B. Choose a type and relation combination by double-clicking the boxes and selecting a value from the **Type** and **Relation** lists.
- C. Click **Update the selection in the tree based on rules** to update the selections in the tree.

Note:

Rules can be removed from the table by selecting the row and clicking **Remove selected rules**.

- D. Click **OK** to apply the filters to the objects in the **Explore** tree.


The system closes the **Explore** dialog box and displays the pane related to the original operation.

Note:

The selection rules are saved as a user preference.

- E. Click **OK** to accept the related objects and return to the original operation.

5. Click **OK** (in the **Check-In** dialog box) to check in the selected objects.

The button in the right margin of the dialog box (opposite the object) indicates whether the process was successfully completed. If an error occurs during the process, the error button  is displayed for that object.

You can double-click the error button to display details about the error.

Transfer checkout to another user

1. Select an object that has been checked out of the database.
2. Choose **Tools**→**Check-In/Out**→**Transfer Check-Out**.

The system displays the **Transfer Check-Out** dialog box.

3. Select a user name from the **New User** list.

The user is designated as the **New User** to whom checkout will be transferred.

4. Click **Yes** to transfer checkout.

Cancel a checkout request

1. Select the object in the tree or **Details** table.
2. Choose **Tools**→**Check-In/Out**→**Cancel Checkout**, or right-click to choose **Check-In/Out**→**Cancel Checkout**.

The system displays the **Cancel Check-Out** confirmation dialog box.

3. Click **Yes** to cancel the checkout, or click **No** to stop the cancellation operation.
 - The checkout is canceled immediately.
 - The **Details** table **CO- Checked Out** column entry changes to blank.
 - If the checkout cannot be cancelled, a **Cancel Check-Out** dialog box displays an appropriate message.

Note:

The **Cancel Checkout** command cancels checkout for most objects.

You cannot cancel the checkout of an item, a schedule item, or BOM view revision.

View the checkout history of an object

1. Select the object in the tree and choose **Tools**→**Check-In/Out**→**Check-Out History**.

The system displays the **Check-Out History** dialog box containing the following information:

- Date and time of each checkout transaction
- User ID of the user who performed the checkout
- Site name and user ID of remote users who have checked the object out of the database
- Status of each transaction: checkin, checkout, transfer checkout, or cancel checkout

- Change ID and comments
2. Click **Close** to exit the **Check-Out History** dialog box.

Receiving notification of checkout status

Using the notification list

Use the notification list to notify users when a specific object is checked into or out of the Teamcenter database. When the checkout status of an object is modified, a **CICO Notification** envelope is delivered to the **Teamcenter mailbox** of each user whose name appears in the notification list. Click the envelope to display the contents in the **Details** table. A check mark in the **CO** column indicates that the object is checked out. If the column is blank, the object has been checked in.

Note:

You can add yourself to the notification list for any object; however, you must have administrative privileges to add or remove other users from a notification list.

Providing notification of changes in checkout status

You can notify users when a specific object is checked in to or out of the Teamcenter database.

- When the checkout status of an object is modified, a **CICO Notification** envelope is delivered to the mailbox of each user whose name appears in the notification list. Click the envelope to display the contents in the **Details** table.
- A check mark in the **CO** column indicates that the object is checked out. If the column is blank, the object has been checked in.

Note:

You can add yourself to the notification list for any object; however, you must have administrative privileges to add or remove other users from a notification list.

Using sequences to manage revision progress

What are sequences?

You use sequences if your business requires additional management of progress within revisions.

- A sequence is an iteration of the object, complete with properties and relations. A sequence of a revision is similar to a version of a file, but the sequence encompasses all information about the object.

- Sequences record a sequence of changes to a work-in-progress. The information contained in each sequence varies depending on the modifications made to the new sequence.
- A sequence is complete and represents a single point for the object as it is prepared for release.

Note:

Sequences are configured to be created by default. Sequence information is displayed based on the **DisplayName** business object constant.

Sequence ownership is not maintained in value history. The user who owns the latest sequence owns all the active and inactive sequences of the revision.

When you create an item revision, an initial *sequence*, to which Teamcenter assigns an initial sequence ID, is also created. This sequence becomes the active, or *default*, sequence.

- Checkout actions increment the sequence ID for the item revision, with the most recent sequence ID becoming the default.
- The default sequence is the only sequence you can check in and check out. Attempting to check out a nondefault sequence results in an error.
- Only one sequence can be active at any given time for an item revision.
- A sequence does not track incremental changes.
- Canceling a checkout decrements the sequence ID and discards any changes that have been saved to the database.

Note:

Sequences are iterations of objects such as item revisions. Sequences do not behave like versions, which are iterations of datasets.

Sequence accumulation

Teamcenter limits by object type the number of sequences stored in the database. At checkin, the system automatically removes the oldest sequence when you reach the limit.

Note:

Your administrator can use the **TCDefaultKeepLimit** preference to specify the number of sequences retained in the system.

- When you create a new item revision, such as when you revision **A** to revision **B**, all sequences are removed from the new revision and the new revision starts with the first sequence ID.

- You can set *immunity* for sequences to prevent their automatic removal.

The system displays an error message if you attempt to exceed the established limit. To add a new sequence after you reach the limit, you must remove at least one sequence by using either the **Delete** or **Purge** actions.

Note:

You can use **search queries** to retrieve sequences.

You can also **remove or purge** sequences.

Sequence preferences

The following preferences affect sequence behavior:

- **TCDefaultKeepLimit**

Determines the number of sequences the system maintains as an item revision is checked in and out of the database.

- **TCDefaultKeepLimitByType**

Determines the number of sequences the system maintains for the specified business object.

- **TCCheckoutReserveOnly**

Specifies for business objects whether a restore copy is not created during checkout.

Sequence ID display

The system displays the sequence ID appended to the item ID and revision, separated from the item revision by a semicolon (;). The sequence ID is followed by a hyphen (-) and the object name. For example, the sixth checkin for item revision **000186/A** of part **P_AX32** is displayed as follows:

```
000186/A;6-P_AX32
```

By default, the system only displays the active sequence, but you can display all sequences for an item using a search query.

For example, a query for **All Sequences** returns sequence information in the following format:

```
000186/A;3-P_AX32
000186/A;4-P_AX32
000186/A;5-P_AX32
000186/A;6-P_AX32
```

Query for sequences

1. Click **Search** on the Teamcenter toolbar or choose **Advanced** from the quick search menu to display the **Search** pane.
2. Click **Select a Search** in the My Teamcenter application to display the **Change Search** dialog box.
3. In the **System Defined Searches**, select either **All Sequences** or **Specific Sequence**.
 - **All Sequences** returns all previous sequences for objects that match the specified criteria.
 - **Specific Sequence** returns the specified sequence.

Set sequence immunity

You can set sequences to be retained by the system after a purge or checkin action that would ordinarily remove the sequence from the database.

1. Retrieve the sequences for an item.
2. Set or remove immunity.
 - Select a sequence and choose **Edit→Make Immune** to prevent removal by a purge action.
 - Select a sequence and choose **Edit→Remove Immunity** to allow removal by a purge action or by a checkin action.

Delete and purge sequences

You can remove sequences from an item revision by either a purge action or a delete action.

You can also query for sequences to retrieve sequences.

- To delete the default sequence, select the default sequence and choose **Edit→Delete**. In the **Delete** dialog box, you can select or clear the **Delete All Sequences** check box. If this check box is not selected, only the latest sequence is deleted and the previous sequence is the new default.
- To purge sequences, select the item revision and choose **Edit→Purge**.
 - A purge command used when the latest sequence is selected removes all previous sequences.
 - A purge used with a previous sequence selected removes only the selected sequence, but only if it is not marked immune from purge.

Sharing data between sites

Import and export basics

You can import and export data to and from the Teamcenter database. See Teamcenter Data Exchange for additional information on the ways to import and export Teamcenter data.

- Default options under the **Tools→Import** menu include **From Briefcase, Objects, From PLMXML, Remote, Bulk Import, and Templates.**

You can import objects in to the database from sites that are not part of a Multi-Site Collaboration network.

Note:

When sharing form data between multiple sites, ensure that the form storage class is properly defined at the importing site and is compatible with the form storage class at the exporting site.

- Default options under the **Tools→Export** menu include **Objects, To PLMXML, Objects to Excel, Objects To Word, Remote, Bulk Export, To Remote Site Via Global Services, To Briefcase, To SRM, and To PDX.**

You can export an object in either Teamcenter format, STEP format, or Microsoft Office Word.

You can also use Application Interface mode to export data in PLM XML format and track those exports.

Briefcase provides an alternative method of sharing data with suppliers or other unconnected Teamcenter sites. A Briefcase package file contains the selected object, such as an assembly, and its related components and data, in an archive format.

The PDX export process packages Teamcenter data in a file format that is usable by applications that support the PDX format.

You can import and export data that in PLM XML format. When you export objects in PLM XML format, the transfer mode determines what data is exported. You can also track your PLM XML exports using Application Interface mode.

Note:

While exporting workflow templates from a site using PLM XML, some of the associated objects such as named ACLs, saved queries, and release statuses do not get exported for security reasons. Therefore, when the exported file is imported at another site, these associated objects are not imported/created.

Named ACLs must be manually created and synchronized between sites. Saved query and release status objects can be exported/imported separately using PLM XML, and this method should be used to synchronize these objects between sites. During PLM XML import, if the process encounters these object types, a warning message is written to the log file indicating that these objects must be synchronized independently. The log file is named **plmxml_log_#.log** and is located in the **log** directory.

You can import objects from other sites in to your database even if you do not have a direct network connection to the site; however, you must have a directory containing data exported from the other site. This directory must be the output of an object export operation (as opposed to simple file export operation) using one of the following object export methods:

- Teamcenter export
- STEP export

Object export allows you to export objects in Teamcenter format or STEP format. When you export an object in Teamcenter or STEP format, you move all internal data associated with that object. For example, if you export an item, you export all its relations (for example, item revisions, BOM view revisions, item master, and any exportable requirement, specification, manifestation or reference objects) in one operation.

With Supplier Relationship Management (SRM), when an original equipment manufacturer (OEM) sponsor needs to exchange data with a supplier who does not have a Teamcenter installation, the sponsor can select items in My Teamcenter to share with the supplier. The sponsor's email address is required, and the sponsor can optionally type a reason for the export and can specify a transfer option set.

You can also import and export JT files and Systems Engineering structures.

Importing and exporting data

You can import objects from other sites in to your database even if you do not have a direct network connection to the site; however, you must have a directory containing data that was exported from the other site. This directory must be the output of an object export operation (as opposed to simple file export operation) using one of the following object export methods:

- Object export

Objects can be exported in either of the following formats:

- Teamcenter
- STEP
- TC XML export

- PLM XML export
- Briefcase export

When you export an object in Teamcenter or STEP format, you move all internal data associated with that object. For example, if you export an item, you export all of its related data (for example, item revisions, BOM view revisions, item master, and any exportable requirement, specification, manifestation, or reference objects) in one operation.

When you export objects in PLM XML format, the transfer mode determines what data is exported.

Note:

While exporting workflow templates from a site using PLM XML, some of the associated objects, such as named ACLs, saved queries, and release statuses do not get exported for security reasons. Therefore, when the exported file is imported at another site, these associated objects are not imported/created.

Named ACLs must be manually created and synchronized between sites. Saved search and release status objects can be exported/imported separately using PLM XML, and this method should be used to synchronize these objects between sites. During PLM XML import, if the process encounters these object types, a warning message is written to the log file indicating that these objects must be synchronized independently. The log file is named **plmxml_log_#.log** and is located in the **log** directory.

Briefcase files for data exchange are exported in TC XML format. This is the format normally used to transfer files to suppliers who do not have Teamcenter installed. These sites are known as *unmanaged sites*. Briefcase files can also be used for transfers to suppliers who have Teamcenter installed (*managed sites*) or to other Teamcenter sites in your enterprise that do not have a direct network connection or are offline for other reasons.

You can also export files to other Teamcenter directly if you have a network connection or you have Web access to a Global Services site.

Multi-Site Collaboration lets you import and export data between Teamcenter sites with either a direct network connection or through HTTP.

Importing objects

Import a collaboration context

Suppliers and OEMs import collaboration-context exported files to apply changes to their local environment. For example, if an OEM requires a supplier to change an object, the OEM sends the collaboration context for that object. The collaboration context provides information on how the OEM uses the object and enables the supplier to make changes without affecting other objects.

1. In Teamcenter, choose **Tools**→**Import**→**From Briefcase**.

2. In the **Import Briefcase** dialog box, select the file to import.
3. Choose **TIEImportOptionSetDefault** as **Option Set**.
4. Click **OK**.
5. Review the **Briefcase Import Options Settings** dialog box.
6. Click **Yes** to proceed.

From the **Home** tab, right-click the collaboration context and use the shortcut menu to send the collaboration context to an application for use.

Types of import data

You can import data into Teamcenter using a Teamcenter object, a STEP file, or a PLM XML file.

Note:

You can use Teamcenter PLM XML file or STEP file import for PLM data.

- You cannot import a geometry using this mechanism, so you cannot import a geometry STEP file.
- You can import a PLM XML file or STEP file that identifies a geometry file to be imported and attached as a dataset file.

You can import objects in to the database from sites that are not part of a Multi-Site Collaboration network.

Note:

When sharing form data between multiple sites, ensure that the form storage class is properly defined at the importing site and is compatible with the form storage class at the exporting site.

Import a Teamcenter object

1. Select the container object into which the objects will be imported.
2. Choose **Tools→Import→Objects**.
3. In the left pane of the **Import** dialog box, click the **Teamcenter** button.
4. In the **Importing Object** box, click the **Browse** button **...** to locate and select a folder or file from the system directory.

5. If you selected a directory or file containing Teamcenter objects, the objects are displayed in the **Object List**. Select the objects that you want to import using one of the following methods:
 - Click the check boxes to select individual objects in the list.
 - Click the **Select All** button to select all importable objects in the folder.
 - Click the **All But** button to select all objects except those that are currently selected.
 - Click the **Select None** button to clear all object selections.
6. (Optional) Choose from the following report options:

Note:

The report options are offered in addition to the operation log file.

Generate Import Report	Generates a report listing the objects that were imported. The system displays the report after the successful completion of the import operation.
Preview Import Report	Performs a dry run of the import operation. The resulting report lists the objects that would be imported, as well as any problems that are encountered.
Continue on Error	Allows the import operation to continue if errors are encountered while importing optional objects. All objects are considered optional except those with the following relation types:

**Requirement
Specification
Item Master
Item Revision Master**

If errors are encountered, a completion report is generated even if you do not select the **Generate Import Report** option.

7. Click **Apply** to start the import operation and retain the dialog box, or click **OK** to start the import operation and exit the dialog box. When the import operation has successfully completed, you can review the log file.

Import a STEP file

1. Select the container object into which the objects will be imported.
2. Choose **Tools→Import→Objects**.

- In the left pane of the **Import** dialog box, click the **STEP** button.

Note:

When you import product data into Teamcenter from a STEP AP203 or AP214 physical file, it is always imported as a complete item structure.

- Type the path to the folder containing the STEP file that you want to import in the **Importing Object** box, or click the **Browse** button **...** to locate and select a folder from the system directory.

After you select a STEP file, the directory path of the selected file is displayed in the **Importing Object** text box. The STEP file and all included references are displayed in the **Include Reference** section of the dialog box.

- Review the objects selected for import, and perform one of the following steps.
 - If the list accurately reflects the objects that you want to import, click **Apply** or **OK**.
 - If the list does not accurately reflect the objects that you want to import, click **Cancel**.

Import data from a PLM XML file

- Choose **Tools**→**Import**→**From PLMXML**.
- In the **PLM XML** dialog box, click the **Browse** button **...** to the right of the **Importing Object** box.

The system displays the **Select Object** dialog box.

- Select **PLM XML File (.xml)** from the **Files of type** list.
- Navigate to the directory containing the file, and select the file.
- Click the **Select** button.
- Select the transfer mode to be used to configure the import operation.
- (Optional) Create or select an incremental change object into which BOM components contained in the XML file will be imported.

Importing BOM components into an incremental change object allows you to view changes in Structure Manager prior to making them effective.

Note:

BOM components imported into an existing incremental change object are appended to the list of incremental change components.

8. Click **Apply** or **OK**.

The system imports the data in to your **Newstuff** folder.

Note:

If object names or IDs are encountered that exceed the character limit for those attributes in Teamcenter, the name and/or ID is truncated when imported in to Teamcenter.


Exporting objects

Methods of export

You can export data from Teamcenter in either Teamcenter, STEP, or PLM XML format. You can also use **Application Interface** mode to export data in PLM XML format and track those exports.


Application interface objects store parameters required to share data in PLM XML format, allowing you to repeatedly share data with other sites without defining the parameters each time you export the data.

Export an object

1. Select the objects to be exported.
2. Choose **Tools→Export→Objects....**
3. In the left pane of the **Export** dialog box, click the **Teamcenter** button.
4. Type the path to the directory containing the objects to be exported in the **Parent Directory** box or click the **Browse** button to locate the directory.
5. Type the name of the export directory in the **Export Directory** box.
6. (Optional) Type comments related to the export operation in the **Reason** box.
7. Use the buttons to the right of the **Target Sites** list to select the Multi-Site Collaboration export destinations for the objects.
8. (Optional) Set the export preferences by clicking the **Export Settings** button .

9. Click **OK** to export the objects.

Export objects in STEP format

1. Select the objects to be exported.
2. Choose **Tools→Export→Objects**.
3. In the left pane of the **Export** dialog box, click the **STEP** button.
4. Type the path to the directory containing the objects to be exported in the **Export Directory** box or click the **Browse** button to locate the directory.
5. Type the name of the export file in the **Export Filename** box.
6. (Optional) Type comments related to the export operation in the **Export** box.
7. Select an **Export Format** option: **AP 203** or **AP 214**.
8. (Optional) Select the **View Log File** option to view the log file when the export operation is complete.
9. (Optional) Set the export preferences by clicking the **Export Settings** button .
10. Click **OK**.

Export to a PLM XML file

1. Select the objects to be exported.

You can export only a single BOM. Do not configure multiple BOM structures for export as PLM XML.

2. Choose **Tools→Export→To PLMXML**.

The system displays the **PLM XML Export** dialog box.

3. In the **Export Directory** box, select the directory in which to place the PLM XML file. Click **Browse** to locate the directory.
4. Specify the name of the export file in the **Export Filename** box.
5. Choose a transfer mode from the **Transfer Mode Name** list.

6. (Optional) Click **Select Languages** to display the **Language Selection** dialog box for the languages configured at your site.
 - The **Available Languages** box lists the languages you can select as additional languages for export.
 - The **Select Languages** box lists the preconfigured languages for the selected transfer mode.
 - To select additional languages for export, follow these steps:
 - a. Select a language in the **Available Languages** box.
 - b. Click the **Add** button **+**.
 - The selected language is added to the **Selected Languages** box.
 - To reorder the languages in the **Selected Languages** box, select a language and use the move **▲ ▼** buttons as required.
 - c. Click **OK** or **Apply**.

The languages selected for export are displayed in the **Languages** box.

Note:

If you change the transfer mode, the **Languages** entries remains unchanged. You can use the **Language Selection** dialog box again to add or remove more languages.

7. (Optional) Select a revision rule to configure the assembly to be exported for the selected root object.

Note:

If you select multiple root objects, no revision rule is applied, so only the selected root objects, not the structure, are exported.

8. (Optional) Select **Open PLM XML File** to view the file when the export operation is complete.
9. (Optional) Select the **Perform Export In Background** check box to perform an asynchronous export.
10. Click **OK** to export the objects in the **Object List** list and close the dialog box.

When the export completes, a dialog box displays.

If the export was successful, you can click **Yes** in the dialog box to view the log file for the export.



If there were errors during the export, the dialog box lists the errors. Click **Yes** to view information about the errors that occurred.

Note:

Exports that completed without errors in past versions may now show errors. Previously, unless the **PLMXML_log_file_content** preference was set to **detailed**, errors did not display. The detailed error information now displays in the log file by default. Setting the **PLMXML_log_file_content** preference to **detailed** produces detailed information of all objects (those successfully exported and those exported with errors).

Export objects using application interface mode

An application interface lets you exchange data between Teamcenter and an external application using the Application Interface (AI) service functionality.

1. Select the objects to be exported.
2. Choose **Tools**→**Export**→**Objects**.
3. In the left pane of the **Export** dialog box, click the **AppInterface** button.
4. Choose an application interface by clicking the **Find Application Interface** button  or create a new application interface by clicking the **Create Application Interface** button  and entering information in the following fields:

- **Name**

Specifies the name of the application interface.

- **Description**

Describes the application interface (optional).

- **Import Transfer Mode Name**

Specifies the transfer mode used when objects are imported in to your database.

- **Export Transfer Mode Name**

Specifies the transfer mode used when objects are exported from your database.

- **Target Sites**

Specifies the sites to which objects are exported when this application interface is used.

- **Active Incremental Change**

Specifies the incremental change into which objects are imported. The buttons to the right of the **Active Incremental Change** box enable you to create an incremental change object, search for an existing change, or select from the most recently used changes. In addition, the **Information** button allows you to view or modify the active change.

5. (Optional) Choose the **Is Partial Export** option.
6. (Optional) Choose the **Open on Export** option.
7. Click **OK**.

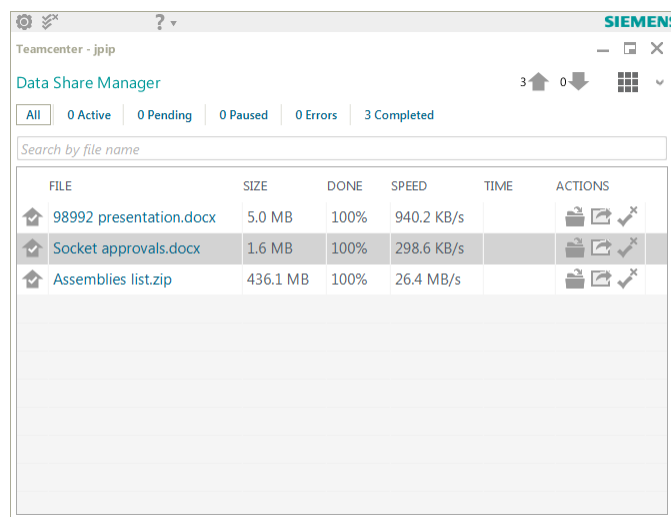
Uploading and downloading files with Data Share Manager


Introduction to Data Share Manager

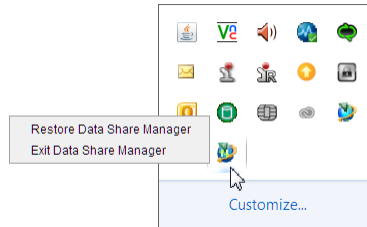
Use Data Share Manager to:

- Asynchronously upload and download files
- Upload multiple files of the same file type as named references to a dataset object
- View large file uploads and downloads and manage them by pausing, resuming, or canceling the processes

See Data Share Manager installation overview for details on installing and configuring Data Share Manager. Data Share Manager is supported on the rich client, and is a separate program:



Data Share Manager runs on Windows, Linux, and Mac OS clients. On Windows workstations, Data Share Manager resides in the system tray. To open it, right-click the Data Share Manager icon  and choose **Restore Data Share Manager**. (To close Data Share Manager, choose **Exit Data Share Manager**.)




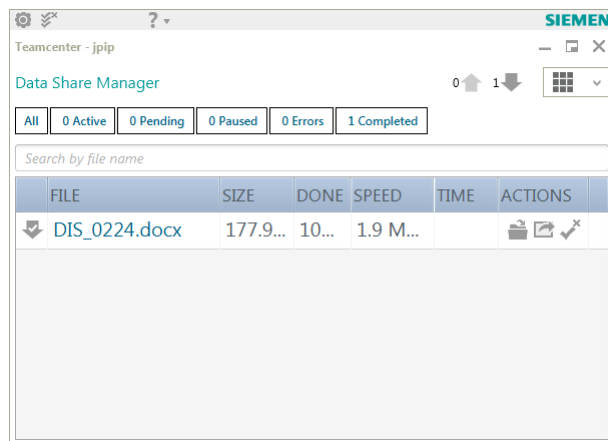
Data Share Manager runs whenever you log on or start a file upload or download.

Control file uploads and downloads with Data Share Manager

1. By default, Data Share Manager is hidden until the first new transaction is launched, when a tile view is displayed as shown.



Click the **Restore**  in the upper left corner of the tile view to the expand Data Share Manager to its larger size.



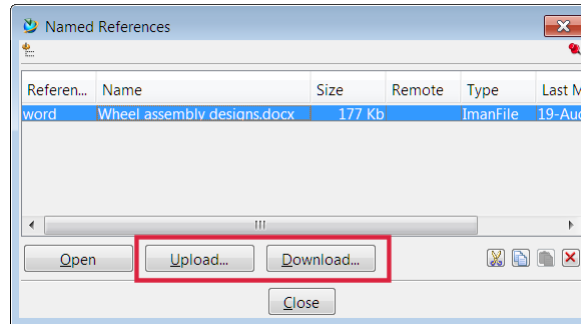
(Return to the tile view by clicking the tile button  in the upper right of Data Share Manager.)

You can also open Data Share Manager by selecting the Data Share Manager icon in the system tray.

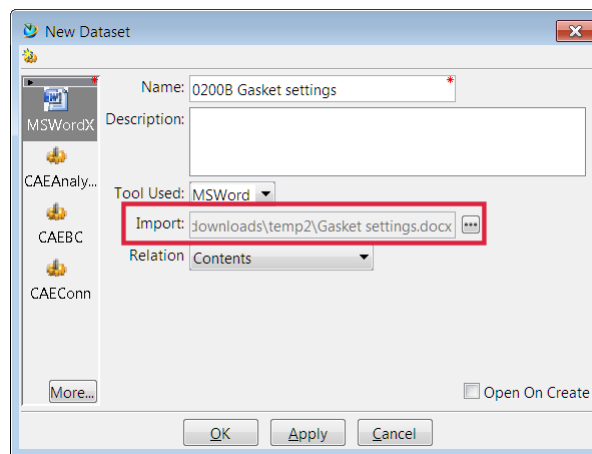
2. Upload or download files to run Data Share Manager.

Example:

- Right-click a checked-out dataset, choose **Named References**, and click the **Upload** or **Download** buttons in the **Named References** dialog box.



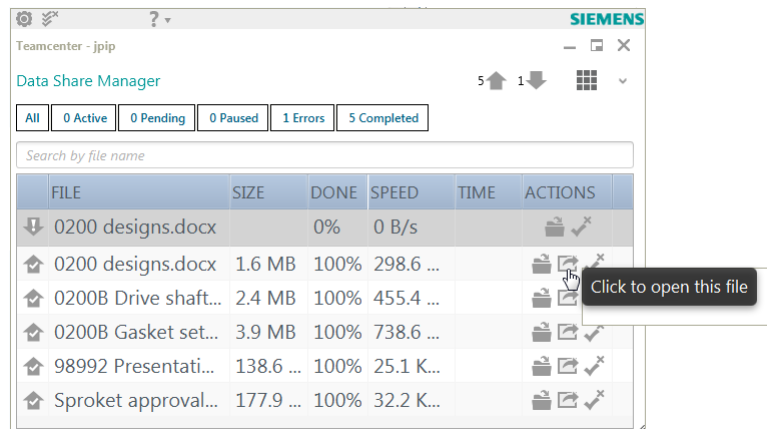
- Create a dataset and click the **Import** button to upload a file.



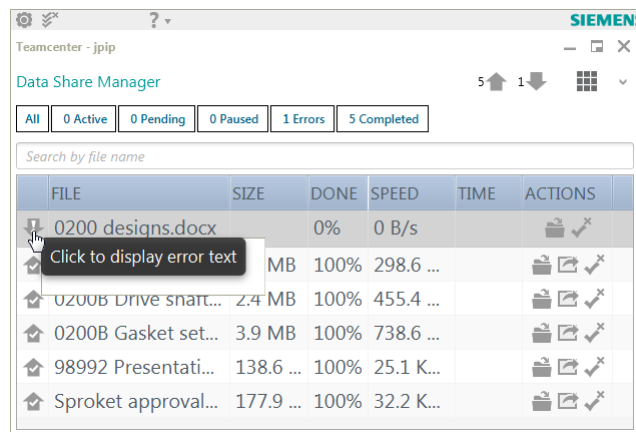
3. View the file upload and download processes in Data Share Manager.


FILE	SIZE	DONE	SPEED	TIME	ACTIONS
0200 designs.docx		0%	0 B/s		📁 🔄 ✖
0200 designs.docx	1.6 MB	100%	298.6 ...		📁 🔄 ✖
0200B Drive shaft...	2.4 MB	100%	455.4 ...		📁 🔄 ✖
0200B Gasket set...	3.9 MB	100%	738.6 ...		📁 🔄 ✖
98992 Presentati...	138.6 ...	100%	25.1 K...		📁 🔄 ✖
Sprocket approval...	177.9 ...	100%	32.2 K...		📁 🔄 ✖

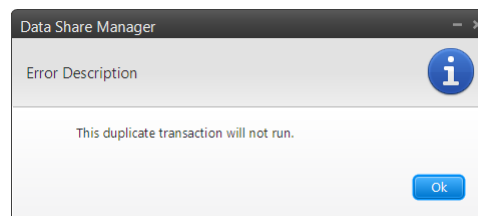
4. Hover your mouse over controls to see the available actions.



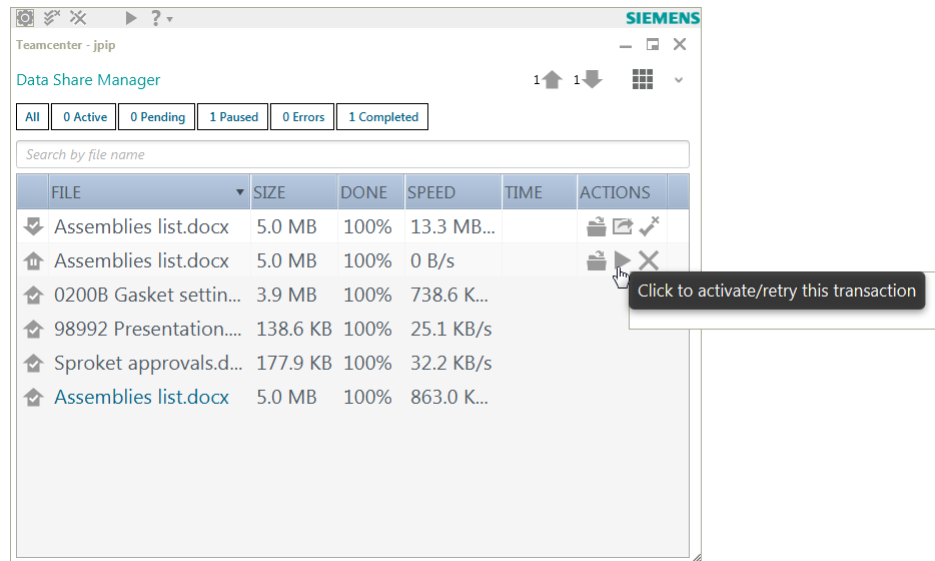
5. Upload and download errors are displayed with ! symbols. Click the arrow to see the error message.



For example, the following error means that this file was already downloaded and the duplicate record for this file is already shown in the list. If you want to download the file again, you must first delete the duplicate record for this file from the list by clicking .



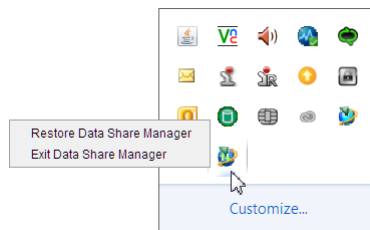
6. Click a process to pause it. Click the process a second time to resume it.



7. When you are done working with Data Share Manager, close it.

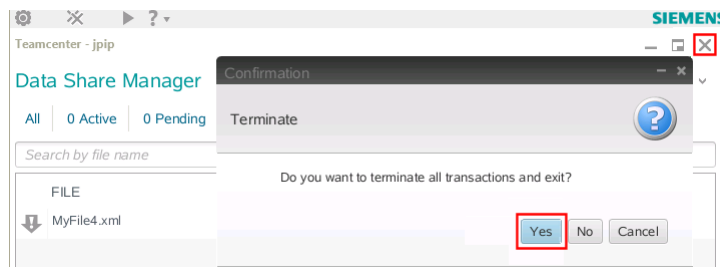
- Windows

Right-click the Data Share Manager icon in the system tray and select **Exit Data Share Manager**.



- Linux

Click the close button (X) in the upper right corner of Data Share Manager and click **Yes** in the confirmation dialog box.



Receiving object change notices using subscriptions

Subscriptions overview

Subscriptions let you receive notification, in near real time using external email, when data is modified by another user or as the release status of an item revision changes. You can:

- Create subscriptions to objects that provide external email notification when modifications are made to the object or when the status of the object changes.
- Create subscriptions that notify you when a secondary object, such as a dataset, is created relative to the primary object, such as the item or item revision. Teamcenter refers to these changes and additions of secondary objects as *events*.
- Subscribe to multiple objects simultaneously. All objects must be of the same type and the chosen event must be the same for all the chosen objects.
- Use subscription criteria to subscribe to objects of a specified type or subset of specified type.
- Manage subscriptions using the Subscription Manager.

Note:

Subscription functionality is enabled by setting site preferences.

You can be notified when:

- An item or item revision is checked in or checked out.
- Any status is applied to an item.
- A specific status is applied to an item.
- Any status is applied to an item revision (achieved by subscribing to the parent item).
- A specific status is applied to an item revision (achieved by subscribing to the parent item).
- An item revision (base or baseline) is released with any release status.
- An item revision (base or baseline) is released with a specific release status.
- A base item revision is released with any release status other than a specified status.
- A base item revision is created.

- Any object is attached to an item or item revision with any relation.
- A **UGMASTER** dataset is created and attached to an item revision with a specification relation (achieved by subscribing to the parent item of the item revision).
- A **UGPART** dataset is created and attached to an item revision with a manifestation relation (achieved by subscribing to the parent item of the item revision).

HTML format notification mail includes the following information:

- Subscription object
- Subscription object type
- Notification for event
- Event initiated by
- Time of event
- Site name
- Property name (if applicable)
- Property value (if applicable)
- Subscription criteria (if applicable)

Subscription notification content displays in the language specified by the **Locale** value in the **Person** object of the notifying user. If locale is not set for the notifying user, the system uses the locale set in the **TC_language_default** environment variable. If no locale is set, the locale defaults to **en_US**.

If the **SCM_notification_history** preference is set to **true**, notification event types are available in the audit log:

- **Email_Send**

Indicates the notification mail is sent.

- **Email_Not_Send**

Indicates the notification mail is not sent.

To access notification mail history, choose the **View→Audit→View Audit Logs** menu command to display the **Viewing the audit logs** dialog box. And then, under **Event Type Name**, specify **Email_Send** or **Email_Not_Send** to view notification status.

Event types

An *event type* defines an event whose occurrence on an object can be tracked with a subscription.

Note:

Event types and the **Event Type** editor are part of the Business Modeler IDE.

- When the event occurs relative to the target object, the subscriber is notified.
- The list of available event types displayed during the creation of a subscription depends on the event types that are mapped to the selected target object type.
 - When you subscribe to an item revision, which can be the target of a workflow process, the **Event Type** list includes the workflow event types such as **process initiated**, **assign**, **start**, and **complete**.
 - When you subscribe to an item, which cannot be the target of a workflow process, the **Event Type** list does not include workflow event types.

Create a subscription

To create a subscription:

1. (Optional) Select one or more subscribable objects in My Teamcenter.
2. Choose **Tools**→**Subscribe** or right-click and choose **Subscribe**.

The system displays the Subscription and Notification Wizard.

3. In the **Details Group** area, select **Create Subscription for Object** or **Create Subscription for Object Class**, and then click **Next**.

Note:

If no object is initially selected, only **Create Subscription for Object Class** is available.

4. Select **Event Type** and **Object Type**.

Modify the **Frequency**, **Active**, and **Importance** preset options.

Note:

Event Type is required for object subscription.

Event Type and **Object Type** are required for object class subscription.

- Specify a subscription name.

Note:

The execution time is set in Universal Time (24-hour).

- Click **Next** or **Finish**.

- If this subscription is for an object, click **Next** to select handlers.
- If this subscription is for an object class, click **Next** to either define attribute criteria or select a condition. Then click **Next** to select handlers.

- (Optional) Specify a notification subject, additional recipients to be notified, additional message content, and available properties to be reported, and then click **Finish**.

Receive real-time notifications




Refresh notification subscriptions

Refresh notification subscriptions let you receive near real-time notification when events occur involving objects to which you have subscribed. You can be informed when another user updates data, creates a new revision of an item, or when the status of an item revision changes.

Note:

Refresh notification subscription functionality must be enabled by your Teamcenter administrator.

Objects in your refresh notification list are automatically updated at user-specified intervals. The refresh notification button is located in the lower-right corner of the Teamcenter window, and indicates three states of refresh notification.

Button	State
	No pending refresh notification.
	Pending refresh notification. Indicates that there are objects on the notification list that have been viewed but have not yet been refreshed.
	New refresh notification. Indicates that there are refresh notifications that have not been reviewed.

You can access the notification list by double-clicking the button.

Configuring refresh notification

Preferences are used to configure refresh notification to fit your work processes.

You can configure refresh notification as follows:

- Specify whether refresh notification functionality is enabled **TC_refresh_notify** preference.
- Configure type-based subscriptions using the **TC_refresh_notify_subscribe_to_types** preference. These subscriptions are created each time you log in to Teamcenter.
- Configure event-based subscriptions (in conjunction with type-based subscriptions) using the **TypeName_subscribe_to_events** preference.
- Specify the time interval for obtaining refresh notification using the **TC_refresh_notify_pull_time_interval** preference.

Create an object-based refresh notification subscription

1. Select an item or item revision in My Teamcenter.
2. Choose **Tools**→**Subscribe to Refresh Notification**.

The system displays the **Create Session Subscriptions** dialog box.

3. Choose an event type from the **Event Type** list.
4. Click **OK**.

The system creates the subscription, which is valid for the duration of your Teamcenter session.

Note:

Object-based refresh notification subscriptions are valid only for your current session. When you log off of Teamcenter, the subscription expires. You can specify a duration for a subscription using the Subscription Manager.

Manually refresh objects in the refresh notification list

Teamcenter automatically refreshes objects on your refresh notification list at user-specified intervals. However, you can manually refresh objects on your notification list, either collectively or selectively, prior to the automatic update being processed.

1. Click the refresh notification icon located in the lower-right corner of the Teamcenter window.

The system displays the **Refresh Notify** dialog box.

2. Either select specific objects from the list and click **Refresh Selected** or click **Refresh All** to refresh the entire list.

The system refreshes the objects that are loaded in your current session.

Accessing Subscription Manager

For active subscriptions, right-click the object and choose **Subscription Manager**, or choose **Tools→Subscription Manager** to:

- Find, modify, copy, or delete a subscription.
- Transfer notification to another user.
- Clear a transfer notification period.

All users can access the Subscription Manager. Your role determines the level of functionality that is available. Only system administrators can modify or delete subscriptions, transfer notification to other user, or clear the transfer notification period on behalf of another user.

Teamcenter queries the database to retrieve the information that displays in the **Subscription** table. You can rearrange the order of columns in the table by clicking on the column head and moving it to the desired location. You can also use the **Edit the list and order of displayed columns** button to add or remove column heads. Finally, you can also print, add, and remove columns, such as:

- **Target**
- **Subscriber**
- **Event Type**
- **Expiration Date**
- **Execution Time**

Use the lower portion of the pane to enter search criteria.

Search for subscriptions in the database

1. Choose **Tools→Subscription Manager**.
2. Click the **General** tab and define the search criteria, either **Object**, **Subscriber**, and/or **Event Type**.
3. (Optional) Refine your search criteria by clicking the **Advanced** tab and choosing one of the following options:

Expiration Date Range	Searches for subscriptions that expire within a date range.
No Expiration Date	Searches for subscriptions that do not have an expiration date.
Execution Time Range	Searches for subscriptions with execution times within a specified range.
Execution Time	Searches for subscriptions with the frequency or number of days before or after the execution time.
Subscription Name	Searches for subscriptions with the specified name.
Priority	Searches for subscriptions with the specified priority.
Active/Inactive	Searches for subscriptions with the specified status.

4. Click **Find**.

Modify a subscription

1. Choose **Tools**→**Subscription Manager** or right-click an object and choose **Subscription Manager**.
2. Select the row in the table corresponding to the subscription that you want to modify and click the **Modify** button.

The system displays the **Edit Subscription** dialog box.

3. Modify the information in the **Expiration Date**, **Execution Time** and/or **Event Type** boxes.

You can modify all values selected when the subscription was created, except **Target Object**.

4. Click **OK**.

Delete a subscription

1. Choose **Tools**→**Subscription Manager** or right-click an object and choose **Send to**→**Subscription Manager**.
2. Select the subscription that you want to delete and click the **Delete** button.
3. Click **Yes** to confirm and complete the delete action.

Using email polling

Overview of email polling

Teamcenter email polling automates the process of collecting and importing information contained in email from third-party business partners.

Email polling must be configured by an administrator.

The administrator:

- Configures the email server in Teamcenter.
- Creates an email polling rule to filter and validate incoming emails.
- Configures email polling to specify the email server to be polled to download incoming email messages.
- Starts email polling to poll the email server at the specified time interval.

When email polling is in operation, specified users see workflow tasks in their inbox to approve or reject incoming emails. Approved or rejected emails and their attachments are processed according to the polling rule.

Managing URL links

Uniform resource locator (URL) objects

Uniform resource locator (URL) objects, also called Web links or link objects, let you directly access Web pages using your Web browser. URL objects can be contained within other data objects, such as folders, items, and item revisions. The same rules and preferences that apply to other basic objects, such as folders, items, and datasets, apply to URL objects.

Create a new URL object

You can create a URL object in My Teamcenter by using the **New→URL** command on the **File** menu, or by clicking **My Links** in the **Quick Links** section of the navigation pane. The URL contains the name of the protocol required to access the resource, a domain name that identifies a specific computer on the Internet, and a hierarchical description of a file location on the computer.

In My Teamcenter, the URL object is created as a child node within the tree. You can determine the placement of the new URL object by selecting a parent object in the tree prior to creating the URL object.

1. Select a container object.

2. Choose **File**→**New**→**URL**.

The system displays the **New URL** dialog box.

3. Enter a name for the new URL object in the **Name** box. Up to 20 characters are allowed for the URL name.
4. Enter the URL of the Web page that you want to access via this object in the **URL** box.

The maximum number of characters allowed for the URL is 512. The input format of the URL depends on your browser. For example, when using Microsoft Internet Explorer, the following formats are valid:

```
http://www.your-site.com  
www.your-site.com  
your-site.com
```

5. (Optional) Enter a description of the URL in the **Description** box. The maximum number of characters allowed for the description is 240.
6. (Optional) Select **Open on Create** if you want to display the Web page when you finish creating the URL object.
7. Click **OK** to create the URL object and exit the dialog box.

The system displays the new URL object within the selected container in the My Teamcenter tree.

Open Web pages using URL link objects

To open a Web page using a Teamcenter **Web Link** object, perform one of the following:

- Double-click the object to display the content in the default local browser.
- Select the object and choose **File**→**Open** to display the content in the default local browser.
- Select the object and use the **Viewer** view to display the **Web Link** object properties.

Teamcenter automatically opens a **Web Browser** view to display the Web page associated with the object.

- Select a URL link object.

Teamcenter displays the **Web Link** object properties in the **Viewer** view and automatically opens a **Web Browser** view to display the Web page associated with the object.

Note:

When a URL link object is selected and the Web page associated with the object is displayed, you can edit the address in the **Viewer** view or the **Web Browser** to navigate to other Web pages.

Change the URL associated with a link object

1. Select the URL object in the My Teamcenter tree.
2. Choose **Tools**→**Check In/Out**→**Check Out**.
3. Right-click the link object and choose **Edit**.

The system displays the **Web Link** dialog box.

4. Modify the URL.
5. Click **Save**.
6. Click **Close**.
7. Choose **Tools**→**Check In/Out**→**Check In**.

Change the name or description associated with a link object

1. Select the URL object in the My Teamcenter tree.
2. Choose **Tools**→**Check In/Out**→**Check Out**.
3. Choose the **Summary** pane.

The system displays the properties of the URL.

4. Modify the value of the name or description box.
5. Choose **Tools**→**Check In/Out**→**Check In**.

The updated values are displayed in the **Summary** pane and in the My Teamcenter tree.

5. Using workflows

What is a workflow?

Introduction to Workflow

A *workflow* is the automation of business procedures in which documents, information or tasks are passed from one participant to another in a way that is governed by rules or procedures. Teamcenter workflows allow you to manage your product data processes. Typically, documents, information, or tasks are passed from one participant to another in a way that is governed by rules or procedures.

A *workflow process* is initiated by a user, and workflow tasks are assigned to users.

As shown in the following diagram, in a basic workflow the initial **Start** step leads to the active **Do** task, **Create Design**. The **Do** task leads to a pending **Review** task, **Design Signoff**, and then to the final **Finish** step.



Workflow benefits

The benefits of automating your business processes include:

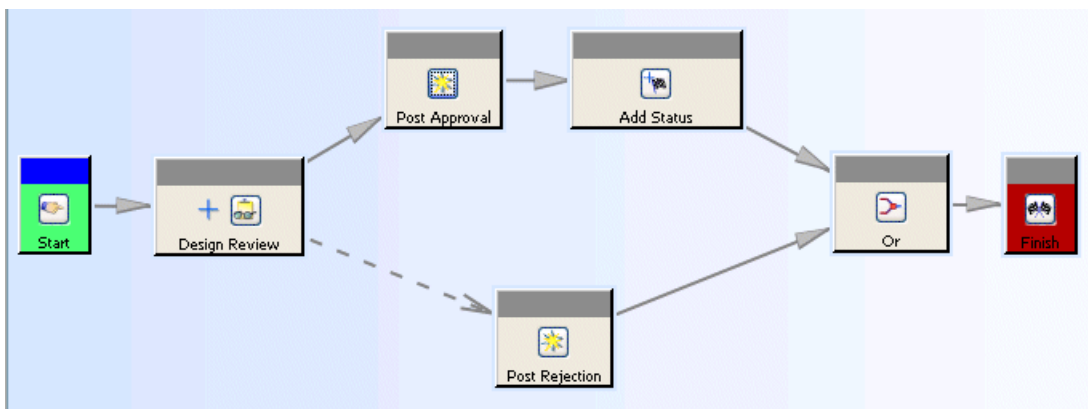
- *Improved efficiency*—The automation of your business processes can result in the elimination of unnecessary steps.
- *Better process control*—Company business processes are more easily managed with standardized work methods and the availability of audit trails.
- *Improved customer service*—Consistent business processes increases predictability in levels of response to customers.
- *Flexibility*—Computer-modeled processes can be quickly and easily redesigned to meet changing business needs.
- *Continual process improvement*—The resulting focus on business processes leads to their streamlining and simplification.

Workflow examples

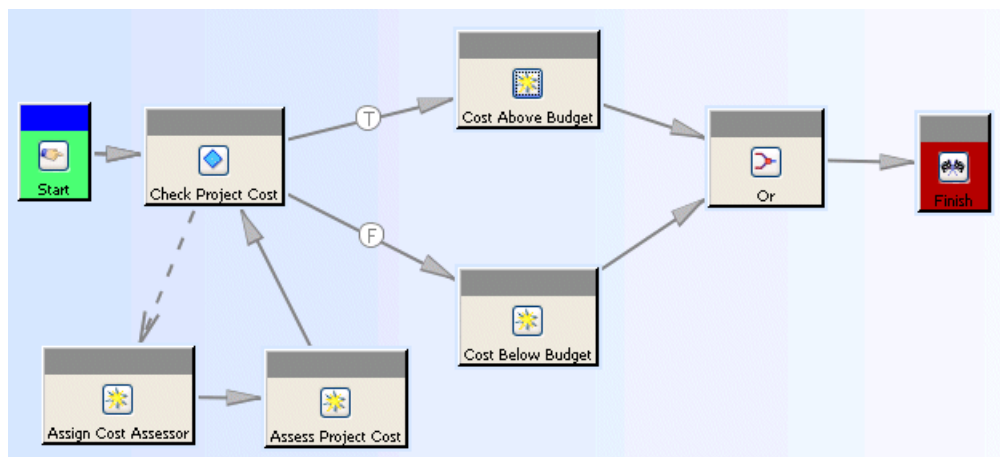
For example, you can create a simple review workflow in which an object is reviewed. Depending on the outcome of the review, one of two tasks is then required. When either of the tasks is performed, the workflow is complete. At completion, the object is granted a specified status.

Typically, an object sent through a review workflow is granted *Released* status after successful completion. Standard workflow behavior for released objects are that their release time and date is marked and the object is made read-only.

In this example, if an item revision containing a design part and its accompanying documentation is sent through design review, and the **Post Approval** task completes (rather than the **Post Rejection** task), the item revision part is marked as **Released** when the workflow finishes. The item revision and the objects it contains (the design part, and the documentation) are made read-only. No further changes can be made to the design, enforcing the review that was just performed.



In another example, you can create a more complicated workflow containing a **Condition** task. In this workflow, whether a specified condition is met or not determines the second round of tasks. Which tasks are required depend on whether the condition was met.



Teamcenter workflows are extensible by handlers; small ITK programs used to extend and customize the tasks. Handlers are essential to the creation of highly functional, flexible workflows.

- Action handlers perform an action, such as attaching objects or sending an e-mail.
- Rule handlers confirm a defined rule has been satisfied.

Using workflows

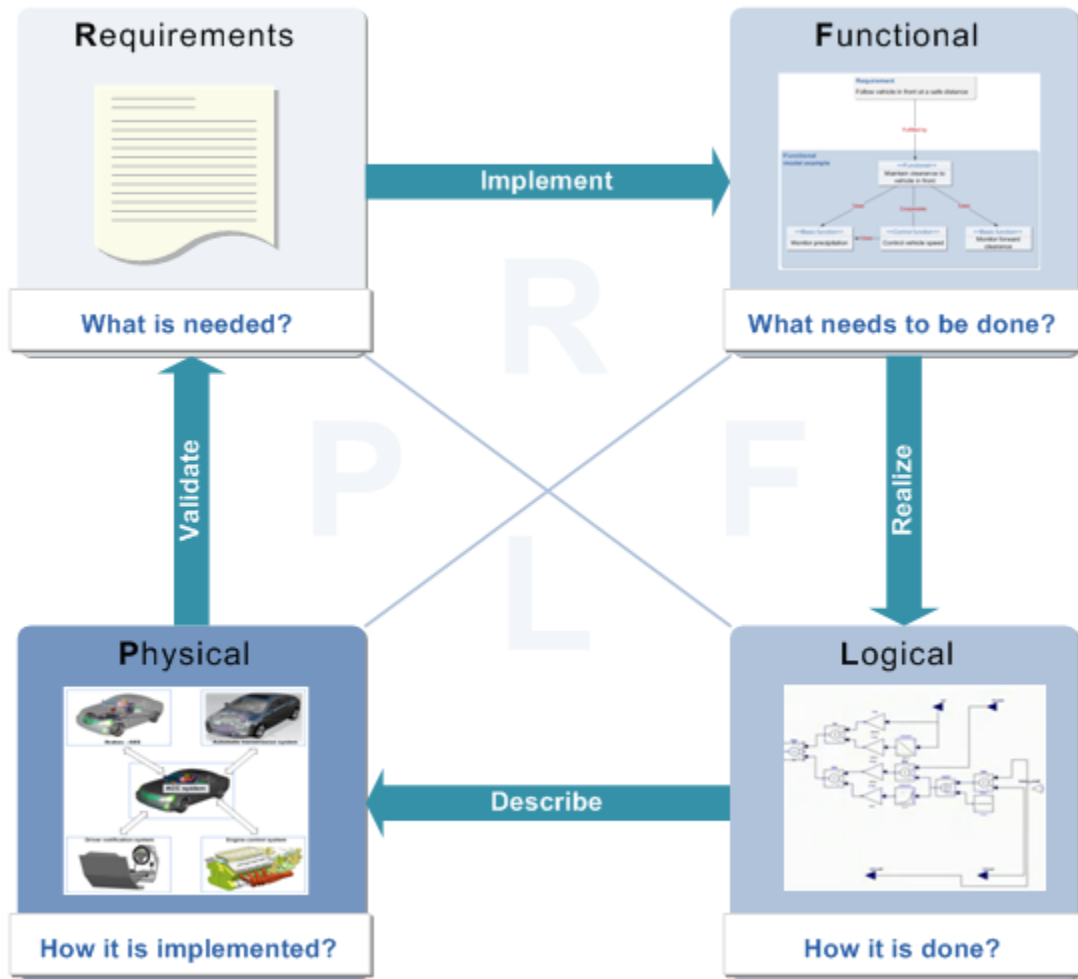
You can use workflows in Teamcenter to manage your processes and changes in many applications, such as:

- Change Manager

Workflows are ideal for managing your change process as problem reports lead to change requests which lead to change notices. With a well-designed change process and matching workflow process template, you can ensure that the right people perform the correct tasks in the proper order.

- Systems Engineering

A typical Systems Engineering workflow is the requirements, functional, logical, and physical design (RFLP) process. The process is iterative and may be repeated during the design or development of a product.



You can construct a workflow process template that matches your organization's version of the RFLP process.

Note:

For ease of use, Siemens Digital Industries Software recommends using My Teamcenter to initiate and complete workflow processes because the entire procedure can be accomplished from within your inbox in **My Worklist**. You can also initiate workflows from the Workflow Viewer application.

What are workflow processes?

A *workflow process* automates a business procedure by describing the individual tasks and task sequences required to complete the procedure.

You can initiate workflow processes, assign tasks to users, set task duration and due date, and maintain process assignment lists.

- When you initiate a workflow process, it is based on a selected process template that contains a framework of tasks and signoff team profiles.

Note:

The **EPM_adhoc_signoffs** preference value must be set to **ON** to enable ad hoc signoff functionality.

When this is enabled, workflow participants performing **select-signoff-team** tasks can select workflow signoff users individually, in addition to being able to select profiles.

- The initiator of the process can assign the responsibility of signing off tasks.
- A process template can automate some or all of the assignments.

Your administrator can create *static* process templates.

- If your site uses static templates, a user who initiates a process can select only from the available, saved process templates.
- Depending on the **WORKFLOW_adhoc_process** preference setting for your site, you may be able to make ad hoc modifications and edit a workflow process from your inbox by sending a task to Workflow Viewer to:
 - Add or delete tasks from a process while it is in progress.
 - Modify the order of tasks in a process.
 - Add members to a signoff team.

You can alter workflows in progress in **My Teamcenter**, or you can right-click on a task and choose **Send To→Workflow Viewer**.

In *Workflows and Tasks on Rich Client*, you can modify the structure and behavior of a process while it is running by choosing **Edit→Mode→Design** and then making edits in structures or handlers. You use **Edit→Mode→Execute** to effect the changes.

Workflow participants

Workflow participant roles include the *process initiator*, also known as the process owner, and zero or more *responsible parties*.

- A *process initiator* is a user who initiates a workflow process.
 - When you initiate a workflow process, you are the process owner.

- Whenever any task in the process is not explicitly assigned to another user, person, or resource pool, Teamcenter defaults responsibility for the task to the process owner.
- You become the *responsible party* for a task when it arrives in your inbox.

Note:

You can:

- Complete a task.

Instructions associated with the task describe the work to be done.

- Reassign a task.

Reassigning a task transfers ownership of the parent task to the selected user and makes that user the responsible party for the task.

Reassigning a task does not transfer your signoff responsibility.

- Delegate your signoff responsibility for a **perform-signoffs** subtask to another user.

If you are selected to a signoff team based on your inclusion under a signoff profile, you can only delegate the **perform-signoffs** subtask to another user who can match your signoff profile group and role. Otherwise, you can delegate the **perform-signoffs** subtask to any other user.

Workflow assignment activities use selection functionality from the Teamcenter Organization application. You can search by user, group, and role in the **Assign Participants**, **Assign Responsible Party**, **Delegate Signoff**, and **Select Signoff Team** dialog boxes.

View and assign participants for a single item revision

Note:

Workflows configured to use dynamic participants let you use the **Assign Participants** menu command to assign roles to data.

When an item revision is placed in a workflow that has one or more workflow handlers with the **\$PROPOSED_RESPONSIBLE_PARTY** and/or **\$PROPOSED_REVIEWERS** keywords as argument values, the values attached to the item revision are used.

1. Select an item revision in a Teamcenter component view.
2. Choose **Tools**→**Assign Participants**.

The system displays the **Assign Participants** dialog box.

This dialog box lets you perform exact matching with multiple selection. For example, if a signoff profile requires three users, you can select only those users.

3. Select a participant type, either **Proposed Reviewers** or **Proposed Responsible Party**.
4. Remove or add participants.
 - To remove a participant, select the participant and click **Remove**.
 - To add a participant, select the participant from the **Organization** or **Project Teams** tab and click **Add**.

On the **Organization** tab, you can search for a specific user, group, role, or combination.

Participants chosen from **Project Teams** can be individual users or a resource pool. Only active projects to which you belong are shown.

Note:

Use **Resource Pool Options** to refine your search for participants by setting scope and specifying group, role, or user information.

- When a group is selected, choose **Any Member** to have a task complete after a single signoff or **All Members** to have the task complete only when all members of the group complete the signoff.
- When a role under a group is selected with **Any Member** or with **All Members**, choose **Specific Group** or **Any Group**.

5. Click **OK**.

Initiate a workflow process

1. Choose **File**→**New**→**Workflow Process**.

The system displays the **New Process Dialog** dialog box.

2. Type a name for the process in the **Process Name** box.
3. Type a description to identify the process in the **Description** box.
4. Click the **Process Template** list to view process templates and make a selection.
5. (Optional) Select the **Show Under Construction Templates** check box .
6. Select a **Process Template Filter** option, if available.

Caution:

Legacy **Process Template Filter** functionality has been deprecated as of Teamcenter 11.2, and is turned off by default. This functionality is replaced by Business Modeler IDE conditions used to associate templates.

- To view all available process templates, select the **All** option.
 - To view only those process templates assigned to your group, select the **Assigned** option.
7. Click the **Attachments** tab to view or assign target and reference attachments.

It is not necessary to assign target data at the initiation of a process.

Note:

If necessary, generate a list of objects from several sources, including search results, Structure Manager, and other active Teamcenter applications, that can be pasted as references or attachments.

If there are proposed replica targets for the workflow at remote sites, the **Replica Proposed Targets** folder is displayed in the **Attachments** tab.

8. Click the **Process Template** tab to view the process template selected as the basis of the new process.
9. (Optional) Assign all tasks in the process.
- a. Click the **Assign All Tasks** tab.

The system displays the assignment list information.

- b. Select a list from the **Assignment Lists** list.

Teamcenter applies the assignment list to the tasks in the process. Users are displayed as nodes in the process tree and the action assigned to the user is displayed to the right of the tree under the **Actions** heading.

Note:

The **select-signoff-team** and **perform-signoffs** subtasks associated with **Route**, **Review**, and **Acknowledge** tasks are not displayed in the tree.

- c. (Optional) Assign responsible parties:
- A. Select the task node in the tree.

B. Use the **Resource Pool Options** criteria and search capabilities to select the responsible party.

C. Click **Add (+)**.

The system displays the user information and action assigned to that user beneath the task node in the process tree.

D. Repeat the previous steps to assign a responsible party for other tasks in the process.

d. (Optional) Assign users:

A. Expand the task node in the tree to begin to assign users to review, acknowledge, or receive notification of a task.

The system displays either the **Users** node or **Profiles** node.

- The **Users** node allows you to assign resources using an ad hoc selection process.
- Profiles limit the pool of users that can be assigned to the task.

The system displays the **Profiles** node when user profiles were defined as part of the process template.

B. Select the **Users** or **Profiles** node.

C. Use the **Group**, **Role**, and **User** lists to select a user.

D. Select an action from the list.

The system displays the actions in this list based on the task template type. For example, if a **Route** task is selected, the **Review**, **Acknowledge**, and **Notify** actions are displayed. If a **Review** task is selected, only the **Review** action is available; if an **Acknowledge** task is selected, only the **Acknowledge** action is available.

Note:

The required check box indicates that the selected user's decision is required before the Perform Signoff task can proceed.

E. Click **Add (+)**.

The system displays the user information and action assigned to that user beneath the task node in the process tree.

- F. Repeat the previous steps to assign users to review, acknowledge, or receive notification of other tasks in the tree.

Tip:

You can copy user nodes and paste them in to another task using the **Copy** and **Paste** buttons located beneath the tree.

- e. (Optional) Modify or set the quorum value for **Review** and **Acknowledge** tasks in the **Rev Quorum** and **Acknow Quorum** boxes.
- f. (Optional) To save modifications to the process assignment list, select the **Save Modifications Back to List** check box .

Note:

You can only save modifications to personal process assignment lists. Shared lists can be modified, but the changes cannot be saved.

10. Click **OK** to initiate the process.

Note:

Click **Cancel** at any time to cancel the operation without initiating a process.

Use Advanced Paste to generate a list of objects as target or reference attachments

Note:

This feature is controlled by the **WORKFLOW_advanced_paste** preference. To enable this feature, choose **Edit**→**Options**, expand the **Workflow** folder, select **General**, then select **Show Advance Paste In New Process**.

1. Select the objects in other sources that you want to add to the paste list. For example, objects displayed as the result of a search or those displayed in an open rich client application.
2. Select either the **Targets** or **References** folder on the **Attachments** tab of the **New Process** dialog box.
3. Click **Advanced Paste**, located at the bottom of the **New Process** dialog box.

The system displays the **Advanced Paste** dialog box.

4. Select one or more of the following options in the **Advanced Paste** dialog box:

- **From Prior Search**

Displays all open search results that are open in your session in which you have selected objects. You can select one or more searches from the list.

- **From Referencers**

Displays a list of My Teamcenter objects, such as prior searches and the **Home** folder. You can select one or more objects from the list.

- **From PSE**

Displays open BOM windows.

- a. Select a BOM window.

The system displays the **Collect BomElements** dialog box.

- b. (Optional) Select a load value to determine the number of BOM lines loaded before a cancellation can be effected.

For example, if the value is 250 and you click **Cancel**, the operation is canceled after 250 BOM lines are loaded.

- c. Click **GO** to collect the elements and add them to the paste list.

- **From Application**

Displays the active applications in your session.

Select an application to add all objects currently selected in that application window to the paste list.

The system displays a check mark to the left of the source button to indicate that objects from that source have been added to the paste list.

5. Click **OK**.

The system pastes the object references into the selected attachment folder.

Viewing a workflow process

How you view workflow task progress depends on whether you are a participant in the workflow.

- To use Workflow Viewer to view the progress of tasks in a workflow in which you are not a participant, use the **Send To→Workflow Viewer** shortcut menu command from the **Search Results** view, the **Referencers** tab, or My Teamcenter.
- To manage the workflow processes in which you are a participant, use My Teamcenter workflow tools. If you have read privilege for the process data, you can view any process in the database, whether it is currently in process or has already achieved its final status.

Use the My Teamcenter viewer to examine the status of a workflow process and its constituent tasks graphically, with color settings indicating **task states**.

When you select a workflow task in the viewer, it is outlined in blue and (at the same time) selected in the worklist. Conversely, when you select a task in the worklist, it is selected in the viewer.

- To view a workflow process, select the process in your inbox and click the **Viewer** tab. The system displays the process view.
- To view the current task, rather than the entire process, you can select the **Task View** option.

When you examine a workflow process in the viewer, symbols indicate the state of each task and each task is color-coded to indicate the current state, as follows:

- Gray indicates a *pending* state.
- Yellow indicates a *started* state.
- Green indicates a *skipped* or *completed* state.

Note:

By default, task states also have associated values:

- **1 = unassigned**
- **2 = pending**
- **4 = started**
- **8 = completed**
- **132 = suspended**

Arrows from task to task are color-coded to indicate the state of preceding task, as follows:

- A green line indicates the task is completed.
- A gray line indicates a task that is not yet completed.

Delete a workflow process in My Teamcenter

Workflow processes are instantiated on saved workflow templates. Changes made to workflow template do not effect active workflow processes *unless* the functionality to apply workflow template changes to active workflow processes is configured and you select the **Apply template changes to all active workflow processes** check box after editing the workflow template.

To delete the entire workflow process after it has been initiated, use one of these procedures:

- In **My Worklist**, select a workflow task for which you are the responsible party, and then click **Delete**.
- In the **Impact Analysis** view, select the workflow task, and then click **Delete**.

Note:

Deleting a task in the workflow, deletes the entire workflow process.

Task state, object release status, and object maturity

Teamcenter supports workflow task states, object statuses, and object maturity.

Task state

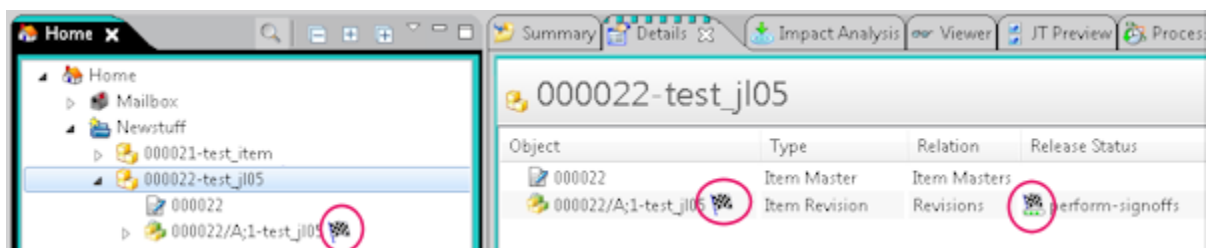
Tasks in a workflow have *state* values, such as **Started**, **Pending**, **Completed**, and so on.

Task states are indicated by icons in the upper-left corner of the task tile in workflow graphical views.



Release status

Objects have a *release status* values, such as **No Status**, **Reviewed**, **Released**, and **Obsolete**. Release statuses are typically attached to objects by a workflow and indicated by the relevant symbol in the information center, by a symbol associated with the object, and by an entry in the **Release Status** column in the My Teamcenter **Details** view.



Following attachment by a workflow, a status object remains permanently attached to the target object after the workflow ends, unless removed or replaced by a subsequent workflow. Status objects:

- Control user access through access rules and associated access control lists.
- May lock the object to prevent modification.
- Are used to define revision rules for use in structure management.
- Are used to define configuration contexts in conjunction with revision rules and effectivity.

Note:

Status values are required to assign effectivity values.

Object maturity

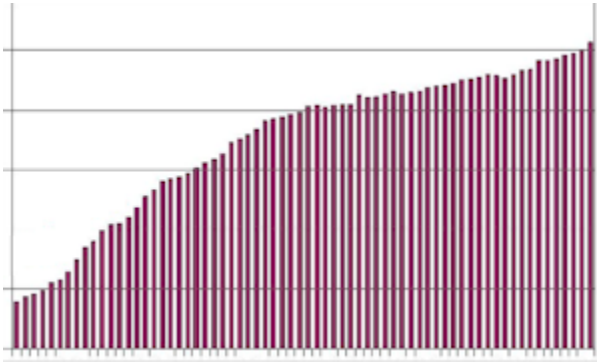
Objects can also have *maturity* values.

Properties, either custom or provided, on business objects represent maturity. For example, the change item revision object has the **CMMAaturity** property.

Maturity, in a product development context, represents an increase or improvement in the completeness, accuracy, or quality of product and process information. Maturity is typically a gradual progression characterized by numerous intermediate conditions or stages.

- Each intermediate stage is achieved incrementally in relatively small degrees.
- Achievement of any particular level of maturity may not indicate readiness for a specific use.
- Milestones represented by release events are typically the culmination of maturity increments.
- Maturity can be specified automatically within a workflow, or by a user selecting a maturity value from a list of values.

In the diagram, the vertical bars represent maturity increments, while the horizontal lines represent release milestones.



What is Workflow Viewer?

Workflow Viewer is an application that provides more functionality than is available in My Teamcenter for workflows. In Workflow Viewer, you can:

- View any initiated workflow process, whether it is currently in process or has already completed.
- Edit an active workflow process, if you have write permissions.

You can view workflow processes from your worklist by selecting a task and selecting **Process View** in the **Viewer** view. However, this method limits you to viewing only those workflow processes that contain tasks assigned to you at the time the task remains in your worklist.

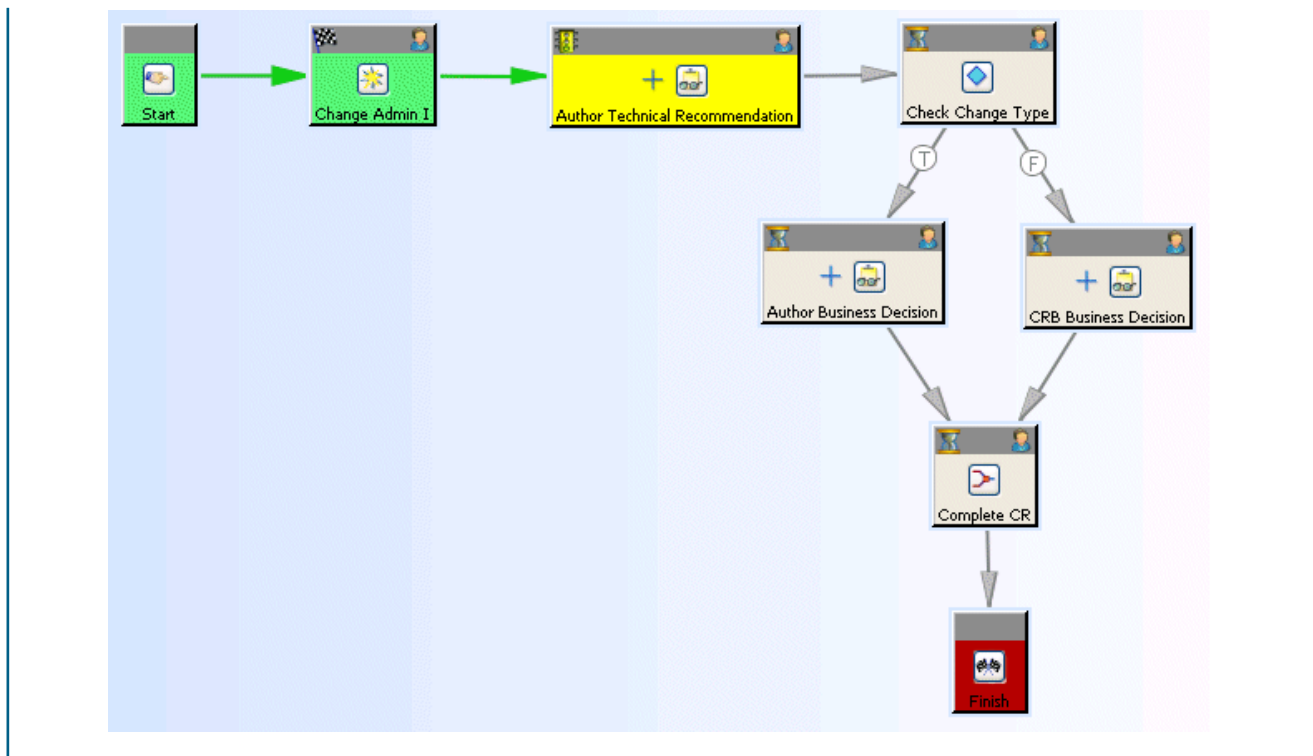
However, Workflow Viewer allows you to view the progress of a workflow process, even if you are not a participating member of that particular workflow process. If you have read privileges for the workflow process data, you can view any workflow process in the database, whether it is currently in process or has already achieved its final status.

Note:

My Worklist in My Teamcenter is designed to provide a more streamlined process for progressing through workflow processes to which you are associated. The worklist lists only those tasks that you can perform or that you are assigned to track.

Example:

The following workflow process shows that the **Change Admin I** task is complete, that the **Author Technical Recommendation** task has started, and that the remaining tasks are pending. You can tell by the name of the **Check Change Type** task (a **Condition** task) that the workflow branches to either an author or CRB business decision, depending on what type of change object is the target of the workflow.



What is Workflow Designer?

Workflow stems from the concept that all work goes through one or more workflow processes to accomplish an objective. Workflow is the automation of these business processes. Using workflow, documents, information, and tasks are passed between participants during the completion of a particular workflow process.

As a system administrator, use Workflow Designer to design workflow process templates that incorporate your company's business practices and procedures. End users use the templates to initiate workflow processes in My Teamcenter and Workflow Viewer.

To design and maintain workflow processes in Workflow Designer, you can perform the following actions:

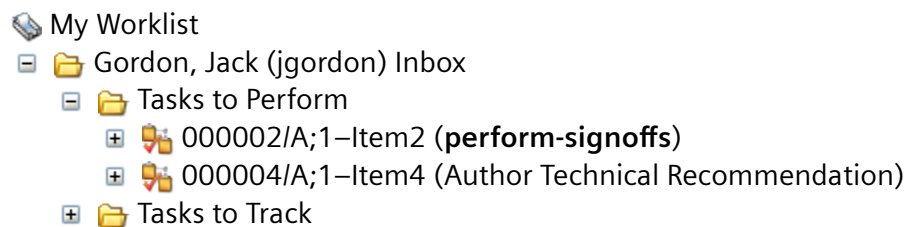
- Create templates.
- View templates.
- Add tasks to templates.
- Link tasks.
- Modify task behavior.
- Import and export workflow templates.

My Worklist

Managing your worklist

In My Teamcenter, your **My Worklist** tree includes your own user inbox and any remote inboxes and resource pool inboxes to which you are subscribed. **My Worklist** is the primary location in Teamcenter to access work assigned to you.

- Use your inbox to perform workflow jobs and view task information.
- If your inbox contains unviewed tasks, the inbox name is highlighted and the number of unviewed tasks is displayed.
- Each inbox contains two folders, **Tasks to Perform** and **Tasks to Track**.



Note:

If you use workflow with Schedule Manager, additional folders display that show your schedule tasks and subscription messages. When expanding the schedule tasks folder, your assigned schedule tasks with a start date within one week of the current date are displayed.

Note:

The **Tasks to Perform** and **Tasks to Track** folders associated with remote inboxes cannot be expanded in the tree. To access these folders, click the link corresponding to the Inbox.

Note:

If the **TC_Use_ActiveWorkspace_Inbox** preference is configured, you can display the Active Workspace inbox in the rich client, instead of the standard inbox.

- In the navigation pane, click **My Worklist**.
The Active Workspace inbox is displayed.

Tasks to Perform folder

Any tasks you are assigned appear in the **Tasks to Perform** folder. Once the completion criteria of a task are met (for example, the required quorum of approvals for a **perform-signoffs** task have been granted), the task is complete and is removed from the folder.

Tasks to Perform entries are color-coded to help you prioritize work based on duration:

- Black

The task has no duration.

- Green

The task has a duration that has not yet been exceeded.

- Red

The task has a duration that has been exceeded.

When a user completes his share of the task, it moves from the **Tasks to Perform** list to the **Tasks to Track** list.

Note:

When you complete a task that has an uncompleted dependent process, such as a background process or subprocess, the original task stays in the **Tasks to Perform** list until the dependent process is completed.

Note:

- Duration is based on the start date plus time. The duration includes weekends and holidays and is based on a 7-day week.
- The **Task Manager** daemon must be installed to see color-coding.

Tasks to Track folder

If you initiate a process, but are not responsible for the currently active task, Teamcenter places the task in the **Tasks to Track** folder in the rich client and in the inbox **Tracking** tab in the Active Workspace client.

- When the completion criteria of the task are met, the task is complete and is removed from the folder.

- For users who do not want tasks added to the **Tasks to Track** folder or the **Tracking** tab, the `WRKFLW_skip_TasksToTrack_update` preference can be set to **true**.

Note:

If the **Tasks to Track** folder or the **Tracking** tab already has content, that content is not removed.

- The root task does not have a **Task View** panel; it only allows the **Process View**. Only tasks that include the responsible party as the logged-in user are seen in the inboxes (either **Tasks to Perform** or **Tasks To Track**), except for **Perform Signoff** tasks.

Understanding the task display

The following task display conventions make it easy to understand the contents of your inbox at a glance:

- Tasks are displayed in reverse-chronological order with the newest tasks, based on start dates, at the top of the tree.
- Task names are displayed with the process name first, followed by the task name in parentheses. In addition, the corresponding tree-node symbol identifies the task type.
 - The names of tasks that have not been viewed are displayed in bold text. This applies only to tasks that are started or suspended.
 - The names of tasks that are late (past their due dates) are displayed in red text..
- Viewed status is specific to individual users. Therefore, if a task is assigned to a resource pool, the viewed status of the task does not change for a user unless he or she has viewed the task. Viewing by one user does not change the viewed status of the task for the entire resource pool.
- Tasks are not considered to have been viewed by users when they reassign the task.
- **Signoff** tasks are not considered to have been viewed by users when they delegate signoff to another user unless the user is the responsible party, in which case the task is considered viewed.

Note:

Teamcenter lets administrators modify active workflow processes.

- If such changes delete an active task currently in your worklist, the task is removed.
- If such changes modify an active task currently in your worklist, the changes do not take effect.

- If a workflow process later returns to a modified task, as can happen with backward branching, demoted tasks, and so on, the changes take effect in the subsequent iteration.


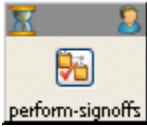


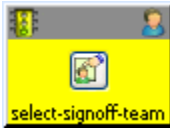

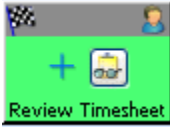

Task states

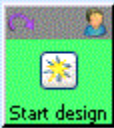





Each task within a workflow process is either **Pending**, **Started**, or **Completed**. The task's state displays in the upper-left corner of the task.

- *Task states* control and coordinate execution of individual tasks in a process.

Tasks are always in one of the defined states.

- The symbol associated with each task state is displayed in the upper-left corner of the task box in the process view.

State	Symbol / task tile	Description
Pending	 	<p>The task has not yet been started. A task cannot start until the previous release level has completed.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Note:</p> <p>If you see the  symbol instead, the task is processing in the background.</p> </div> <p>The gray background of the task and the symbol at the top-left corner of the task indicate that the state of this task is Pending.</p>
Started	 	<p>The task is active and action can be taken.</p> <p>The yellow background of the task and the symbol at the top-left corner of the task indicate that the state of this task is Started.</p>
Completed	 	<p>The required actions have been performed. A completed state for a Review task indicates that all signoffs have been performed and the number of approvals are equal to that specified in the quorum for the task.</p> <p>The green background of the task and the symbol at the top-left corner of the task indicate that the state of this task is Completed.</p>
Skipped		<p>The task has been skipped by a privileged user. If this is a Review task, all signoff subtasks show the No Decision</p>


State	Symbol / task tile	Description
		symbol, indicating the tasks are skipped rather than completed.
Failed	 	<p>A task's state is set to Failed if the task is configured with a failure path and if the failure conditions are met.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Note:</p> <p>The Failed state does not appear on the Actions menu, because it can only be triggered internally.</p> </div> <p>The red background of the task and the symbol at the top-left corner of the task indicate that the status of this task is Failed.</p>
Suspended		The task has been suspended. If this is a Review task, all signoff tasks are removed from the inbox.
Unassigned		The signoff team for a Review task has not yet been assigned.
Aborted		The task is canceled and the process is exited without being completed.

Note:

A completed state for a **perform-signoff** task means that all signoffs have been performed, and the number of approvals are equal to the required number specified in the quorum for the task.

If the **Wait For Undecided Reviewers** check box is selected, the task completes when the last reviewer approves or rejects the task. If the check box is not selected, the task completes as soon as the quorum is satisfied.

View task attachments


1. In your worklist, select a task or process.
2. Choose **View** → **Task Properties** .

The system displays the **Task Properties** dialog box.

3. Click the **Attachments Panel** tab at the bottom of the dialog box.

The system displays the **Attachments** pane with a tree listing of all target attachments and references.

View and edit task attributes

1. In your worklist, select a task or process.
2. Choose **View** → **Task Properties** .

The system displays the **Task Properties** dialog box.

3. Click the **Attributes** tab  at the bottom of the dialog box.

The system displays the **Attributes** pane.

- The **State** box displays the current state of the task.

The task state change as the task proceeds through workflow process activities.

This box cannot be modified.

- The **Responsible Party** box displays the responsible party for the selected task.

This box cannot be modified.

- The **Named ACL** box displays the named ACL assigned to this task (if any).

This box cannot be modified from this dialog box, although you can open the **Named ACL** dialog box for reference.

For more information about named ACLs and Access Manager best practices, see the [Access Management Using Rules and ACLs](#).

- For **Review** and **Acknowledge** tasks, the **Signoffs Quorum** box displays the number of users who must approve the **Signoff** task to reach a quorum, the recipients, and other information such as the due date and duration.

You can set **Recipients** in this dialog box, but you cannot set or modify other values, including the quorum value. The quorum value is set when the workflow process is initiated.

4. Note whether a **Condition** task is selected.
 - If a **Condition** task is selected, the **Condition Query** box displays the name of the assigned query.

- If a **Condition** task is selected, the **Condition Result** box displays the result of the query, either **True** or **False**. If a query has not yet been defined, the result is listed as **unset**.
- If a task immediately succeeding a **Condition** task is selected, the **Condition Path** box is displayed.

Click **Display condition path values** to display the **Condition Path** dialog box listing the value of the path between the **Condition** task and the selected task; either **True** or **False**.

5. Click **Close**.

Note:

In Active Workspace, tasks attributes can be edited from:

- The **Overview** area for a selected inbox task using **List with Summary** or **Table with Summary** and the **Start Edit** command.
- The **Overview** area for an open task using the **Start Edit** command.
- The **Workflow** tab signoff table, using the **Start Edit** command to enable editable fields.
- The **Workflow** tab by selecting a task in the signoff table or graphical viewer, opening the **Information** panel, and using the **Start Edit** command to enable editable fields.

The Business Modeler IDE **FndOEPMTaskModifyPrivilege** condition value also controls user access to task editing.

- Out-of-the-box (OOTB) this condition uses the default **isTrue()** condition expression, which returns true, but customizers can change the condition expression to suit business needs.
- For a started task, edit access is granted to the responsible party or the active surrogate, regardless of the condition value.


When the logged-in user is not a responsible party or active surrogate, task edit access is controlled by the condition value. When the condition returns **false**, other users attempting to edit the task will see a read-only form.

- For completed, skipped, or failed tasks, any user for whom the condition returns true can edit the task.
- After the **Perform-signoff** task is completed, the corresponding signoff object cannot be edited.
- When the workflow is completed, tasks cannot be edited by any user.

Set a due date for a task

Note:

- You can set a due date for a task and create a list of users who are notified if the task is not completed by the due date, but you can only set due dates for tasks that are started.
- The **Task Manager** daemon must be installed to see color-coding relating to task completion.

1. From your My Teamcenter inbox in **My Worklist**, select a task in the **Tasks to Track** or **Tasks to Perform** folder.
2. Click **Task Properties**  on the toolbar.

The system displays the **Task Properties** dialog box.

3. Set the due date, as follows:
 - a. Click **Due Date** to open the calendar.
The calendar initially shows the current day, month, and year.
 - b. Select the month in which the task becomes due. Click the right-arrow button to move forward in the calendar. Click the left-arrow button to move backward in the calendar.
 - c. Type a year in the **Year** box.
 - d. Type the hour and minute by which the task must be completed in the **h** and **m** boxes. Use the 24-hour clock format; for example, type 1:30 p.m. as **h: 13 m: 30**. If you do not specify another time or clear the boxes, the current time is entered. If you clear the boxes, the time is set to **0** and no required completion time is set for the task.
 - e. Click **OK** to accept the due date and time and close the calendar.

You have set a due date for the task. Next, you must create a list of recipients to receive late notices by Teamcenter mail if the task is not performed by the due date. You can specify individual users or assign multiple users to the task using address lists.

4. Define the recipient list by typing a comma-separated list of user names in the **Recipients** box in the **Task Properties** dialog box or as follows:
 - a. Click **Set** to the right of the **Recipients** box.

The system displays the **Select Recipients** dialog box.

- b. Locate a user, group, or address list by entering the name, or a partial name and wildcard character, in the **Search** box and clicking the **User**, **Group**, or **Address list** button. You can display all users, groups, or address lists by entering an asterisk (*) in the **Search** box.

The system displays the search results in the area beneath the **Search** box.

- c. Select the users, groups, or address list from the results and click **To**.
- d. Click **OK** to accept the recipient list and exit the **Select Recipients** dialog box.

The system displays the names of the recipients in the **Recipients** box of the **Task Properties** dialog box.


5. Click **Close** to exit the **Task Properties** dialog box.

Set task duration and assign overdue notice recipients

The *duration* of a task is the time allowed for the completion of a task that is not yet started.

Note:

- Duration is based on the start date plus time. The duration includes weekends and holidays, and is based on a 7-day week. For times exceeding a single week, you should include the nonwork days in the duration time.
- The **Task Manager** daemon must be installed to see color-coding relating to task completion.

1. From your My Teamcenter inbox in **My Worklist**, select a task in the **Tasks to Track** or **Tasks to Perform** folder.
2. Open the **Viewer** view and select the **Process View**.
3. Click **Task Properties**  on the toolbar.

The system displays the **Task Properties** dialog box.

4. Click **Set** to the right of the **Duration** box.

The system displays the **Set Duration** dialog box.

5. Enter integer values in one or more of the following boxes to specify the duration:
 - **Years**
 - **Weeks**

- **Days**
- **Hours**
- **Minutes**

After you set a duration for the task, you must create a list of recipients to receive late notices by Teamcenter mail if the task becomes overdue. You can specify individual users or assign multiple users to the task using address lists.

6. Define the recipient list by typing a comma-separated list of user names in the **Recipients** box in the **Task Properties** dialog box or as follows:

- a. Click **Set** to the right of the **Recipients** box.

The system displays the **Select Recipients** dialog box.

- b. Locate a user, group, or address list by entering the name, or a partial name and wildcard character, in the **Search** box and clicking the **User**, **Group**, or **Address list** button. You can display all users, groups, or address lists by entering an asterisk (*) in the **Search** box.

The system displays the search results in the area beneath the **Search** box.

- c. Select the users, groups, or address list from the results and click **To**.
- d. Click **OK** to accept the recipient list and exit the **Select Recipients** dialog box.

The system displays the names of the recipients in the **Recipients** box of the **Task Properties** dialog box.

7. Click **Close** to exit the **Task Properties** dialog box.

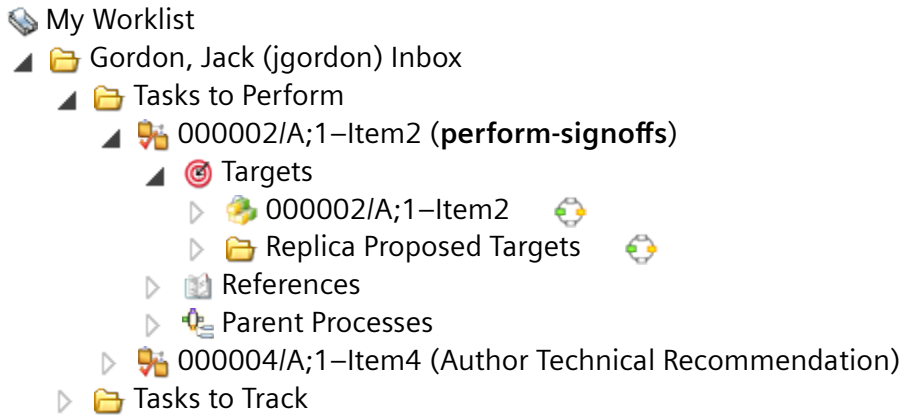
Signoff tasks

Performing interactive tasks

You can use workflow to complete assigned interactive tasks. For example, you can review and approve a change to a product or process.

- You use your **My Worklist** inbox to complete tasks assigned to you, including those originating at a remote site, and you can use and manage address lists and resource pools. For example, you can perform a **select-signoff-team** task.
- You can also complete tasks using the Workflow Viewer.

Interactive tasks are displayed in your **Tasks to Perform** folder.



Claim a task from a resource pool

You can claim a task from a resource pool under the following conditions:

- You are a member of the resource pool and have **subscribed** to it.
- The task is assigned to any member of a resource pool.

If the task is assigned to all members, you cannot claim it.

Note:

If the task is assigned to all members, it does not appear in the resource pool inbox because it cannot be claimed.

1. Click the **My Worklist** link, open the resource pool inbox.
2. Select the task you want to claim, and then choose **Actions**→**Claim Task**.
3. In the **Claim Task** dialog box, click **Yes**.
4. In the confirmation dialog box, click **OK**.

The task is moved from the resource pool inbox to your user inbox, and you are assigned the task.

Note:

You can perform the task directly from the resource pool inbox without first claiming it. This is useful for tasks you can perform right away.

Signing off tasks

The **Review**, **Acknowledge**, and **Route** tasks each contain a **perform-signoffs** subtask. The **perform-signoffs** subtask always follows the **select-signoff-team** subtask.

The members of the signoff team are typically selected by the process initiator.

Note:

The **Route** task contains a **Review** task, an **Acknowledge** task, and a **Notify** task. The **Route** task contains both signoff team subtasks.

- When you are a member of the signoff team, the **perform-signoffs** subtask appears in your worklist. Each member of the signoff team is responsible for reviewing the target object, then indicating a decision.
 - For **Acknowledge** tasks, the decision can be **Acknowledged** or **Not Acknowledged**.
 - For **Review** tasks, the decision can be **Approve**, **Reject**, or **No Decision**.

Note:

Not Acknowledged and **No Decision** do not count toward the quorum count. If your decision is required to meet quorum requirements, this subtask cannot complete until you select either **Acknowledged** or **Approve**.

- If your company's business practices dictate that you must be logged on under a specific group and role to complete a **perform-signoffs** task, the system displays a message and allows you to change your group and role to match the task requirements.

You can delegate your signoff responsibility by clicking your own user name in the **User-Group/ Role** column in the **Perform Signoff** pane. When the **Delegate signoff** dialog box appears, expand the **Organization** tree to select the user to whom you want to transfer your signoff responsibility. The **EPM_delegate_notification_handlers** preference specifies which **Start** action notification handlers are re-executed when the task is delegated to another user by the **Delegate Signoff** dialog box. (This preference is not provided in an initial installation and must be manually added.)

- Group and role requirements are dictated by the **SIGNOFF_required_group_and_role** preference.
- When the functionality is enabled, you can see when other users are available for instant messaging with Microsoft Office Communicator. You can view the current status of other users on the signoff list, and you can click the Microsoft Office Communicator symbol to initiate communication.

Complete a Do task

1. In My Teamcenter, click the **Do** task  in your **Tasks to Perform** folder.

2. (Optional.) If you know you have additional tasks to perform before you can perform the current task, you can create a subprocess from this task. The subprocess must complete before the current task can complete.
3. Click the **Viewer** tab and select the **Task View** option.
4. Complete the task according to the instructions in the **Instructions** box.
5. Type your password in the **Password** box.

The system displays this box if user authentication is required for the completion of the task.

Note:

If your site employs Security Services, you must use the Security Services password rather than your Teamcenter password.

6. Select the **Complete** check box.

Note:

An **Unable to Complete** check box is displayed when a failure path is defined for the **Do** task. Select the **Complete** check box to proceed on the success path to the next task or select the **Unable to Complete** check box to proceed on the failure path.

7. Click **Apply**.

The task is complete and the **Viewer** tab now displays **No View Data Available**.

Complete a perform-signoffs task

1. Select the **perform-signoffs** task in your **Tasks to Perform** folder.
2. Click the **Viewer** tab, and select the **Task View** option.

The system displays the **Perform Signoff** pane listing process information.

- **Responsible Party**

When the **Responsible Party** entry displays as an active link, you can reassign the parent task by clicking the link and selecting a new group, role, and user.

Reassigning the task transfers ownership of the parent task to the selected user, making that user the **Responsible Party** for the task. It does not, however, transfer your signoff responsibility.

- **Instructions**

When the **Instructions** link is displayed, there are instructions for the task. You can view the instructions by clicking the link.

- **Attachments**

When there are attachments to the workflow process, you can view them by clicking the **Attachments** link.

The system displays the **Attachments** dialog box. Target and reference attachments are listed beneath the signoff task in the task tree.

- **All Comments**

If the **All Comments** entry is present and is as an active link, comments are written for the task. You can view the comments by clicking the link.

3. (Optional) If you are a privileged user because you are the process owner, the responsible party, or a member of the administration group, you can delegate your signoff responsibility for the **perform-signoffs** subtask to another user.

Note:

If you are selected to a signoff team based on your inclusion under a signoff profile, you can only delegate the **perform-signoffs** subtask to another user who can match your signoff profile group and role. Otherwise, you can delegate the **perform-signoffs** subtask to any other user.

- a. Click your linked name in the **User-Group/Role** column.

The system displays the **Delegate Signoff** dialog box.

- b. Select a new user from the **Group, Role, and User** lists.
- c. Click **OK**.

Teamcenter assigns the task to the specified user and the task is placed in their **Tasks to Perform** folder.

4. Sign off the task:

- a. Click the link in the **Decision** column to display the **Signoff Decision** dialog box.
- b. Select an option.

- If **perform-signoffs** is a subtask of an **Acknowledge** task, select **Acknowledged** or **Not Acknowledged**.
- If **perform-signoffs** task is a subtask of a **Review** task, select **Approve**, **Reject**, or **No Decision**.

Note:

The **Not Acknowledged** and **No Decision** options do not apply to the quorum count. If your decision is necessary to meet quorum requirements, this subtask cannot complete until you select either **Acknowledged** or **Approve**.

- (Optional) Type comments in the **Comments** box.
- Click **OK**.

If user authentication is required to complete the task, type your password in the **Password** box, and click **OK**.

Note:

This authorization is determined by the creator of the process template. If your site employs Security Services, you must use the Security Services password rather than your Teamcenter password.

The task is complete and the **Viewer** tab now displays **No View Data Available**.

Signing off an Acknowledge or Review task

To perform a signoff task, complete the selected **perform-signoffs** task in the task tree. There are two types of **perform-signoffs** tasks:

- *Review signoffs*, with which you can elect to **Approve**, **Reject**, or make **No Decision** for the selected task.
- *Acknowledge signoffs*, for which you can set the **Acknowledged** or **No Decision** value on the selected task.

Only members of the signoff team can sign off a task.

Note:

Siemens Digital Industries Software recommends using your worklist in My Teamcenter to perform signoffs, as the worklist is designed specifically for performing tasks. If you are a responsible party, the **Perform Signoff** task is automatically sent to the **Tasks to Perform** folder in your worklist.

Information most pertinent to a signoff task is displayed in the **Perform Signoff** dialog box. The process name, task name, and task state are listed at the top of the dialog box. View any comments and instructions by clicking the respective links. Additional task information, such as task attributes, is displayed in other dialog boxes.


Click any linked entry to display its related dialog box. For example, click a linked entry in the **Decision** column to display the **Signoff Decision** dialog box and make your signoff decision.

Tool tips are available for each column in the dialog box. Activate the tool tips by moving your cursor over each column.


Perform a Route task

Note:

A **Route** task is the electronic equivalent of a routing sheet; the task is used to assign different responsibilities for the same task to multiple users. After you complete a **Route** task, the users are notified of their tasks using Teamcenter mail.

1. In My Teamcenter, you can assign responsibility for a review, acknowledge, or notification task to one or more users by performing the following steps:
 - a. Select the **Route** task in your **Tasks to Perform** folder.
 - b. Click the **Viewer** tab, and then choose the **Task View** option at the top of the **Viewer** pane.
 - c. Click **Users**  to display the **Group**, **Role**, and **User** lists.
 - d. Select a group, role, and user to whom the task will be assigned.
 - e. Select an action from the list: **Review**, **Acknow**, or **Notify**.
 - f. Click **Add**.

The system displays the user information and action assigned to that user beneath the task node in the process tree.

- g. Click **Modify**  to change the group, role, or user definition for a particular user or to modify the user action.
 - h. Click **Delete** (–) to delete a particular user.
2. Display the members of an entire address list and assign individual review, acknowledge, and notify responsibilities:
 - a. Select the route task in your **Tasks to Perform** folder.

- b. Click the **Viewer** tab, and select the **Task View** option at the top of the **Viewer** pane.
- c. Select the **Address Lists** option to display the **Address Lists** list.
- d. Select an address list.

The system displays the members of the address list.

- e. Select an action from the list.

The **Review**, **Acknowledge**, and **Notify** actions are displayed.

- f. Click **Add**.

The system displays the address list in the **Signoff Team** tree.

- g. Repeat the previous steps to assign task responsibilities to members of additional address lists.

3. (Optional) Modify or set the quorum value for **Review** and **Acknowledge** tasks in the **Rev Quorum** and **Acknow Quorum** boxes.
4. Select the **Ad-hoc done** check box to indicate you have completed the task assignments.
5. Click **Apply**.

The task is complete and the **Viewer** tab now displays **No View Data Available**.

Waiting for undecided reviewers

In a **Review** or **Route** task, when enough reviewers reject the task to prevent a quorum from being reached, Teamcenter takes one of the following actions:

- If the **Wait for Undecided Reviewers** check box was selected when the signoff team was selected, the task is not rejected until all reviewers submit their decision. This is true even if enough reviewers reject the task to prevent a quorum before all reviewers respond.

This allows all reviewers to give their input and early reviewers time to change their decision. However, this may delay a time-sensitive workflow.

- If the **Wait for Undecided Reviewers** check box on the task was cleared when the signoff team was selected, the task is rejected immediately.

Reviewers who do not respond before the quorum is prevented do not have the opportunity to submit a decision or their comments.

- If the **EPM-demote-on-reject** or **EPM-suspend-on-reject** handler is attached to the task, the task is demoted or suspended immediately. The **Wait for Undecided Reviewers** check box is ignored.

Performing manual condition tasks

To perform a manual **Condition** task, you can follow the directions in the **Instructions** box. The instructions pose a question or define a set of parameters that can be set to **True**, **False**, or **Unset**. If the task is **Unset**, it cannot be completed and the workflow process cannot proceed.

- If a condition task fails, a log file and corresponding dataset are added to the process as a reference attachment in the **Tasks Attachments References** folder.
- You can complete **Condition** tasks that are in a pending state. However, this prevents the task from appearing in the assigned user's Inbox.


Performing an automatic **Condition** task while it is pending preempts the query results, allowing you to override the query and manually set the task to **True** or **False**.

- If you perform a **Condition** task while it is still in a pending state, you can return to the task and reset the **True/False/Unset** setting at any point before the task reaches a started state.

Note:

Condition tasks can be configured to proceed automatically during the workflow process. Such tasks display milestones in the workflow process but have no associated user actions.

Complete a started manual Condition task

1. In My Teamcenter, select the **Condition** task  in your **Tasks to Perform** folder.
2. (Optional) If you know you have additional tasks to perform before you can perform the current task, you can create a subprocess from this task. The subprocess must complete before the current task can complete.
3. Click the **Viewer** tab and select the **Task View** option.
4. Complete the task according to the instructions in the **Task Instructions** box.
5. Set the **Task Result** to **True** or **False**, based on the requirements listed in the **Instructions** box. This setting determines whether the workflow process continues along the true or false branch from the **Condition** task.

Setting the condition path to **Unset** prevents the task from completing and pauses the workflow process.

Note:

An **Unable to Complete** check box is displayed when a failure path is defined for the **Condition** task. Select the **Unable to Complete** check box to proceed to the failure path.

6. Type your password in the **Password** box.

The **Password** box is displayed if user authentication is required to complete the task.

Note:

If your site employs Security Services, you must use the Security Services password rather than your Teamcenter password.

7. Click **Apply** to complete the task.

The task is complete and the **Viewer** tab now displays **No View Data Available**.

Complete a Customized task

1. In My Teamcenter, select the **Task** task  in your **Tasks to Perform** folder.

Note:

Customized tasks generally involve custom forms that are unique to your company's processes. Incorporating company forms into a customized task further automates the workflow process.

2. Click the **Viewer** tab and select the **Task View** option.

Note:

The selected custom task varies depending on the form and other tasks in the process.

3. Complete the steps listed in the dialog box, following instructions provided by the system administrator.

Click the button provided to complete the task and close the dialog box.

The task is complete and the **Viewer** tab now displays **No View Data Available**.

Selecting signoff teams

Selecting members of the signoff team

When you create a process, you can assign other users responsibility for performing a particular task within the process.

- While performing a task, the responsible party can reassign responsibility for the task to another user.
- When a task is reassigned to a user other than the process owner, the process owner and the responsible party are different users.

The user who initiates the workflow process must select a signoff team. As the process progresses, a **select-signoff-team** task appears in the **Tasks to Perform** folder of the process initiator's Inbox each time a task requiring a signoff team reaches a **Started** state.

Tasks that require signoff teams include:

- **Review** tasks
- **Acknowledge** tasks
- **Route** tasks

Note:

Rather than select signoff teams as the **select-signoff-team** task appears in your worklist, you can select signoff team members for all the different signoff teams required within an entire workflow using **process assignment lists**.

When you are assigned a **select-signoff-team** task, you select users as signoff team members who are assigned the responsibility of signing off a target object, such as a document.

- You can assign signoff responsibility to an entire address list or resource pool of users, as well as individual users.
- You can assign signoff responsibility by completing predefined profiles or by ad hoc selection.
- You can select a signoff team in the **Task Hierarchy** tree and the **Task Flow** pane.

A green light in the upper left hand corner of the task node indicates that a signoff team has been assigned.

Completing select-signoff-team tasks

The **Review**, **Acknowledge**, and **Route** tasks each contain a **select-signoff-team** subtask.

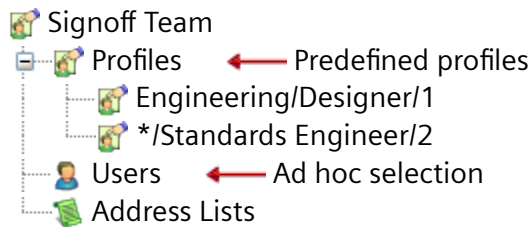
When you initiate a process on a Teamcenter object and that process contains one of these parent tasks, you are usually responsible for selecting the signoff team. Each member of the signoff team you select is responsible for reviewing the target object and signing off on it.

Note:

The **Route** task contains a **Review** task, an **Acknowledge** task, and a **Notify** task. The **Route** task contains both signoff team subtasks.

The **Route** task also lets you specify the action for each user: **Review**, **Acknow** (for acknowledge), or **Notify**.

You can select a signoff team either by completing predefined profiles or by ad hoc selection.



The requirements of the selected workflow template determine the method used to select a signoff team.

- Predefined profiles

An administrator defines profiles and associates them with workflow processes.

When you initiate a workflow process that contains predefined signoff profiles, you must select the specified number of users for each specified group and role. For example, a typical workflow can include predefined signoff profiles that require one user who is a member of the **Engineering** group and whose role is **Designer**, and two users who are members of any group and whose role is **Standards Engineer**.

- Ad hoc selection

Ad hoc selection allows the initializing user, address list members, and resource pool members to add users to the signoff team individually. When the task template contains predefined signoff profiles, the ad hoc selections make one-time-only additions to the required signoff team. When the task template does not contain predefined signoff profiles, the ad hoc additions are the entire signoff team.

Select a signoff team from predefined profiles

1. In My Teamcenter, select the **select-signoff-team** task in your **Tasks to Perform** folder.
2. (Optional.) If you know you have additional tasks to perform before you can perform the current task, you can create a subprocess from this task. The subprocess must complete before the current task can complete.
3. Click the **Viewer** tab, and then click the **Task View** option at the top of it.
 - Predefined profiles are listed in the **Profiles** folder.
 - The group, role, and user name of the assigned members is displayed for **group/role/#**, where **#** indicates the number of users required on the signoff team for that particular group and role.
 - You can replace group and role with an asterisk (*) to represent all groups and roles.
4. Select each profile in turn.

User names that meet the predefined group/role criteria are displayed in the **Organization** tab to the right.

You can search for a specific user, group, role, or combination.

5. For each profile, select the specified number of users.

For example, if a signoff profile is **Design Office/Architect/3**, select three users who are members of the **Design Office** group and who have the role of **Architect**.

6. Click **Add** to assign each user to the signoff team.
7. Repeat the previous steps to assign the required number of users to the selected signoff team.

Note:

Quorum requirements are displayed in the **Review Quorum** pane. You must select the specified numbers of users for each predefined profile before you can complete this task.

8. (Optional) Add other users to the signoff team.
 - a. Click the **Users** folder directly below the **Profiles** folder.

This displays all users in the **Organization** tab to the right.

You can search for a specific user, group, role, or combination.

- b. Select the additional users you want to add to the signoff team.
9. (Optional) Add comments in the **Comments** field.
10. Select the **Ad-hoc done** check box to indicate you have completed your signoff team member selections.
11. Click **Apply**.

The task is complete and the **Viewer** tab now displays **No View Data Available**.


Select a signoff team based on an ad hoc selection process

1. In My Teamcenter or Workflow Viewer, select the **select-signoff-team** task in your **Tasks to Perform** folder.
2. (Optional.) If you know you have additional tasks to perform before you can perform the current task, you can create a subprocess from this task. The subprocess must complete before the current task can complete.
3. Assign specific users to the signoff process:
 - a. Click the **Viewer** tab, and then click the **Task View** option at the top of it.

The system displays the **Signoff Team** tree in the left pane of the window.
 - b. Click **Users** in the **Signoff Team** tree.

The right pane displays the **Organization** tab.
 - c. In the **Organization** tab, select a group, role and user.

You can search for a specific user, group, role, or combination.
 - d. Select a user, then click **Add** to assign the user to the signoff team.
 - e. Repeat the previous steps to assign additional users to the signoff team.
4. Assign users from an address list to the signoff team, as follows:
 - a. Click **Address Lists**.
 - b. Select an address list.
 - c. Click **Add**.

- The address list appears in the **Signoff Team** tree.
 - The person name, user, group, and role values for each member are listed below the selected address list.
- d. Repeat the previous steps to add additional address lists.
5. (Optional) Add comments in the **Comments** field.
6. Select the **Ad-hoc done** check box  to indicate you have finished adding signoff team members.
7. Click **Apply**.

The task is complete and the **Viewer** tab now displays **No View Data Available**.

Assigning resource pools

Balance workflow task assignments with resource pools

You can use resource pools to balance workflow tasks between groups of users.

- Resource pools let you balance workflow task assignments. They allow open-ended assignments, permitting any user to accept responsibility for a task that is assigned to a group, role, or a role in a group.
- All users can subscribe to resource pool inboxes; however, they can only perform tasks if they are valid members of the group or are assigned the appropriate role.

Note:

Administrators can use the **EPM_resource_pool_restrict_subscription** preference to restrict users to subscribe only to resource pools belonging to groups and roles in which the user is a member.

- Any **select-signoff-team** task can be assigned to a resource pool.

Resource pools are assigned responsibility for a task in the same way that a user is assigned responsibility: a group and role are defined, and the resource pool is indicated by the use of an asterisk (*) in place of a specific user name.

- Tasks assigned to a resource pool appear in the **Tasks to Perform** folder and the **Tasks to Track** folder of the appropriate resource pool inbox. Any member of the resource pool can then accept responsibility and perform the task. All members of a group, role, or role-in-group can take ownership of the assignment. The assignment is delivered to the **Tasks to Perform** folder for all members.

Subscribe or unsubscribe a resource pool of a group, role, or role in a group

1. Choose **Tools**→**Resource Pool Subscription**.

The system displays the **Resource Pool Subscription** dialog box.

2. Define the group and role for the resource pool worklist:
 - a. Click **Accessible** to list the groups and roles to which you belong. As a member of the resource pool's defined group and role, you are able to access and perform tasks assigned to the resource pool.
 - b. Click **All** to list all groups and roles. If you are not a member of the resource pool's defined group and role, you are not able to access and perform tasks assigned to the resource pool.
 - c. Select the group and role you want assigned to the resource pool.

3. Click **Subscribe a Resource Pool (+)**.

The resource pool is added to the list in the **My Worklist** tree.

4. In the **My Worklist** tree, select a resource pool.
5. Click **Unsubscribe a Resource Pool (x)** to remove a resource pool from the **My Worklist** tree.
6. Click **Cancel** at any time to close the dialog box without making changes to the database.

Assigning tasks with process assignment lists (PALs)

Managing process assignment lists

Process assignment lists are distribution lists associated with workflow process templates. These lists assign resources to all tasks in a workflow process. Assignment lists can be used to assign resources to single-user tasks, such as **Do** tasks, and to multiple-user tasks, such as **perform-signoffs** tasks.

When used with single-user tasks, assignments are replaced with the resources specified in the list. When used with multiple-user tasks, the resources defined in the list are appended to the resources to whom the tasks are currently assigned. In addition, multiple process assignment lists can be associated with a single workflow process, providing users with multiple task assignment configurations.

Process assignment lists can be either *shared* or *private*.

- *Shared* lists are generated by members of the **DBA** group or by a user designated as a group administrator. These lists are available for use by all users and cannot be modified by end users.
- *Private* lists can be created by any user and are only visible to that user.

Note:

You can **assign all tasks when you initiate a new process** or you can assign all tasks in an in-progress workflow process using process assignment lists. These lists let you choose configurations of users to assign to the tasks in a given process template.

Access to this feature is controlled by the **EPM_valid_user_to_apply_assignment_list** preference.

Create process assignment lists

1. Choose **Tools**→**Process Assignment List**→**Create/Edit**.

The system displays the **Create/Edit Assignment List** dialog box.

Tip:

You can create an assignment list based on another list by selecting the list from one of the assignment list folders, entering a new name, and clicking **Create**.

2. Type a name for the list in the **Name** box.
3. From the **Process Template** list, select the template to associate with the assignment list.
4. (Optional) Select the **Create Shared List** check box. This option is only available to members of the **DBA** group and to group administrators.
5. (Optional) Type a description of the process assignment list in the **Description** box.
6. Click the **Resources** tab.

The system displays the process and its associated task templates in a tree structure. You can view the taskflow by clicking the **Process View** tab. This view allows you to view the subtasks, handlers and properties of the selected task.

Note:

The **select-signoff-team** and **perform-signoffs** subtasks associated with **Route**, **Review**, and **Acknowledge** tasks are not displayed in the tree.

Assign responsible parties:

- a. Select the task node in the tree.

The system displays the **Organization** and **Project Teams** tabs in the right side of the window.

Select responsible parties based on their group and role within the organization or the team. In addition, when assigning responsible parties for a task, the only action that can be assigned is **Perform**.

- b. Use the **Organization** or **Project Teams** tabs to select the responsible party.

Note:

The **Projects** listed in the **Project Teams** tab shows only the projects the current logged in user is assigned to. Select a project from the list then select or search for a specific user.

- c. Click **Add**.

The system displays the user information and action assigned to that user beneath the task node in the process tree.

- d. Repeat the previous steps to assign a responsible party for other tasks in the process.

Assign users:

- a. Expand the task node in the tree to begin to assign users to review, acknowledge, or receive notification of a task.

The system displays the **Users** node and the **Profiles** node.

- The **Users** node lets you assign resources using an ad hoc selection process.
- Profiles limit the pool of users that can be assigned to the task.

The system displays the **Profiles** node when user profiles were defined as part of the process template.

- b. Select the **Users** or **Profiles** node.
- c. Use the **Organization** or **Project Teams** tabs to select a user.

Note:

The **Projects** listed in the **Project Teams** tab shows only the projects the current logged in user is assigned to. Select a project from the list then select or search for a specific user.

- d. Select an action from the list.

The system displays the actions in this list based on the task template type. For example, if a **Route** task is selected, the **Review**, **Acknowledge**, and **Notify** actions are displayed. If a **Review** task is selected, only the **Review** action is available; if an **Acknowledge** task is selected, only the **Acknowledge** action is available.

- e. Click **Add**.

The system displays the user information and action assigned to that user beneath the task node in the process tree.

- f. Repeat the previous steps to assign users to review, acknowledge, or receive notification of other tasks in the tree.

Tip:

You can copy user nodes and paste them in to another task using the **Copy** and **Paste** buttons located beneath the tree.

- g. (Optional) Modify or set the quorum value for **Review** and **Acknowledge** tasks in the **Review Quorum** and **Acknowledge Quorum** boxes.

7. Click **Create**.

The system displays the process assignment list in your **My Lists** folder.

Modify task assignments in your process assignment lists

1. In My Teamcenter, choose **Tools**→**Process Assignment List**→**Create/Edit**.

The system displays the **Create/Edit Assignment List** dialog box.

2. Select a list from the **My Lists** folder. If you are a group administrator you can modify lists contained in the **My Group Lists** folder, as well as those contained in the **My Lists** folder. If you are a member of a **DBA** group, you can modify lists contained in any of the folders.

3. Assign responsible parties to the task:

- a. Click the **Resources** tab.
- b. Select the task node in the tree.

The system displays the **Organization** and **Project Teams** tabs in the right side of the window.

These tabs let you select responsible parties based on their group and role within the organization or team. In addition, when assigning responsible parties for a task, the only action that can be assigned is **Perform**.

- c. Use the **Organization** or **Project Teams** tab to select a user.

You can search for a specific user, group, role, or combination in the **Organization** tab.

- d. Click **Add**.

The system displays the user information and action assigned to that user beneath the task node in the process tree.

- e. Repeat the previous steps to assign a responsible party for other tasks in the process.

4. Assign users to review, acknowledge, or receive notification of a task:

- a. Expand the task node in the tree to begin to assign users to review, acknowledge, or receive notification of a task.

The system displays the **Users** node and the **Profiles** node.

- The **Users** node lets you assign resources using an ad hoc selection process.
- Profiles limit the pool of users that can be assigned to the task.

The system displays the **Profiles** node when user profiles are defined as part of the process template.

- b. Select the **Users** or **Profiles** node.

- c. Use the **Organization** or **Project Teams** tab to select a user.

You can search for a specific user, group, role, or combination in the **Organization** tab.

- d. Select an action from the list.

The system displays the actions in this list based on the task template type. For example, if a **Route** task is selected, the **Review**, **Acknowledge**, and **Notify** actions are displayed. If a **Review** task is selected, only the **Review** action is available; if an **Acknowledge** task is selected, only the **Acknowledge** action is available.

- e. Click **Add**.

The system displays the user information and action assigned to that user beneath the task node in the process tree.

- f. Repeat the previous steps to assign users to review, acknowledge, or receive notification of other tasks in the tree.

Tip:

You can copy user nodes and paste them into another task using the **Copy** and **Paste** buttons located beneath the tree.

- g. (Optional) Modify or set the quorum value for **Review** and **Acknowledge** tasks in the **Review Quorum** and **Acknowledge Quorum** boxes.

5. Click **Modify** to save the changes you have made.

Replace a user in one or more process assignment lists

Note:

To replace a user who is assigned responsibility for tasks within a process, or multiple processes, through assignment lists, both the old and new user must be members of the same group and fill the same role within the group.

1. Choose **Tools**→**Process Assignment List**→**Replace User**.

The system displays the Replace Group Member wizard.

2. Select the old group member from the **Organization** tree by clicking the button to the right of the **Old Group Member** box.

The system displays the **Select Group Member** dialog box.

3. You can search for a specific user, group, role, or combination or expand the tree to locate and select the group member yourself.

Teamcenter closes the dialog box and displays the wizard.

4. Select the new group member by clicking the button to the right of the **New Group Member** box.

The system displays the **Select Group Member** dialog box.

5. You can search for a specific user, group, role, or combination or expand the tree to locate and select the group member yourself.

Teamcenter closes the dialog box and displays the wizard.

Note:

If you do not select a new group member, the old group member is removed from the process assignment list.

6. Click **Next**.

The system displays all process assignment lists that include the user designated as the old group member.

7. Select the lists in the **List(s) Found** section and click the **>** button to move the lists to the **Selected List(s)** section.

Teamcenter replaces the user in these lists.

8. Click **Finish**.

The system displays the **Replace Success** dialog box.

9. Click **OK** to close the dialog box.

Assign tasks to an in-progress process

1. Select an in-process data object.
2. Choose **Tools**→**Process Assignment List**→**Assign**.

The system displays the assignment lists associated with the workflow process template in the **Assign All Tasks** dialog box. To select from all process assignment lists rather than only those associated with the process template, select the **Show All Assignment Lists** check box.

3. Select a list from the **Assignment Lists** list.

Teamcenter applies the assignment list to the tasks in the process. Users are displayed as nodes in the process tree, and the action assigned to the user is displayed to the right of the tree under the **Actions** heading.

Note:

The **select-signoff-team** and **perform-signoffs** subtasks associated with **Route**, **Review**, and **Acknowledge** tasks are not displayed in the tree.

4. (Optional) Modify the task assignments by assigning responsible parties:
 - a. Select the task node in the tree.

The system displays the **Organization** and **Project Teams** tabs in the right side of the window.

The **Organization** tab lets you select a responsible party based on their group and role within the organization.

You can search for a specific user, group, role, or combination in the **Organization** tab.

In addition, when assigning a responsible party for a task, the only action that can be assigned is **Perform**.

- b. Use the **Organization** or **Project Teams** tab to select the responsible party.
- c. Click **Add**.

The system displays the user information and action assigned to that user beneath the task node in the process tree.

- d. Repeat the previous steps to assign a responsible party for other tasks in the process.

5. (Optional) Modify the task assignments by assigning users to review, acknowledge, or receive notification of a task.

- a. Expand the task node in the tree to display the **Users** node and the **Profiles** node.
 - The **Users** node lets you assign resources using an ad hoc selection process.
 - The **Profiles** node, displayed when user profiles are defined as part of the process template, lets you limit the pool of users that can be assigned to the task.
- b. Select the **Users** or **Profiles** node.
- c. Use the **Organization** or **Project Teams** tab to select a user.

You can search for a specific user, group, role, or combination in the **Organization** tab.

- d. Select an action from the list.

The system displays the actions in this list based on the task template type. For example, if a **Route** task is selected, the **Review**, **Acknowledge**, and **Notify** actions are displayed. If a **Review** task is selected, only the **Review** action is available; if an **Acknowledge** task is selected, only the **Acknowledge** action is available.

- e. Click **Add**.

The system displays the user information and action assigned to that user beneath the task node in the process tree.

- f. Repeat the previous steps to assign users to review, acknowledge, or receive notification of other tasks in the tree.

Tip:

You can copy user nodes and paste them into another task using the **Copy** and **Paste** buttons located beneath the tree.

- g. (Optional) Modify or set the quorum value for **Review** and **Acknowledge** tasks in the **Review Quorum** and **Acknowledge Quorum** boxes.

6. (Optional) To save modifications to the process assignment list, select the **Save Modifications Back to List** check box.

Note:

You can only save modifications to personal process assignment lists. Shared lists can be modified, but the changes cannot be saved.

7. Click **Assign**.

Teamcenter sends the tasks to the **Tasks to Perform** folders of the assignees.

Importing and exporting process assignment lists

You can use **Import** and **Export** options in the **Create/Edit Assignment List** dialog box to import and export process assignment lists (PALs) in PLM XML format.

Note:

The length of the **EPMAssignmentList** name must not exceed the maximum allowed. For rich client versions prior to 11.6 the Assignment List name is limited to 32 characters. For versions 11.6 and beyond, the Assignment List name length is limited to 128 characters.

If the maximum number of characters is exceeded the Assignment List will not be imported.

- Exporting a process assignment list also exports its associated workflow template.
- Importing a process assignment list also imports its associated workflow template.
 - When importing a PAL and the importing site does not have one with the same name:
 - The PAL is successfully imported if at least one resource is assigned to the PAL.

- The associated workflow template is also successfully imported if a template with the same **origin_id** property does not exist at the importing site.
- Otherwise, neither the PAL nor the template is successfully imported.
- When the **Overwrite Duplicate Assignment Lists** check box is not selected, a PAL with the same name as one at the importing site is not imported.
- When the **Overwrite Duplicate Assignment Lists** check box is selected, and you import a PAL that has the same name as one at the importing site:
 - The PAL successfully overwrites the one at the importing site if at least one resource is assigned to the PAL and a workflow template with the same **origin_id** property exists at the importing site.
 - Otherwise, neither the PAL nor the template is successfully imported.

Using work contexts

What are work contexts?

You can create work contexts and associate them with data objects.

- A *work context* is a profile that a user assumes to complete a specific assignment.
- Work contexts are created from a combination of user name, group, role, and project; however, it is not necessary to include all four of these elements in the definition of a work context.
- If task can be performed by anyone, regardless of their group and role, the work context specifies only the project to which the context applies.
- If a task can be performed only by a user with a specific role within a group, the work context definition specifies the project, group, and role, but not a specific user.
- Work contexts are related to data objects by the **TC_WorkContext_Relation** relationship. This relationship can only be established between a work context object and a workflow task, item, or item revision.

Create a work context

1. Select the workflow process, task, item, or item revision for the work context.
2. Choose **File**→**New**→**Work Context**.

The system displays the **New Work Context** dialog box.

3. Type a name for the work context in the **Name** box.
4. (Optional) Type a description of the work context in the **Description** box.
5. Select any combination of group, role, user, and project from the lists.
6. (Optional) Select the **Subgroup Members Allowed** check box. When this option is selected in addition to specifying a group for the work context, Teamcenter allows members of subgroups of the specified group to perform the task.
7. (Optional) Select the **User Setting Modifiable** check box. When this option is selected, users can modify the user settings associated with this work context.

Note:

The default setting for this option is controlled by the `TC_wc_setting_modifiable_default` preference.

8. Click **OK**.

Assign or remove a work context

To assign a work context to a workflow task, item, or item revision:

1. Select the object to which you want to assign the work context.
2. Choose **Tools**→**Assign Work Context**.

The system displays the **Assign Work Context** dialog box.

3. Find the work context by typing its name or partial name and wildcard in the **Name** box and click **Find**.

The system displays the first page of work contexts that match the search criteria. Click the right-arrow or left-arrow buttons to load the next or previous page of results.

4. Select the work context from the list and click **Apply** or **OK**.

Teamcenter assigns the work context to the selected item, item revision, or workflow task.

Note:

In addition to using this method, you can assign a work context to an object by selecting the work context object in a tree or table, copying to the clipboard, and pasting to another object.

To remove a work context that is assigned to an object:

1. Select the work context.
2. Choose **Cut** from the shortcut menu.

Altering workflows in progress

Demote a process by putting a task in the Pending state

Note:

In My Teamcenter, the **Actions→Undo** command displays the **Demote Action Comments** dialog box and lets you change the state of a selected task to **Pending** from a **Started**, **Completed**, or **Skipped** state.

In Workflow Viewer, the **Actions→Demote** command displays the **Demote Action Comments** dialog box and lets you change the state of a task.

1. In My Teamcenter, select the task you want to demote.

When you demote a task, you change the state to **Pending** from a **Started**, **Completed**, or **Skipped** state.

Note:

- You must be a privileged user to demote a task.
- Demoting a **Review** task voids any signoff decisions that have been made.

2. Choose **Actions→Undo**.

The system displays the **Demote Action Comments** dialog box.

3. Type your comments in the box. These comments appear in the audit file.
4. Click **OK** to change the task state to **Pending**.

The workflow returns to the previous task.

Note:

If a task is designated to process in the background, the move to the **Pending** state might be delayed.

Start a paused task

1. Select the task that is paused.

Note:

Paused tasks can result when a subsequent task in a process is demoted and the previous task does not automatically start. You must be a responsible party or privileged user to reset a paused task to the started state.

2. Choose **Actions**→**Start**.

The system displays the **Start Action Comments** dialog box.

3. Type your comments in the box. These comments appear in the audit file.
4. Click **OK** to move the task to a started state.

Note:

If a task is designated to process in the background, the move to the **Start** state might be delayed.

Suspend a task

1. Select the task you want to suspend.

Note:

Suspended tasks stop a process from moving forward.

2. Choose **Actions**→**Suspend**.

The system displays the **Suspend Action Comments** dialog box.

3. Type your comments in the box. These comments appear in the audit file.
4. Click **OK** to move the task to a suspended state.

Note:

If a task is designated to process in the background, the move to the **Suspend** state might be delayed.

Resume a task

1. Select the desired suspended task.

Note:

Resuming a suspended task restores it to the state it was in prior to being suspended.

2. Choose **Actions**→**Resume**.

The system displays the **Resume Action Comments** dialog box.

3. Type your comments in the box.
4. Click **OK** to move the task to the state that it was in prior to being suspended.

Note:

If a task is designated to process in the background, the move to the prior state might be delayed.

Abort a task

1. Select the task you want to cancel and choose **Actions**→**Abort**.

Note:

Aborting cancels a task without attempting to complete it.

The system displays the **Abort Action Comments** dialog box.

2. Type your comments in the box.
3. Click **OK** to cancel the task without completing it.

Note:

If a task is designated to process in background, the move to the **Abort** state might be delayed.

Letting others perform your tasks

Assign one or more tasks to other users in My Teamcenter

1. Select the current task in your **Tasks to Perform** folder.
2. Choose **Actions**→**Assign**.

The system displays the **Assign Responsible Party** dialog box.

3. Use the **Organization** or **Project Teams** tab to select the responsible party.

You can search for a specific user, group, role, or combination.

Note:

You can only reassign tasks to a user who meets the group and role criteria specified for the task.

4. (Optional) Reassign multiple tasks, as follows:
 - a. Click **Show Tasks**.

The system displays the pending tasks associated with the selected process in a tree structure.

- b. Select individual tasks to be reassigned, or click the **Select All the Tasks** button to select all displayed tasks.

Note:

Click the **Clear the Selection** button to clear selections you have made in the tree.

5. Click **OK** to reassign the selected tasks to the new user.

Forward your tasks with the Out of Office Assistant in My Teamcenter

The **Tools**→**Out of Office Assistant** command displays the **Out of Office Assistant** dialog box. The **Out of Office Assistant** dialog box lets you forward your tasks to another user or to a resource pool while you are out of the office.

You can set the period of time you will be out of the office and to set the name of the user or the resource pool to receive your tasks during your absence.

- System administrators can modify **Out of Office Assistant** settings for any user.

Note:

- The **Out of Office Assistant** menu command is available only when **My Worklist** is selected.
- The **Out of Office Assistant** does not reassign existing tasks in your inbox. These tasks must be manually reassigned using the **Assign** command on the **Actions** menu.
- If you clear both the start and end dates (in other words, set them to null), the **Out of Office Assistant** is turned off.

1. Choose **Tools**→**Out of Office Assistant**.

The system displays the **Out of Office Assistant** dialog box.

2. Select the user, group, and role for whom these settings apply. You must be an administrator to change another user's out of office status.

3. Set the **Out of Office Dates** absence beginning date and time by performing the following steps:a. Click the **From** box to open the calendar.

The calendar initially shows the current day, month, and year.

b. Select the month in the year in which your absence begins. Click the right-arrow button to move forward in the calendar. Click the left-arrow button to move backward in the calendar.

c. Select the time, in hours and minutes, at which your absence begins.

Use the 24-hour clock format; for example, type 1:15 p.m. as **13:15**.

4. Set the **Out of Office Dates** absence ending date and time by performing the following steps:a. Click the **To** box to open the popup calendar.

The calendar initially shows the current day, month, and year.

b. Select the month in the year in which your absence ends. Click the right-arrow button to move forward in the calendar. Click the left-arrow button to move backward in the calendar.

c. Type a year in the **Year** box.

d. Type the time, in hours and minutes, at which your absence ends.

Use the 24-hour clock format; for example, type 1:15 p.m. as **13:15**.

Note:

If you are unsure of your return date, leave the date blank. Your assigned tasks are forwarded until you reset your status.

If you clear both the start and end dates (in other words, set them to null), the **Out of Office Assistant** is turned off.

5. Set the **New Task Recipient** by selecting the group, role and user name of the person to whom the assigned tasks will be forwarded.

If the system indicates the selected person is out of office, that person cannot be selected as a recipient.

6. Click **OK**.

Set your out of office status

1. Choose **Tools**→**Out of Office Assistant**.

The system displays the **Out of Office Assistant** dialog box.

2. Select the user, group, and role for whom these settings apply. You must be an administrator to change another user's out of office status.
3. Set the **Out of Office Dates** absence beginning date and time by performing the following steps:

Note:

Do not leave the date blank. Otherwise, the **OK** and **Apply** buttons are disabled in the **Out of Office Assistant** dialog box.

- a. Click the calendar button next to the **From** box to open the calendar. The calendar initially shows the current day, month, and year.
- b. Select the month in which your absence begins. Click the right-arrow button to move forward in the calendar. Click the left-arrow button to move backward in the calendar.
- c. Type a year in the **Year** box.
- d. Type the hour, minute, and second at which your absence begins in the **h**, **m**, and **s** boxes.

Use the 24-hour clock format; for example, type 1:30 p.m. as **13 h**, **30 m**, and **00 s**.
- e. Click **OK** to accept the date and time and close the calendar.

4. Set the **Out of Office Dates** absence ending date and time by performing the following steps:

Note:

Do not leave the date blank. Otherwise, the **OK** and **Apply** buttons are disabled in the **Out of Office Assistant** dialog box.

- a. Click the calendar button next to the **To** box to open the popup calendar. The calendar initially shows the current day, month, and year.
 - b. Select the month in which your absence ends. Click the right-arrow button to move forward in the calendar. Click the left-arrow button to move backward in the calendar.
 - c. Type a year in the **Year** box.
 - d. Type the hour, minute, and second at which your absence ends in the **h**, **m**, and **s** boxes.

Use the 24-hour clock format; for example, type 1:30 p.m. as **13 h**, **30 m**, and **00 s**.
 - e. Click **OK** to accept the date and time and close the calendar.
5. Set the **New Task Recipient** by selecting the group, role and user name of the person to whom the assigned tasks will be forwarded. If the system indicates the selected person is out of the office, that person cannot be selected as a recipient.
 6. Click **OK**.

Who are surrogate users?

You can define a list of surrogate users who are authorized to perform your workflow tasks. Once defined, a link to your inbox appears in the inbox of the surrogate user, who can claim responsibility for a task or designate themselves the active surrogate and perform any of the tasks in your inbox, provided that they match the group and role profile of the task.

- Surrogate users can perform workflow tasks when the user to whom the task was originally assigned is out of the office or is unable to perform the task. This prevents unnecessary stoppages in the workflow process, yet allows the original user to retain control of the task.
- Multiple surrogate users can be defined for a single task; however, only a single user can be the active surrogate for the task at any given time.
- Surrogate users are automatically granted all access privileges afforded to the original responsible party or approver.
- Any user can be designated as a surrogate, but only a user who belongs to the group and role specified by the task profile can perform a task.

- Any user can take responsibility for a task, even if that user does not match the group and role profile of the task.

Note:

You cannot define special access control lists (ACLs) for a surrogate user.

If you have administrative privileges, you can define surrogates for other users.

- Site administrators can define surrogates for any user within the site.
- Group administrators can define surrogates for any user within their group.

If you do not have administrative privileges, you can only define surrogates for your own tasks.

Note:

When the user adds a new surrogate from the user list, only the surrogate user information is saved by the system, without the associated group and role information. When the system evaluates a selected workflow surrogate at runtime, such as when performing a Stand-In action on a task, the system will refer to the surrogate user's default group and role, as configured in the Organization application.

Define a surrogate for your workflow tasks

1. Click **My Worklist**  in the navigation pane.

The system displays your inbox.

2. Choose **Tools** → **Workflow Surrogate**.

The system displays the **Workflow Surrogate** dialog box.

3. Select the group, role, and user to be a surrogate.

Note:

You can choose all roles within a group by selecting the asterisk (*) rather than selecting a specific role.

4. Set the **Surrogate Effective Dates** effectivity start date for the surrogate user:
 - a. Click the calendar button in the **From** box to open the popup calendar.

- b. Select the month in which the surrogate user becomes effective. Click the back arrow to scroll to the previous month or click the forward arrow to scroll to the next month.
- c. Select the year in which the surrogate user becomes effective. Click the back arrow to scroll to the previous year or click the forward arrow to scroll to the next year.
- d. Select the day the surrogate user becomes effective by clicking the appropriate square on the calendar.
- e. Type the hour, minute, and second at which the surrogate user's effectivity begins in the **h**, **m**, and **s** boxes.

Use the 24-hour clock format; for example, type 1:30 p.m. as **13 h**, **30 m**, and **00 s**.

If you do not specify another time or clear the boxes, the current time is entered.

- f. Click **OK** to accept the effectivity start date and time and close the calendar.

5. Set the **Surrogate Effective Dates** effectivity end date for the surrogate user:

You have set the effectivity start date for the surrogate user. Now you must set the effectivity end date.

- a. Click the calendar button in the **To** box to open the popup calendar.
- b. Select the month in which the surrogate user's effectivity ends. Click the back arrow to scroll to the previous month or click the forward arrow to scroll to the next month.
- c. Select the year in which the surrogate user's effectivity ends. Click the back arrow to scroll to the previous year or click the forward arrow to scroll to the next year.
- d. Select the day the surrogate user's effectivity ends by clicking the appropriate square on the calendar.
- e. Type the hour, minute, and second at which the surrogate user's effectivity ends in the **h**, **m**, and **s** boxes.

Use the 24-hour clock format; for example, type 1:30 p.m. as **13 h**, **30 m**, and **00 s**.

If you do not specify another time or clear the boxes, the current time is entered.

- f. Click **OK** to accept the effectivity end date and time and close the calendar.

Tip:

To allow the surrogate user to be effective indefinitely, do not set an end date. To reset the effectivity dates, click **Reset**.

Note:

Leaving the end date unset means the surrogate user remains in place indefinitely.

6. Click Add.

The system displays the surrogate user in the **Current Surrogate Users** list. In addition, a link is created in the surrogate user's inbox. This link allows them to access the inbox of the user for whom they are acting surrogate. The surrogate user is notified via email.

Remove a surrogate user

1. Click My Worklist  in the navigation pane.

The system displays your Inbox.

2. Choose Tools → Workflow Surrogate.

The system displays the **Workflow Surrogate** dialog box.

3. Select the user to be removed from the Current Surrogate Users list.**4. Click Remove.****5. Click Close to exit the Workflow Surrogate dialog box.**

Act as a surrogate for a task

If an administrator has defined you as a surrogate user, you can become the active surrogate for a task by performing the task as a surrogate or by taking complete responsibility of the task.

To perform a task as the active surrogate, you must belong to the group and role matching the profile of the task. However, you are not required to belong to the group and role matching the task profile when assuming responsibility for a task.

Note:

Unlike performing a task as the active surrogate, assuming responsibility for a task removes control from the original user.

1. From your worklist, click the link corresponding to the worklist of the user for whom you will act as a surrogate.
2. Select the task in the original user's worklist.
3. Choose **Actions**→**Stand-In**.

The system displays the task name, responsible party, and surrogate user in the **Surrogate Actions** dialog box.

4. Select one of the following options:

- **Stand-In**

Allows you to perform the task while allowing the original user to retain control.

- **Release**


Releases the active surrogate from the task. At this point, the active surrogate cannot perform the task without first reclaiming it.

When you select the **Release to Responsible Party** option, the checkout on the target object is transferred from the active surrogate to the responsible party (original user), and the system releases the checkout status from the surrogate user and reassigns it to the original user.

- **Transfer Check-Out(s)**

Transfers checkout of the target objects from the original user to the active surrogate when you select the **Stand-In** option.

5. Click **OK**.

Teamcenter designates the user as the active surrogate and grants the surrogate all privileges assigned to the original user. The system indicates that there is an active surrogate for the task by displaying the surrogate task symbol  in the task display.

Use Surrogate Actions options

1. From your worklist, click the link corresponding to the worklist of the user for whom you will act as a surrogate.

2. Select the task in the original user's worklist.
3. Choose **Actions**→**Stand-In**.

The system displays the task name, responsible party, and surrogate user in the **Surrogate Actions** dialog box.

4. Select one of the following options:

- **Stand-In**

Allows you to perform the task while allowing the original user to retain control.

- **Release**


Releases the active surrogate from the task. At this point, the active surrogate cannot perform the task without first reclaiming it.

When you select the **Release to Responsible Party** option, the checkout on the target object is transferred from the active surrogate to the responsible party (original user), and the system releases the checkout status from the surrogate user and reassigns it to the original user.

- **Transfer Check-Out(s)**

Transfers checkout of the target objects from the original user to the active surrogate when you select the **Stand-In** option.

5. Click **OK**.

Teamcenter designates the user as the active surrogate and grants the surrogate all privileges assigned to the original user. The system indicates that there is an active surrogate for the task by displaying the surrogate task symbol  in the task display.

Viewing workflow and schedule progress

Reviewing workflow and schedule progress by viewing the process history

The **Process History** view displays the Workflow or Schedule Manager process of the business object selected in the **Home**, **My Worklist**, or **Search Results** view in My Teamcenter.

Object Display Name	Event Type Name	Task Result	Task State	Sign Off Decision	Comments	Start Date
000017/A;1-Test1	End					
Requirement Signoff	Complete	Completed	Completed			15-Apr-2013 16:36
Requirement Review	Complete	Approved	Completed			15-Apr-2013 16:36
perform-signoffs	Complete	Approved	Completed		Complete: Complete the approved task	15-Apr-2013 16:37
perform-signoffs	Approve	Unset	Started	Approved	This is signoff comments for testing	15-Apr-2013 16:37
select-signoff-team	Complete	Completed	Completed		This is task comments for testingComplete: This is task comments for testing	15-Apr-2013 16:36

- If there is no audit data for the business object, the view displays a `No process history data available for selected object.` message.
- If the selected object has passed through more than one workflow process, you can choose which process to display from the list to the right of the tab.

In the **Process History** view, you can review the progress of a workflow or schedule and do the following:

- Determine the progress of an object in a schedule or workflow and who has responsibility for the object.
- Review comments by other workflow participants.
- Verify that the appropriate participants completed the required reviews.
- Debug a workflow that proceeded down an unexpected path.
- Identify workflows that require attention to continue processing.
- Review user activity to verify the appropriate users signed off.

Note:

If you migrate from Audit Manager version 2 to version 3, workflow-related events are migrated and are displayed in the **Audit Logs** tab. However, the events are not displayed in the **Process History** view.

Tip:

Administrators can configure display of the **Target Release Status** values in the **Process History** view.

- **Target Release Status** values are only shown by the **Process History** view for a selected object.
- **Target Release Status** is not shown in the **Process History** view for a workflow or task.

Customize the process history display

1. In the **Process History** view, click the **View Menu** button ▼ and then choose **Column** from the view menu.

The **Column Management** dialog box appears.

2. Add or remove columns from the **Process History** view table.
 - To add a column, select a property from the **Available Properties** list and click the **Add to Displayed Columns** button ►.
 - To remove a column, select a property in the **Displayed Columns** list and click the **Remove from Displayed Columns** button ◀.
3. (Optional) Click the **Move Up** ▲ and **Move Down** ▼ buttons, to the right of the **Displayed Columns** list, to adjust the order of the displayed columns.
4. Click **Apply** to apply the configuration to the current view, or click **Save** to save the configuration for later use.

Note:

You can use the **Apply Column Configuration** command on the view menu to:

- Apply a saved configuration.
- Restore the default configuration. This is the only way to restore columns removed using the right-click **Remove this column** command.

You can use the **Save Column Configuration** command on the view menu to save the current configuration of the table display.

5. Click **Close** to close the **Column Management** dialog box.

View and print process reports

On My Teamcenter, choose **Tools**→**Reports**→**Report Builder Reports**, and then choose one of the following audit reports:

- **Audit - Workflow Attachment Report**

Displays all attachment object details for the specified workflow process.

- **Audit - Workflow Detailed Report**

Displays all actions and their statuses for the specified workflow process.

- **Audit - Workflow Signoff Report**

Displays the signoff results and comments for the specified object in a workflow process.

- **Audit - Workflow Summary Report**

Displays the start, complete, approve, rejected, assign status, demote, promote, fail, and update actions for the specified workflow process.

- **WF - Items In Process**

Displays the *items* currently in a workflow process and where they are in their respective processes.

- **WF - Objects In Process**

Displays the *objects* currently in a workflow process and where they are in their respective processes.

To print a process history report:

1. Export the audit report to Excel.
2. Use the Excel print function to print the report.

Export audit logs or process history to Microsoft Excel

Teamcenter contains Extensions for Microsoft Office (also known as live Excel) which allows you to manage Teamcenter objects and properties from Microsoft Excel.

1. Display the **Process History** view and choose the rows you want to export.

OR

Run a saved query and select the audit logs you want to export from the **Details** tab.

Note:

You can only run a saved query from My Teamcenter. The saved query functionality is meant to be executed only when the **Schedule tasks** folder is expanded in **My Worklist**. You cannot run this query from anywhere else in the system.

2. Choose **Tools**→**Export**→**Objects To Excel**.

Teamcenter displays the **Export To Excel** dialog box.

3. Under **Object Selection**, select one of the following:

- Select **Export Selected Objects** to export the rows you selected in the view.
- Select **Export All Objects in View** to export all rows.

4. Under **Output Template**, select one of the following:

- Select **Export All Visible Columns** to export all the columns in the view.
- Select **Use Excel Template** to activate the template list.

In the list, select the template that specifies the data that you want to export.

5. Under **Output**, select one of the following:

- For a standard Excel file that is not connected to Teamcenter, select **Static Snapshot**.
- For an interactive live Excel file that is connected to Teamcenter, select **Live integration with Excel (Interactive)**.
- For a live Excel file that is not connected to Teamcenter, select **Live integration with Excel (Bulk Mode)**.

You can accumulate changes and later connect the file to Teamcenter.

- To export the data to an Excel file that also contains import processing information on a separate sheet, select **Work Offline and Import**.
- To check out objects while exporting to live Excel, select **Check out objects before export**.

Note:

The checkout applies to all objects being exported. Use this option carefully if you are exporting a large number of rows.

6. (Optional) Click **Copy URL**.

Note:

- **Copy URL** is unavailable if you select more than one object to export.
- **Copy URL** is unavailable if you select any of the following dialog box options:
 - **Work Offline and Import**
 - **Export All Visible Columns**
 - **Export All Objects in View**

The export file is generated and the **URL Generated** message is displayed, confirming that the URL is in your Windows Clipboard and showing the URL details.

7. Click **OK** to generate the export Excel file.

Excel opens a temporary file. You can create a permanent file by choosing **File→Save As** in Excel to display the **Save As** dialog box.

If you save a live Excel file, you can open it later in My Teamcenter to reconnect it to the database.

Note:

Values that you cannot change in Teamcenter are unavailable in the cells of the live Excel file.

6. Managing forms

Teamcenter forms overview

Forms support captured, informative, and derived information in a predefined template.

- Captured information is what you type in the boxes within a form. These are generally required boxes. Business rules may require certain boxes be populated when the form is created.
- Informative information is what you see in read-only boxes in the form. You cannot modify this information.
- Derived information can be the sum or combination of other boxes, or can be product data that is composed and displayed in the form. Derived data typically cannot be modified.

Forms contain information about the objects to which they are attached. Companies typically use forms to:

- Capture and store information for work orders, change orders, or change notices. This is the most common use of forms.
- Maintain processing information to support other features. For example, a form can be developed to maintain the next available number when automatically generating numbers. This type of form is used by administrators.

To view a form in the rich client, select the form object and choose the **Viewer** view.

Creating new forms

New forms are created from other forms or from predefined form types. Forms let you select values from predefined lists of values (LOVs) if these lists have been created in your site's database. Administrators create these lists using the Business Modeler IDE. Administrators can associate these predefined lists with any box in a form. The presence of such a predefined list is indicated by a button beside the box.

Master forms, which are created and deleted when an item or item revision is created or deleted, display specific product information to the rest of the enterprise in a standardized format. Every time a new item is created, an **Item Master** form object is created automatically. Similarly, when a new item revision object is created, an **ItemRevision Master** form object is created automatically. You can enter data in the item master and item revision master forms when you create an item or by opening an **Item Master** or **ItemRevision Master** form object.

You create forms in the rich client using one of the following methods:

- Choose **File**→**New**→**Form** to create a stand-alone form object in a container (like a folder) or a form associated with an item or item revision object. You select the form type from the list.

- Choose **File→New→Item**. When you create an item, at least two form objects are also created: the item master and item revision master.
- Choose **File→New→Change**. When you create a change object, additional forms may be automatically created for the change revision object. The type and number of forms are set when you create new change objects.
- Perform a workflow action that has an associated workflow handler. Form objects can be created automatically during a workflow process by the **EPM-create-form** action handler.

Note:

Form fields may be mandatory or modifiable, depending on the local site configuration.

Create a form from a predefined form type

1. Select a container object.
2. Choose **File→New→Form** or press Ctrl+M.

The system displays the **New Form** dialog box.

3. Select an existing form, then click **Next**.

Note:

The forms displayed in this dialog box are controlled by your administrator. Therefore, it is possible that you may be unable to create form types that are visible to you in your workspace.

4. Enter a name for the new form.

Note:

Hyphen characters, -, are not allowed in form names. Naming rules that control the format of the form name may be in effect at your site. These rules are managed by your administrator using the Business Modeler IDE.

5. (Optional) Enter a description and related information.
6. Click **Finish** to save the form in the database, or click **Cancel** to close the dialog box without creating the form.

Create a form from a predefined form type using the legacy dialog box

Note:

The **TC_Enable_Legacy_Create** preference specifies whether the legacy dialog box or the generic dialog box is displayed for the rich client **File**→**New**→**Form** menu command objects. If the legacy dialog box is enabled, use the following procedure.

1. Select a container object.
2. Choose **File**→**New**→**Form** or press Ctrl+M.

The system displays the **New Form** dialog box.

Note:

The **Name** and/or **Description** boxes may contain an initial value determined by property rules implemented at your site. You can replace this value, but you cannot specify a null value by clearing the box. If you clear the box, the initial value is reapplied to the property when you save the new form.

3. Enter a name for the new form.

Note:

Hyphen characters, -, are not allowed in form names. Naming rules that control the format of the form name may be in effect at your site. These rules are managed by your administrator using the Business Modeler IDE.

4. (Optional) Enter a description of the new form.
5. Select a form type from the **Type** bar by clicking the button in the display. If the type names are truncated, click the arrow located in the upper-left corner of the icon display and then select a type from the list.

The **Type** bar displays the form types that you use the most. If you do not see the type you are looking for, click **More** to display all defined form types.

Note:

The form types displayed in this dialog box are controlled by your administrator. Therefore, it is possible that you may be unable to create form types that are visible to you in your workspace.

- Click **OK** to save the form in the database and close the dialog box, or click **Apply** to save the form in the database and retain the dialog box.

Create a form based on another form

- Select the form that you want to duplicate from the tree or **Details** table.
- Choose **File**→**Save As**.

The object **Save As information** dialog box displays the form creation options.

Caution:

The new form inherits the properties of the form on which it is based. You cannot change the properties or the form type when creating the form.

- Enter the following information:
 - An item comment, previous ID, and serial number
 - A description in the **Description** box.
 - A short descriptive name in the **Name** box.

Note:

Hyphen characters, (-), are not allowed in form names.

- Additional information as indicated.
- Click **Finish** to save the form in the database.

The form is pasted into your **Newstuff** folder. In the next step, you move the form to the desired location.

- Select the form in your **Newstuff** folder and cut or copy it.
- Choose the destination container and paste the form using the **Paste** button or **Edit**→**Paste**.

Compare two forms

You can compare the attribute values of any two forms of the same type.

Note:

To enable this feature, an administrator must change the value of the **showFormCompare** property to **true** in the **com/teamcenter/rac/common/common.properties** file (delivered as part of the **com.teamcenter.rac.common_version-number.jar** file).

1. In the My Teamcenter tree, select two forms of the same type to which you have **read** access.

Tip:

You can select a single form and Teamcenter automatically compares the selected form with the form associated with the previous item revision, if one exists.

2. Choose **Tools**→**Form Compare**.

The system displays the **Form Compare Results** dialog box listing the properties and their values for each form.

Note:

Extra spaces or a change in the order of values is considered a difference and is presented as such.

3. Click **Close** to exit the dialog box.

7. Producing reports

My Teamcenter application reports

Several Teamcenter applications provide report capability through My Teamcenter, including the following:

- Validation Manager result reports are available to help you ensure data conforms to requirements.
- Trace link traceability reports let you display defining and complying relationships for an object.
- A **search compare report** lets you compare search results to the results of other searches or to the contents of your **Home**, **My Worklist**, or **Newstuff** containers.
- The **Referencers** pane supports **where-referenced and where-used print wizard reports**.
- When you import Teamcenter objects you can generate a variety of reports.
- When you work with embedded software, you can generate hardware and software compatibility reports for electronic control units.

Running reports

Teamcenter provides a number of standard report designs that you can use to extract information and generate reports based on saved queries of the database. For example, you can generate a report to show:

- All items of a specified type that have achieved a particular release status.
- Information, such as name, address, and employee number for specific users in your organization.

The report generation wizard in My Teamcenter guides you through the steps required to generate a report including:

- Selecting a design format.
- Specifying the information you want to extract from the database.
- Choosing an output format.

In addition to the standard report designs, Teamcenter administrators can create custom reports using Report Builder.

Reporting and Analytics is a stand-alone reporting application. When it is installed and deployed in a Teamcenter environment, it integrates with Report Builder and displays reports in the **TcRA Reports** folder. A separate application is added to Teamcenter which shows contents of the Teamcenter Reporting and Analytics dashboard.

Note:

Teamcenter manufacturing process management provides a Report Generator application, which is intended for building reports of data that is managed in Manufacturing Process Planner and Part Planner. Do not use this application for creating reports of other data.

Report application reports

Teamcenter provides several report applications, including Report Builder and Report Generator.

- Report Management Using Report Builder supports the administrative tasks of creating and managing report definitions that let you use PLM XML-based report definitions to generate reports in multiple output formats. Applications such as Schedule Management — Deployment and Rich Client Usage which provides report definitions for cross schedule tasking, baseline, and overview data, let you generate Report Builder reports that can be formatted using style sheets and that can reflect data in the context of one or more selected items.

Note:

Teamcenter Reporting and Analytics (Reporting and Analytics) reports can be imported into Teamcenter and then executed in My Teamcenter.

You can view the Reporting and Analytics dashboard by installing the **Dashboard** application.

- Report Generator lets Manufacturing Process Planner and Part Planner application users generate reports in HTML. Default Report Management Using Report Generator reports provide an introduction to the types of reports you can generate, and you can use the XSL files provided with the software as examples for creating your own customized reports to better meet your business objectives.

Caution:

Report Generator provides a mechanism to report data managed by Manufacturing Process Planner and Part Planner only. Do not use the Report Generator application for creating reports of other data.

Generate reports

Report commands in My Teamcenter

Report commands let you generate reports in My Teamcenter. Reports extract information from the Teamcenter database.

You use the following report commands to generate reports:

- **Generate Report**

Creates **item reports** generated in the context of one or more selected objects. Item reports generate in multiple output formats and follow PLM XML standards allowing integration with third-party reporting tools.

- **Report Builder Reports**

Creates reports based on saved or dynamic queries. **Report Builder reports** generate in multiple output formats and follow PLM XML standards allowing integration with third-party reporting tools.

Note:

You generate reports in My Teamcenter by choosing **Tools→Reports** or by right-clicking an object and choosing **Generate Report**.

The process of generating reports differs slightly depending on the type of report you choose. If style sheets are available, they can be selected while generating a report. You also have the option to save the generated results as a dataset.

You generate Teamcenter Reporting and Analytics (Reporting and Analytics) reports from My Teamcenter if Reporting and Analytics is installed and deployed in your Teamcenter environment. For Reporting and Analytics reports defined as a snapshot or template, you see the report results in a Web browser. If the report is redefinable, you see another page in the Web browser where you can enter additional criteria.

Note:

When using Report Builder, performance may be degraded as more objects are selected for reporting. For example, when reporting 2000 objects, it can take approximately 2 minutes for the report to complete, 6 minutes for 4000 objects, and 30 minutes for 8000 objects.

This is a known third-party library issue with the Xalan library.

To optimize performance, specify criteria to generate smaller reports. For example, run one report on items 1–5,000 and another report on items 5,001–10,000.

Generate an item report on a Teamcenter object

Generate an item report from My Teamcenter by choosing one or more Teamcenter objects, such as an item revision. Only objects with associated reports have report definitions displayed in the selection wizard. When you select an item report from a list of available reports, you may be prompted for additional parameters.

1. In My Teamcenter, choose a Teamcenter object, such as an item revision.
2. Right-click the object and choose **Generate Report**.

The system displays the **Report Generation Wizard**.

If no reports are listed, no reports have been created by your system administrator for the selected object type. Teamcenter has standard item report definitions for item revisions.

3. Select an item report.

Note:

If you choose a Reporting and Analytics report, only **Finish** is available. When you choose **Finish**, you are logged on to the Reporting and Analytics BuildNPlay application. Enter any additional filter information and choose **Show Report**.

4. Click **Next**.
5. Fill in criteria for the query. Only the objects that match the query are placed into the report.
 - To select the display locale, select the locale from the **Report Display Locale** list.
 - If you want to choose the format for the report, click the arrow in the **Report Stylesheets** box to select a stylesheet.
 - If you want to save the report as a file, select **Create Dataset** and type a name in the **Dataset Name** box.
6. Click **Finish**.

If you did not choose a style sheet, the report is displayed in your default XML application. If you chose an HTML spreadsheet, the report is displayed in a Web browser.

If you saved the report as a dataset, the report file is saved in your default **Home** folder, for example, **Newstuff**.

Generate a Report Builder report

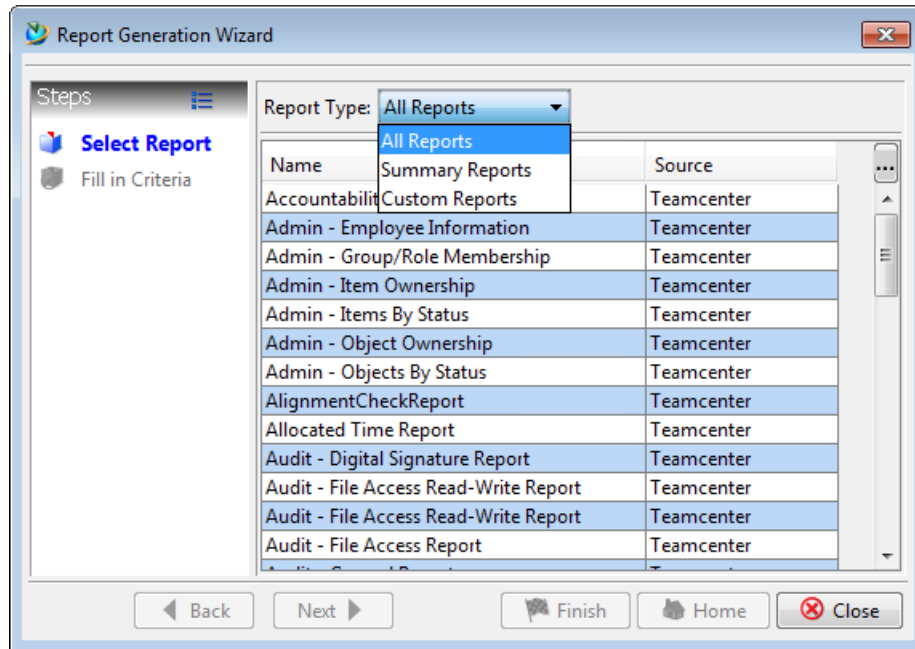
Report Builder reports are created from saved or dynamic queries. When you select a Report Builder report from a list of available reports, you are prompted to input query criteria.

1. In My Teamcenter, choose **Tools**→**Reports**→**Report Builder Reports**.

The system displays the Report Generation Wizard.

The **Report Type** menu lets you choose to display all reports, summary reports, or custom reports.

If no reports are listed, no reports have been created by your system administrator.

**Note:**

The default list of available reports varies depending on whether the logged-on user has administrator privileges. Administrator users can use two additional reports: **User Login IP Address Report** and **Users Login Date Information**. These reports display session logon information and are not available to nonadministrator users.

2. Select a report.

Note:

If you choose a Reporting and Analytics report, only **Finish** is available. When you choose **Finish**, you are logged on to the Reporting and Analytics BuildNPlay application. Enter any additional filter information and choose **Show Report**.

3. Click **Next**.
4. Fill in criteria for the query. Only the objects that match the query are placed into the report.
5. If you want to choose the format for the report, click the arrow in the **Report Stylesheets** box to select a style sheet.
6. If you want to save the report as a file, select **Create Dataset** and type a name in the **Dataset Name** box.
7. Click **Finish**.

If you did not choose a style sheet, the report is displayed in your default XML application. If you chose an HTML spreadsheet, the report is displayed in a Web browser.

If you saved the report as dataset, the report is saved in your default **Home** folder, for example, **Newstuff** folder.

8. Managing alternate and alias identifiers

Overview of alternate and alias identifiers

Items and item revisions can be identified in a number of ways to match the business practices of your enterprise and those of your business partners. Initial identifier attributes, alternate identifiers, and alias identifiers are all used to communicate information about items and item revisions.

- An *alias ID* is the identifier of a part that is similar to the current part.

You can use it as a substitute part in the product structure.

- An *alternate ID* is a different identifier for the current part, but it represents the same part.

Different organizations and suppliers can have their own part numbers. With alternate IDs, you are able to find the part you are looking for using your naming scheme.

You enable display of alternate and alias identifiers by using shown item relations. Separator and context length associated with the identifiers can be configured.

Note:

If you set the **TC_publishable_<business-object-name>_contexts** Multi-Site preference for an item or item type, you can use the **Search** view to find items by specifying the alternate identifier. To search based on **Alternate ID** and **Context** criteria to find items that have been published to the Object Directory Service (ODS), choose **Change Search** → **System Defined Searches** → **Remote**. Also, your system administrator can add the identifier and context to **Item** and **Item Revision** saved queries.

For information about publishing alternate ID information to the ODS, see the *Teamcenter Environment Variables*.

To search alternate identifier values in Structure Manager, use an **Item** or **Item Revision** search. To display alternate identifier values in Structure Manager, you must edit a preference to add the column to the BOM line display table; an administrator can use the Business Modeler IDE to add a title for the new column.

For information about making product structure searches, see *Structure Management on Rich Client — Usage*.

Warning:

The alias identifier feature (accessed from the **Revise** and **New Item** dialog boxes or using the **New** → **ID** command on the **File** menu) is a replacement for the alias object feature accessed by choosing **File** → **New** → **Alias**. These features must not be used together in the same database.

Initial identifier attributes

When an item or item revision is created, an initial identifier (ID) attribute is assigned to the object.

Initial identifier attributes have the following characteristics:

- They are required.
- They are not case-sensitive.
- They are unique within the Teamcenter database.
- The identifier attribute cannot be modified if any revision of the item has been released.

Alias and alternate identifiers

Identifier creation prerequisites

You administrator must perform several tasks before you can work with identifiers:

- Define alias and alternate identifier contexts.
- Create identifier types in the database.
- Create **IdContext** rules to define valid combinations of the **IdContext**, **Identifier** type, and **Identifiable** type.
- If you want to use custom attributes for identifiers, your administrator must create two new classes, one for the identifier and one for the identifier revision. These new classes should be based on the identifier class.

For information about defining contexts, creating types, identifier classes and defining identifier context rules, see *BMIDE for Data Model Design*.

For more information about alternate identifier rule characteristics, see *BMIDE for Data Model Design*.

Alias identifiers

Alias identifiers store part numbers and other attribute information for similar parts, and they can be associated with many items or item revisions.

Alias IDs let you store information about external entities.

For example, alias IDs can be used to do any of the following:

- Store parts according to internal naming conventions and also according to the naming conventions of other companies, such as suppliers.
- Maintain a cross reference of the relationships between other manufacturer's part numbers and the part numbers used by your organization.
- Distinguish between parts tracked in other systems.

For example, you can use the alias ID to indicate that a Teamcenter item has information stored in an external database of part attributes. Based on the alias ID, you know whether the Teamcenter item has information stored in the separate database. This information can also be useful in workflows.

Alternate identifiers

Alternate identifiers store information about part numbers and attributes of the same part from different perspectives. They allow different user communities to identify and display an item or item revision according to their own rules rather than according to the rules of the user who created the object.

Assigning alternate identifiers to a part at different stages of development and production allows you to maintain a history of the lifecycle of the part.

Both alias and alternate identifiers are created within a context. The context is used to denote a specific organizational focus, such as a supplier or a department in your organization. You can also use identifiers to store custom information, such as a supplier's name and address or cost data.

Alternate identifiers have the following characteristics:

- An alternate ID identifies only one item or item revision in the database.
- Once created, the context and owning item revision cannot be modified.
- The identifier cannot be modified if any revision of the alternate has been released.
- The item alternate cannot be deleted if any of the revision alternates cannot be deleted.
- The last revision alternate of an item alternate cannot be deleted.

Alternate IDs let you define additional identifiers for an item that are then useful for setting up appropriate display contexts. For example, the design department can use item IDs, but other departments or other companies may have other IDs. A single item can be assigned any number of IDs, each unique within its context and controlled and assigned by its own naming rules.

The following example shows possible alternated IDs for an item:

```
MyItem123
  123456789@dept01
```

K999999999@company01
0000-9999999@company02

- A user in department 01 can set the display context to see all items with their **dept01** number.
- A manager that deals primarily with company 01 can set the context to show all items with the **company01** ID values.
- A designer can switch between display contexts, depending on the current situation.

Create identifiers for items and item revisions

You can create alternate and alias identifiers for an item or item revision, based on business rules established by your administrator, as follows:

1. Select an item or item revision in the tree or **Details** table.
2. Choose **File**→**New**→**ID**.

The system displays the **New ID** dialog box.

3. Select to create an alternate ID or an alias ID, then click **Next**.
4. Select the context for the new ID from the **Select context** shortcut menu.
5. Select the identifier type from the **Select type** list.

Only types that are valid for the selected context are displayed in this list.

6. Manually enter ID and revision values, or click **Assign** to automatically generate the ID and revision values.

Note:

The revision text box and the **Assign** button are not available when you create an alias identifier. The **Assign** button is available when you create alternate identifiers, but it is functional only when naming rules and automatic generation are set for the identifier type and identifier revision type.

7. Type a name for the new ID in the **Name** box.
8. (Optional) Type a description of the new ID.
9. Click **Next**.

If attributes are defined for the ID type, the system displays the **Enter Additional ID Information** pane. Mandatory attributes are indicated by a red asterisk in the upper-right corner of the box.

10. Fill in the attribute values, as required.
11. Click **Next**.

If attributes are defined for the ID revision type, the system displays the **Enter Additional Rev Information** pane.

12. Fill in the attribute values, as required.
13. Click **Next**.

The system displays the **Define Display Options** pane.

Note:
Display options are not available when creating alias IDs.

14. (Optional) Select one or both of the **Use item identifier as default display** and **Use revision identifier as default display** options to set the new identifier as the default display for the item or item revision.
15. Click **Finish**.

The new identifier is created and displayed according to your display rules and default settings.

Note:
The new identifier may not yet be displayed under the appropriate item or item revision.

Define alias ID and alternate ID as a shown relation

Alias and alternate identifiers must be defined as shown item relations to be displayed in Teamcenter. Perform the following steps to define shown item relations:

1. Choose **Edit→Options**.

The system displays the **Options** dialog box.

2. Expand the **General** folder (in the left pane) and select the **Item** node.

The system displays the item options in the right pane of the dialog box.

3. Click the **General** options tab.
4. Select the **Alias IDs** and **Alternate IDs** relations in the **Available Relations** list and click **Add**.

The system displays the relations in the **Shown Relations** list.

5. Click **Apply**.

Alias ID and alternate ID objects are displayed in My Teamcenter.

Note:

Use the same procedure to display the identifier under the item revision node.

Configure the format of alias ID and alternate ID objects

The default string displayed for an alias ID or alternate ID object consists of the first characters of the context name, a separator, and the alias or alternate ID.

1. Choose **Edit→Options**.

The system displays the **Options** dialog box.

2. Expand the **General** folder (in the left pane) and highlight the **Identifier** node.

The system displays the identifier options in the right pane of the dialog box.

3. Type a value for the length of the context.
4. Type a character to separate the identifier from the context.
5. Click **Apply** to save the change and retain the dialog box, or click **OK** to save the change and exit the dialog box.

Define the default display identifier for an item or item revision

1. Right-click the alternate identifier object that will be the default display identifier.

The system displays the **Item Object** shortcut menu.

2. Choose **Copy** from the shortcut menu.

The system copies the alternate identifier object to the clipboard.

3. Right-click the item or item revision for which the alternate identifier will become the default.

The system displays the **Item Object** shortcut menu.

4. Choose **Properties** from the shortcut menu.

The system displays the **Properties** dialog box.

5. Locate the **id_dispdefault** (Display Default ID) property.

Note:

If the property is not visible, click the **More** link in the lower-left corner of the dialog box.

6. If necessary, click **Check Out and Edit** to enable the arrows for the **Paste** command.
7. Click the arrow next to the value of the **id_dispdefault** property and choose the **Paste** option.
8. Click **Save** and **Check In**.

The alternate ID is now the default display for the item or item revision and is displayed according to your identifier display rule settings.

Assign an alternate identifier to a new item or item revision

1. Click the **Enter Identifier Basic Information** link in the left pane of the dialog box.
2. Select the context for the identifier.

Note:

The **Select Context** options are derived from rules set by your administrator.

3. Select the identifier type.

Note:

Only identifier types that are valid for the selected context appear in the list.

4. Enter an item ID, revision, and name for the alternate ID, or click **Assign** to automatically generate the item ID and revision identifiers.

Tip:

It may be necessary to resize the dialog box to view the **Assign** button.

Note:

The **Assign** button is available only if naming rules and automatic generation have been implemented for the selected object type.

5. Click **Next** to move to the next step and further define the item or click **Finish** to create the item or item revision immediately.

Specify additional attribute information for alternate IDs

1. Click the **Enter Additional ID Information** or **Enter Additional Rev Information** link in the left pane of the dialog box.

The system displays input boxes in the right pane of the dialog box. Mandatory attributes are indicated by a red asterisk in the upper-right corner of the box.

2. Fill in the attribute values as needed or required.
3. To further define the item, click **Next** or click **Finish** to create the new item or item revision.

Note:

This feature is available only if attributes have been defined for the selected alternate ID type.

Setting identifier display rules

What are identifier display rules?

Identifier display rules let you select the context in which items and item revisions are displayed in your workspace. If no rule is applied, the initial identifier attribute is displayed. You can create display rules or use those belonging to other users.

Note:

Display rules apply to alternate identifiers, but do not apply to alias identifiers.

Display rules can be associated with multiple contexts. The selected contexts are evaluated by the system in the order in which they appear in the **Selected Contexts** list, from top to bottom. If an item or item revision alternate identifier exists that corresponds to the first context in the list, that identifier is displayed in your workspace. If none match the first context, the next context is evaluated and if an

alternate identifier exists, it is displayed. This continues until a context is found that matches one of the alternate ID contexts defined for the item or item revision.

For more information about ID context rules, see *BMIDE for Data Model Design*.

If the item or item revision does not have alternate identifiers corresponding to any of the contexts in the display rule, the **Use Default** option, found on the **Id Display Rules** dialog box, lets you specify that the default identifier specified for the item or item revision should be displayed. If no default identifier is specified, the initial identifier attribute of the item or item revision is displayed as specified by your default display identifier settings.

Note:

Default identifiers are specified when an alternate item or item revision identifier is created, or they can be defined as a property of the item or item revision using the **Properties** dialog box.

View and set the current display rule

This option allows you to view the current display rule or select a new rule from your rule list. You cannot create rules or select rules owned by other users with this option.

1. Choose **Tools**→**ID Display Rule**→**View/Set Current**.

The system displays the **Id Display Rules** dialog box. Your current rule is shown in the area above the rule list.

2. To change the rule, select a different rule from the list.

The system displays the context of the selected rule in the right pane of the dialog box.

3. Click **OK**.

The system displays a confirmation dialog box stating that the rule will be changed and the currently displayed data will be affected by the new rule.

4. Click **OK**.

The system closes the confirmation dialog box and the **Id Display Rules** dialog box.

Create a display rule

1. Choose **Tools**→**ID Display Rule**→**Create/Edit**.

The system displays the **Id Display Rules** dialog box. Your current rule is shown in the area above the rule list.

2. Click **Create**.

The system displays the **Create ID Display Rule** dialog box.

3. Type a name for the display rule in the **Rule Name** box.

This is the only requirement for creating a rule. However, if you do not select a context, the initial ID attributes of the items and item revisions are displayed.

4. Select one or more contexts from the **Available Contexts** list and click **Add (+)**.

The system displays the context, or contexts, in the **Selected Contexts** lists.

5. (Optional) Change the order of the contexts using the up-arrow and down-arrow buttons.

The contexts in the **Selected Contexts** list are evaluated in order, from top to bottom, to determine which identifier is displayed.

6. (Optional) Select the **Use Default** check box to display either the default or initial identifier attributes for objects that do not fit any of the selected contexts.

7. Click **OK**.

The system displays the new rule in the **Rule List** pane.

8. To set this rule as your current display rule, select the rule and click **Set Current**.

The system displays a confirmation dialog box stating that the rule will be changed and the currently displayed data will be affected by the new rule.

9. Click **OK**.

The system closes the confirmation dialog box.

10. Click **Close** to close the **Id Display Rules** dialog box.

Add rules created by other users to your display rule list

1. Choose **ToolsID→Display Rule→Create/Edit**.

The system displays the **Id Display Rules** dialog box. Your current rule is shown in the area above the rule list.

2. Click **Add**.

The system displays the **Add Id Rule** dialog box.

3. Select the owner of the rules you want to add from the **Select User** list.
4. Select the rules that you want to add to your list. You can select a single rule or multiple rules.
5. Click **OK**.

The dialog box closes and the rules are displayed in your rule list.

Modify the current display rule

Note:

This action is allowed only when there is a display rule currently set.

1. Choose **Tools**→**ID Display Rule**→**Modify Current**.

The **Modify ID Display Rule** dialog box shows the current settings of the display rule.

2. Edit the display rule as required.
3. Click **OK**.

The dialog box closes and the rules are displayed in your rule list.

Modifying identifiers

Methods of modifying identifiers

You can use the **Viewer** tab or **Properties** dialog box to modify the properties of alternate and alias identifier objects.

Once assigned, the context of the object cannot be modified. If any of the alternate revision IDs are released, the alternate ID cannot be modified. In addition, you cannot convert an alias identifier to an alternate identifier.

Modify identifier properties in the viewer pane

1. Select the identifier in the My Teamcenter tree.
2. Click the **Viewer** tab.

The system displays the properties of the identifier object in the **Viewer** pane.

3. Modify the properties, as required.

4. Click **Apply**.

Modify identifier properties in the Properties dialog box

1. Select the identifier in the My Teamcenter tree or **Details** table.
2. Right-click and choose **Properties**, or choose **View→Properties**.


The system displays the properties of the identifier object in the **Properties** dialog box.

3. Modify the values of the properties, as required.
4. Click **Apply** to modify the properties and retain the dialog box, or click **OK** to modify the properties and exit the dialog box.

Delete alias, alternate, or alternate revision identifiers

1. Select the alternate ID or alternate revision ID in the My Teamcenter tree.
2. Click **Delete** on the toolbar or choose **Edit→Delete**.

The system displays the **Delete** dialog box. You are prompted to confirm the deletion.

3. (Optional) Select related components to delete, as follows:
 - a. Click **Explore Selected Components** .

The system displays the component structure of the selected object in the **Explore** dialog box along with a pane for defining rules that determine which related objects are included.

- b. Select the related objects, using one of the following methods:

- By individual selection

Select the check box corresponding to the component in the tree.

- By selecting all components

Click **Select All Components** located beneath the tree.

- According to user-defined rules

The right pane of the **Explore** dialog box lists type and relation combinations that can be used to select components, as defined by your preference settings. Both the **Type** and **Relation** lists include the **Any** option, which allows you to select all instances of a specific

object type, regardless of relation, or to select all instances of a specific relation, regardless of object type.

Apply rule filters, as follows:

- A. Click **Add a Rule (+)** to add a rule to the table.
- B. Choose a type and relation combination by double-clicking the boxes and selecting a value from the **Type** and **Relation** lists.
- C. Click **Update the selection in the tree based on rules** to update the selections in the tree.

Note:

Rules can be removed from the table by selecting the row and clicking **Remove selected rules**.

- D. Click **OK** to apply the filters to the objects in the **Explore** tree.

The system closes the **Explore** dialog box and displays the pane related to the original operation.

Note:

The selection rules are saved as a user preference.

- E. Click **OK** to accept the related objects and return to the original operation.

4. Click **Yes** to delete the alternate ID/alternate revision ID. Click **No** to cancel the delete operation.

Note:

You cannot delete the last alternate revision ID of an alternate ID, you must delete the entire alternate ID.

Use an alternate ID as an alias ID for an item or item revision

1. Select the alternate ID object that you want to use as an alias ID.
2. Right-click and choose **Copy** from the shortcut menu, or choose **Edit→Copy**.
3. Select the item or item revision for the new alias ID.
4. Choose **Edit→Paste Special**.

The system displays the **Paste** dialog box.

5. Select **Alias ID** in the **Add As** list.
6. Click **OK**.

The system pastes the identifier object to the item or item revision with an alias ID relationship.