

Introduction to Teamcenter®

**Student Guide
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Introduction to Teamcenter®

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Course overview

Course description

The *Introduction to Teamcenter* course introduces the concept of collaborative product data management (cPDM), working in a collaborative environment to share product data. You will become familiar with the rich client user interface and learn the basics of using the Teamcenter software.

Course objectives

To become familiar with the rich client user interface and learn the basics of using the Teamcenter software.

- To understand the concept of collaborative product data management (cPDM).
- To become familiar with the rich client and thin client user interfaces.
- To use the rich client user interface to perform basic user tasks.
- To use various navigation methods to locate, view, and report on product data.
- To create Teamcenter items and populate the items with master data.
- To learn how data is secured and access is controlled in a collaborative data management environment.

Key benefits

Key benefits for completing the course objectives include:

- Using a collaborative product data management (cPDM) system to find, view, and create data.
- Using the rich client interface to perform basic user tasks and organize product data.
- Configuring the navigation pane for efficient access to frequently used product data and functions.
- Creating data items, populating the items with master data, and configuring the data display.
- Working with secure data in a collaborative product data management environment.

Prerequisites

- Familiarity with basic Windows operating system commands.

Audience

The primary audience for this course is the consumer.

The potential audience for this course includes:

User profile	Job goal
Consumer	Gather information.
Reviewer	Provide feedback.
Author	Administer product structure, create data, and relate objects.
Installer	Install, upgrade, migrate, and configure software
Application Administrator	Administer users, configure security, define workflow handlers, and define dataset types.

Learning tracks

Learning tracks for the Teamcenter application are found on the Siemens PLM Software training website: <http://training.ugs.com/tracks/index.shtml>

Recommended Courses

- MT25450 – *Teamcenter Data Model Administration*
- MT25350 – *Teamcenter Installation*

Training materials provided

Material	Description
<i>Student Guide</i>	<p>Presentation slides.</p> <p>Yours to keep and make notes.</p> <p>Evaluation is provided both online and in the appendix.</p> <p>Student profile is provided in the appendix.</p>
<i>Student Workbook</i>	<p>Activities are provided online in electronic format and designed to appear on the left of the monitor.</p> <p>A CD of electronic activities is provided in the back of the <i>Student Guide</i>.</p>

Introduction to Help

Throughout this class, you access Help topics to learn more about the product. The Help Library covers functionality from end-user tasks to customization instructions.

There are several ways to access help from Teamcenter.

- To access the Help Library, click the **Help** button or choose **Help** from the main menu.
- Press F1.
 - Current application help for the rich client

Note

You cannot access application-specific help in the Thin Client.

- Context-sensitive help for the Business Modeler IDE
- Press F2.
 - Help library for the rich client

Lesson

1 *Introduction to Teamcenter*

Purpose

The purpose of this lesson is to introduce the students to the Teamcenter software applications and product data management concepts.

Objectives

After you complete this lesson, you should be familiar with:

- Basic concepts of collaborative product data management.
- An overview of commonly used Teamcenter applications software packages.
- The Teamcenter rich client and Teamcenter thin client interface usage.

Help topics

Additional information for this lesson can be found in:

- *Getting Started with Teamcenter 2007*

Basic concepts

Teamcenter is a suite of digital product lifecycle management solutions built on an open PLM foundation that integrates idea management and requirements planning into the digital lifecycle management, product development, and manufacturing process. Teamcenter links OEMs, partners, and suppliers with secure, global access to your product knowledge, and enables consistent, repeatable processes and commonality. Data is stored in a shared repository and is accessible to everyone based on access rules.

Teamcenter supports all phases of the product lifecycle, including:

- Requirements management
- Product structure and configuration management
- Classification and reuse
- Product visualization
- Repeatable Digital Validation
- Change management
- Multi-Site Collaboration
- Manufacturing process management

What is collaborative product data management?

Teamcenter is a collaborative product data management (cPDM) system. cPDM is a tool that helps manage all the processes, applications, and information required to design, manufacture, and support a product throughout its life cycle.

The goal of a cPDM system is to provide a single, common interface for managing and accessing all data within an organization.

cPDM systems interface with enterprise resource planning (ERP) systems. With cPDM, ERP systems and the Web interface, you have all the ingredients for a true collaborative environment.

Benefits of cPDM

Benefits of using the Teamcenter cPDM system include:

- Reduces duplicate data which reduces storage requirements.
- Simplifies finding data and distributing data to those who need it.
- Allows quick, lightweight viewing of models. This is especially useful for verification when reviewing changes.
- Provides revision control and assurance of latest data.
- Manages assemblies and relationships between parts.
- Easily builds and modifies bills of materials (BOMs).
- Maintains history of a product's development evolution.
- Establishes relationships between parts including requirements and specifications.
- Provides access control and vaulting to assure integrity of data.

Teamcenter applications

Some of the most commonly used Teamcenter software applications include My Teamcenter, Product Structure Editor (PSE), Teamcenter for lifecycle visualization embedded viewer, Workflow Viewer, and Change Management.

- My Teamcenter is the workspace you use to manage your product information. My Teamcenter serves as the main access point for many commonly used functions, such as object creation, checkin/checkout, task management, and query execution.

Note

Much of the basic functionality present in My Teamcenter is available in many of the Teamcenter applications.

- Use PSE to create, view, and modify product structures. PSE also manages product structures that were created in an MCAD program such as NX®. PSE allows creation of generic bills of materials which show different configurations of components.
- The visualization tools available in Teamcenter, both the embedded viewer and stand-alone Teamcenter for lifecycle visualization, enable even nontechnical users to interpret design data, review product structure, and mark up issues for collaboration.
- Workflow Viewer presents a dynamic user interface to view the progress of a workflow process for an object, whether it is currently in process or has already achieved its final status.
- Change Management enables functionality to initiate, administer, review, approve, and execute product changes. By automating the change process, Change Management can minimize change-related rework and coordinate tasks to be performed by individuals across your organization.

Teamcenter user interfaces

Teamcenter user interfaces include the rich client interface and the thin client interface.

- The rich client interface is used by authors who are responsible for the design and configuration of product data, manufacturing authors who are responsible for creating and maintaining processes and process structures, administrators responsible for configuring and maintaining Teamcenter, and other users who require extensive authoring access to data stored in the Teamcenter database.
- The lightweight thin client interface is used by consumers, manufacturing consumers, and reviewers who need to view data, including product structure and variant information, approve data attached to a workflow task, or visualize 2D drawings and 3D models. The thin client interface is ideal for suppliers, production staff, and other users who do not require extensive authoring or administrative access to Teamcenter.

Rich client interface

The Teamcenter rich client is a Java application that runs on client hosts that serves as a gateway to your company's product information. You can integrate and run Teamcenter's product data management applications along with other applications, such as Microsoft Office applications, custom applications, Java Plug-ins, or CAD/CAM/CAE applications, all from a common platform. The rich client accesses Teamcenter databases using a remote or local server.

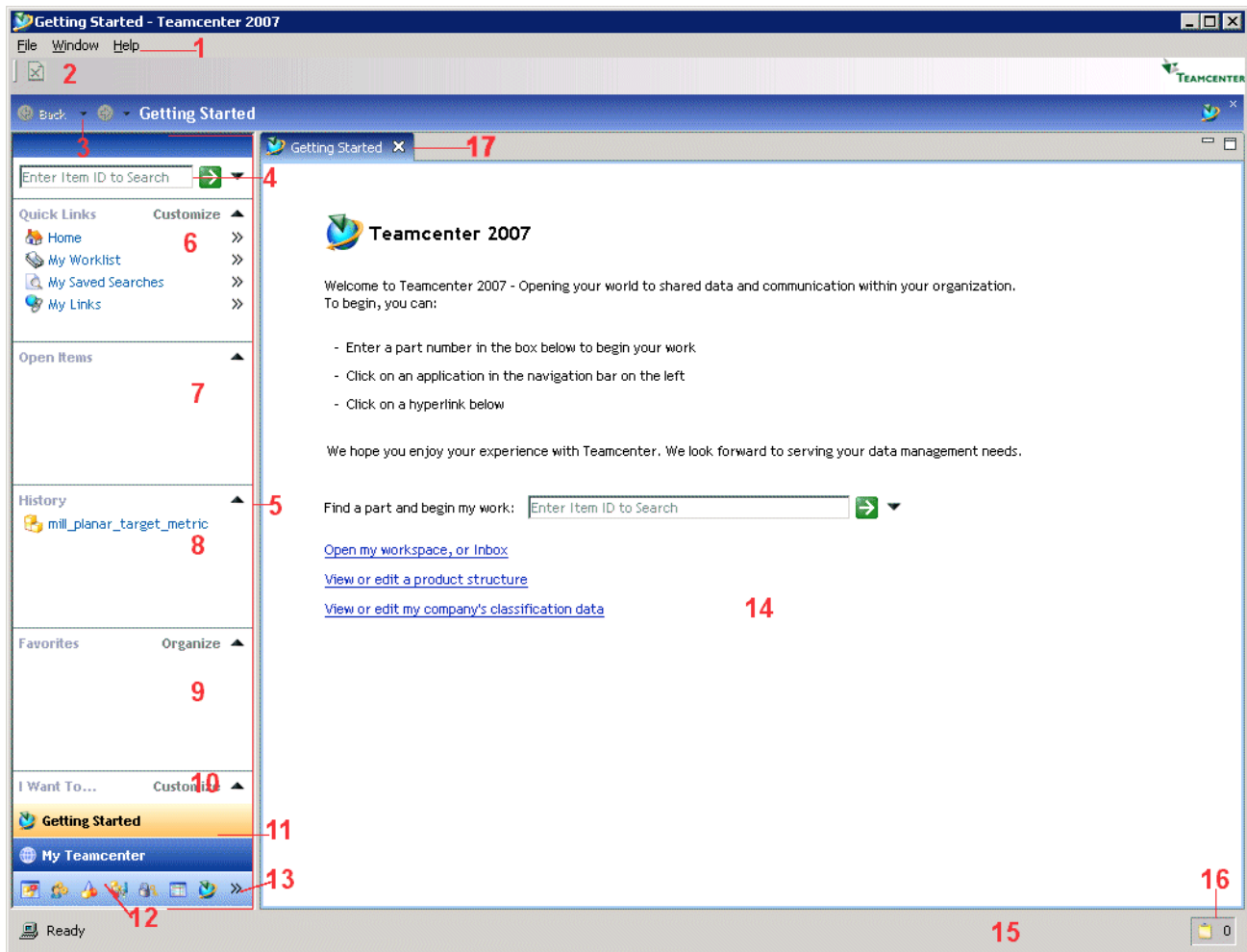


Figure 1-1. Teamcenter rich client window

Table 1-1. The Teamcenter rich client window description

Number	Description
1	The menu bar contains menus for the application that is currently displayed.
2	The toolbar provides access to commonly used menu options. When you point to a button, a tool tip appears. The buttons available on the toolbar varies between applications.
3	The Back and Forward buttons allow you to move between open Teamcenter applications.
4	Quick Search provides predefined searches using dataset, item ID, item name, keyword search, and advanced search features.
5	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 application icons in the navigation pane to display only those applications that you use regularly to perform your tasks.
6	Quick links provide access to your Home folder, work list, saved searches, and web links.
7	Open items displays links to items that are open in the active application.
8	History displays links to Teamcenter applications or objects that you opened. Links are displayed in reverse order; the last object you opened is the first displayed in the History list.
9	Favorites displays links to Teamcenter objects that you have designated as favorites.
10	I Want To provides links to the tools used to complete tasks that you perform repeatedly, such as initiating a process or change.
11	Primary application buttons provide access to your most frequently used Teamcenter applications.
12	Secondary application buttons provide access to the Teamcenter applications that you use infrequently.
13	The Configure Applications button provides access to the tools you can use to configure the display of primary and secondary applications.
14	The application pane displays the applications that are open in your Teamcenter session.

Table 1-1. The Teamcenter rich client window description

Number	Description
15	<p>The system displays information about selected objects in the Information Center.</p> <p>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 tool tip.</p>
16	<p>The clipboard contains references to objects that have been cut or copied from your workspace. The number of objects on the clipboard is displayed to the right of the icon.</p>
17	<p>Application tabs provide access to your open applications.</p>

Thin client interface

Teamcenter thin client provides an access point to your data over the Web using a Web browser configured to use the Sun Java runtime environment. Thin client access is available to the same Teamcenter server and data as the rich client uses; no thin client software is required on a Teamcenter client.

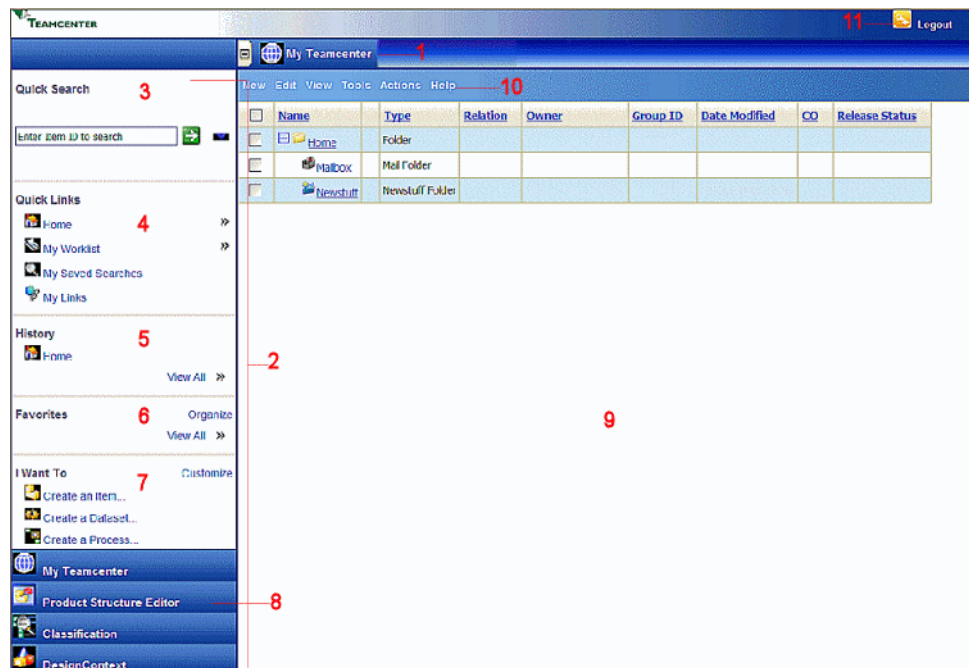


Figure 1-2. Teamcenter thin client window

Table 1-2. Teamcenter thin client window

Number	Description
1	Application tabs provide access to your open applications.
2	The navigation pane provides quick access to the data you use most. You can use it find, organize, and access your data.
3	Quick Search provides predefined searches that enable you to locate your data by dataset, item ID, item name, or keyword.
4	Quick links provide access to your Home folder, work list, saved searches, and web links.
5	History displays links to Teamcenter applications or objects that you opened. Links are displayed in reverse order; the last object you opened is the first displayed in the History list.
6	Favorites displays links to Teamcenter objects that you have designated as favorites.

Table 1-2. Teamcenter thin client window

Number	Description
7	<p>I Want To provides links to the tools used to complete tasks that you perform repeatedly, such as initiating a process or change.</p> <p>Note</p> <p>The I Want To section may not be displayed in the navigation pane when the Quick Links, Open Items, History, and Favorites lists are expanded. In addition, the I Want To section may not be displayed if you choose to display multiple primary applications.</p> <p>To display the I Want To section, collapse the Quick Links, Open Items, History, and Favorites lists or display fewer primary applications by</p>
8	Primary application buttons provide access to your most frequently used Teamcenter applications.
9	The application pane displays the applications that are open in your Teamcenter session. Tabs enable you to move between applications to perform your tasks.
10	The menu bar contains menus for the application that is currently displayed.
11	Ends your thin client session.

Summary

Topics learned in this lesson:

1. Basic concepts of collaborative product data management.
2. An overview of some commonly used Teamcenter software applications.
3. The basic differences between the rich client and thin client interfaces and in what circumstances each is used.

Lesson

2 *Getting started with Teamcenter*

Purpose

The purpose of this lesson is to learn how to start the software, launch an application, and navigate the help system.

Objectives

After you complete this lesson, you should be able to:

- Start a Teamcenter software session.
- Use the Getting Started application.
- Configure the navigation pane.
- Start My Teamcenter and navigate the user interface.
- Organize data in folders.
- Use Teamcenter mail.
- Access online help and find the information you need.

Help topics


Additional information for this lesson can be found in:

- *Getting Started with Teamcenter 2007*
- *My Teamcenter Guide*

Teamcenter software startup

The procedures for starting Teamcenter differs depending on if you want to run a rich client or a thin client session.

Start a Teamcenter rich client session

- Choose **Start→All Programs→Siemens PLM Software Teamcenter 2007→Teamcenter 2007** or double-click the  icon on your desktop.

Tip

If you do not have a Teamcenter shortcut:

1. Choose **Start→All Programs→Siemens PLM Software Teamcenter 2007→Teamcenter 2007**, and right-click **Teamcenter PLM**.
2. Choose **Send To→Desktop**.

Start a Teamcenter thin client session

1. Open the Web browser and type the URL of the Web server in the **Address** box in the following format:

```
http://machine_name:port_number/application_name/webclient
```

machine_name is the network name of the system on which the Web server is running, *port_number* is the port on which it is configured to listen for requests, and *application_name* is the deployed application name (default is **tc**). For example:

```
http://engserve01.ugs.com:7001/tc/webclient
```

or

```
http://engserve01.ugs.com:7001/appl/webclient
```

2. Click **Go**.

The Teamcenter logon page is displayed in your browser.

3. Type your Teamcenter user name and password and click **OK**.

Teamcenter appears in your browser. You are automatically logged on using your default group and role.

Tip

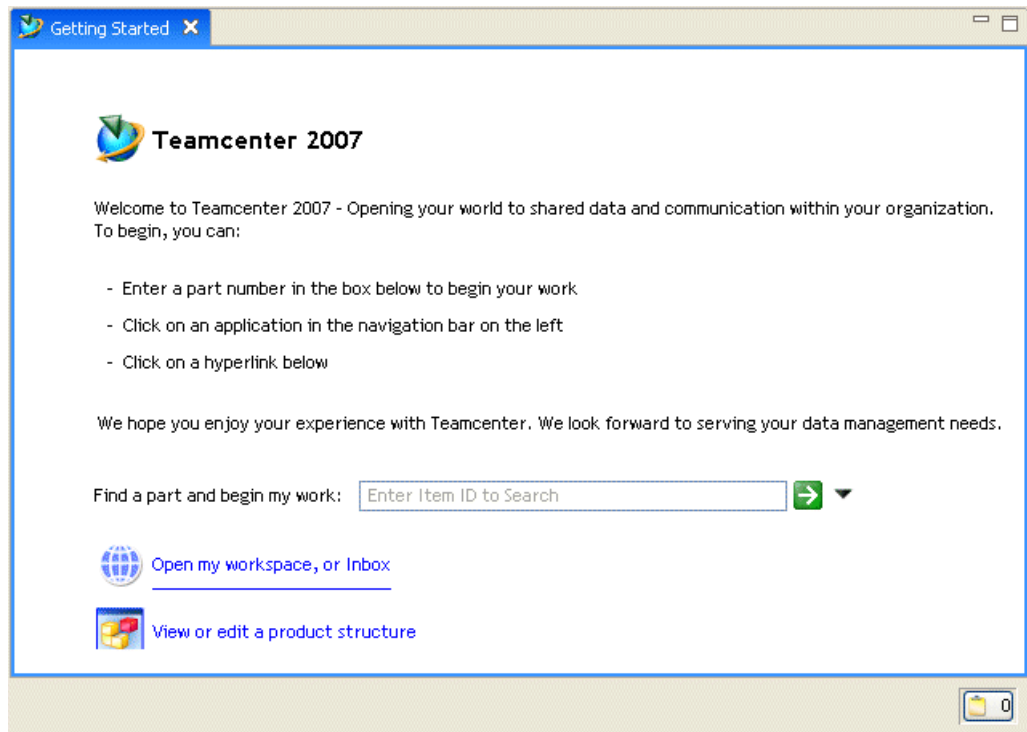
You can change your group or role by clicking the **User Settings** link in the navigation pane.

Getting Started application

The Getting Started application is launched at initial start up of a Teamcenter rich client session.

There are various methods you can use to log on and begin your work from the Getting Started application using the navigation pane or the **Getting Started** pane.

Getting Started pane



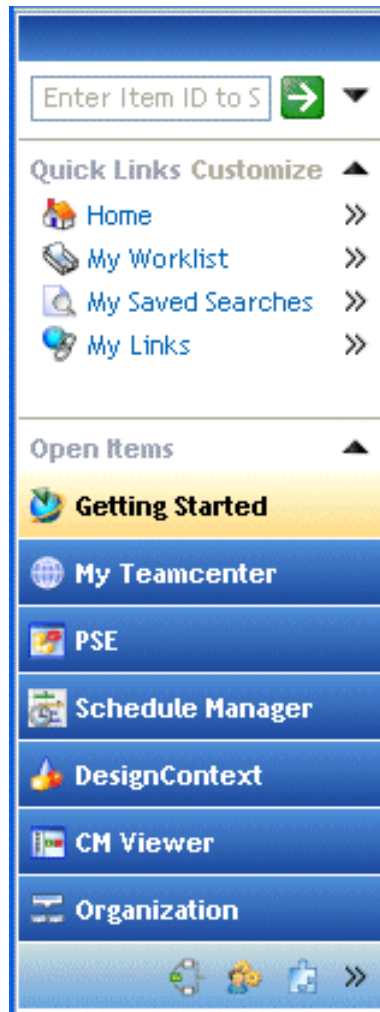
From the **Getting Started** pane, you can:

- Use the **Find a part and begin my work** box to log on and execute a search on the part you want to work on and launch the applicable software application.
- Click **Open my workspace, or Inbox** to log on and immediately access your workspace or inbox.
- Click any other application link listed on your **Getting Started** navigation pane to log on and immediately access the applicable application data.

Note

The application links listed depend on which Teamcenter applications are installed at your site.

Navigation pane



From the navigation pane, you can:

- Execute a search on the part you want to work on to log on and launch the applicable software application.
- Click a quick link to log on and go to the specified location or function.
- Click an application button to log on and launch the desired application.
- Click **Configure Application** to add, remove, and organize the application startup buttons on the navigation pane.

Configuring the navigation pane

The navigation pane provides quick access to the data you use most. You can use it to find and organize your data and to perform common tasks, such as creating parts and datasets or releasing a part.


You can configure the navigation pane as follows:

- Add, remove, organize, and rename quick link containers.
- Add, remove, organize, and rename your saved searches.
- Add, remove, organize, and rename links to your most frequently used data.
- Add, remove, and organize tasks in your **I Want To** list.
- Show or hide the navigation pane.

How to configure the navigation pane will be taught, as applicable, throughout the course.

My Teamcenter application startup

To start My Teamcenter, click  **My Teamcenter** in the navigation pane.

If you do not see My Teamcenter listed by name as a primary application, check for the My Teamcenter button  in the secondary application buttons 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 application button in the navigation pane.

My Teamcenter user interface

Many of the main components of the My Teamcenter user interface are common to other Teamcenter applications.

Some menu commands and toolbar buttons are specific to My Teamcenter.

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

Menu commands

Following is a general description of the My Teamcenter menu commands:

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

Note

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

- Use the **View** menu commands to perform various tasks related to displaying Teamcenter data.
- 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.
- Use the **Window** menu commands to open a new application window and customize your desktop.
- Use the **Help** menu commands to access online help for the Teamcenter software applications, and view information about the installed software product.

Toolbar buttons

The My Teamcenter toolbar buttons provide easy access to frequently used navigation and editing tasks.

You can customize the toolbar for access to the tasks you use most often.

Basic My Teamcenter tasks

You can use My Teamcenter to perform the following tasks:

- Create folders to organize commonly referenced objects and relationships.
- View the contents of your **Home** folder, **My Worklist**, **My Saved Searches**, and **My Links**.
- Perform and track tasks.
- Send and receive mail.
- Open objects, automatically launching the related Teamcenter application.
- Search for objects, both in your local environment and at remote sites, using predefined queries.
- Compare search results to other searches or collections.
- Create and manage items, item revisions, and datasets.

Organize data in folders

My Teamcenter displays product information as various graphical objects.

Each user has a unique personal My Teamcenter window. Therefore, although you may share product information across the enterprise with other users, you can always organize this information in the way that best meets your individual needs.

Folders can be used to organize Teamcenter data. Folder objects can contain references to other objects and/or other folders.

What are folders?

- Folders can be used as a tool to organize both company-wide and individual user data.
- Your company may create a visual method of organizing data using folders.
- Data can be referenced by any number of folders.
- Folders can be nested to practically any extent desired.
- 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.

Working with folders

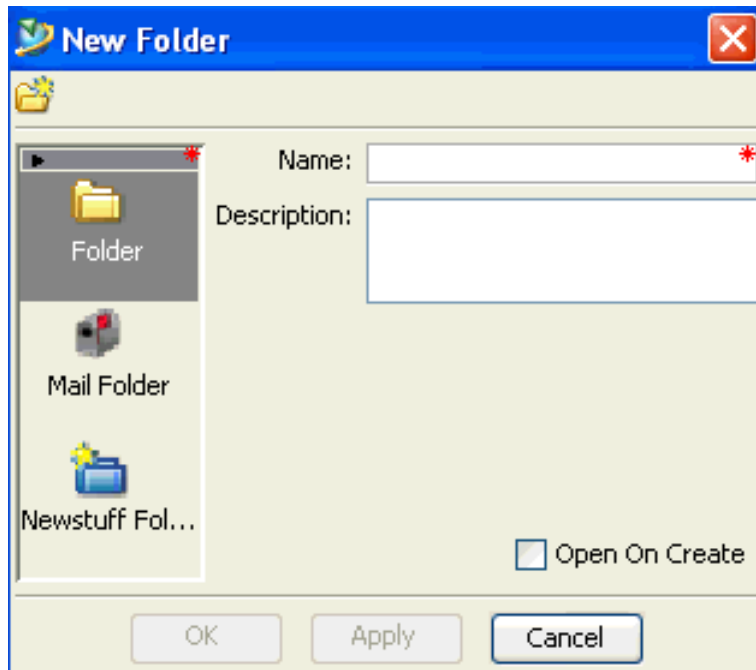
Folders are a flexible way to organize your product information. Folder objects can contain references to other objects and/or other folders.

Use Teamcenter to:

- Create a new folder.
- Rename a folder.
- Move a folder.
- Print a folder.
- Delete a folder.

Create a new folder


- Choose **File® New® Folder** to create a new folder.



Key points

Key points about the **New Folder** dialog box:

- A red asterisk indicates a required entry.
- Enter a short descriptive name. The limit is 32 ASCII characters.
- You can enter a general text description of up to 240 characters. This is optional.

- Set the **Type** to **Folder**  for general-purpose folders.

Rename a folder

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

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



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

Note

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

Move a folder

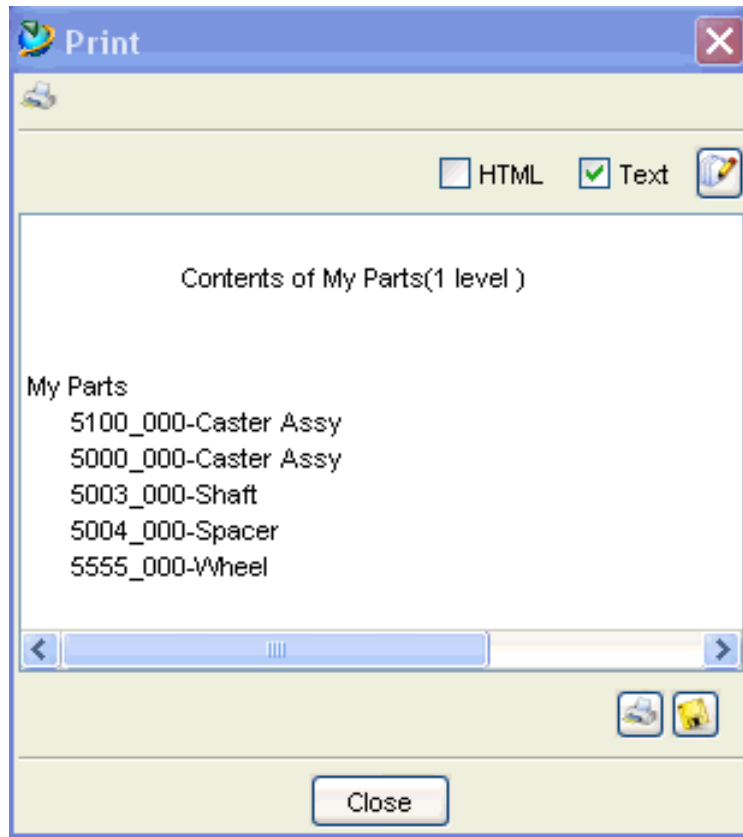
You can reorder the folders in your **Home** folder structure by moving them up or down.

- Select a folder object and choose **Edit® Move® Up** to move a folder up (closer to the top-level folder) in the My Teamcenter object area.
- Conversely, select a folder object and choose **Edit® Move® Down** to move a folder down in the My Teamcenter object area.

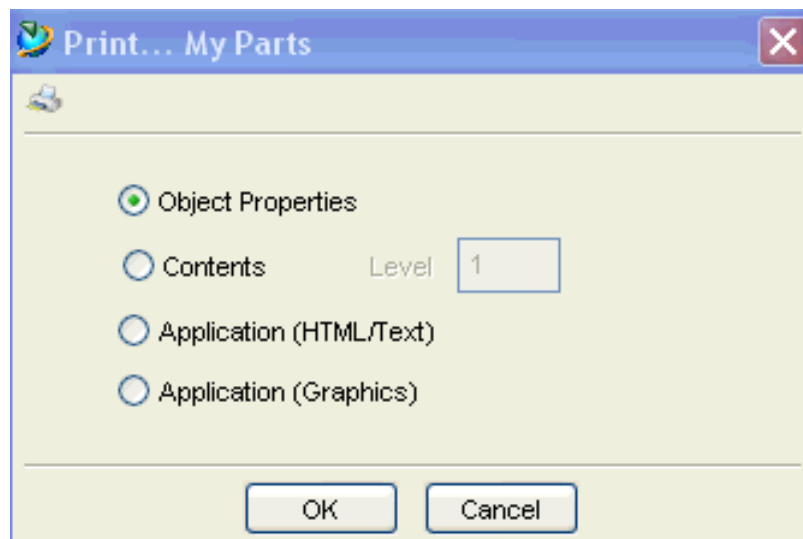
Print a folder

- 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.



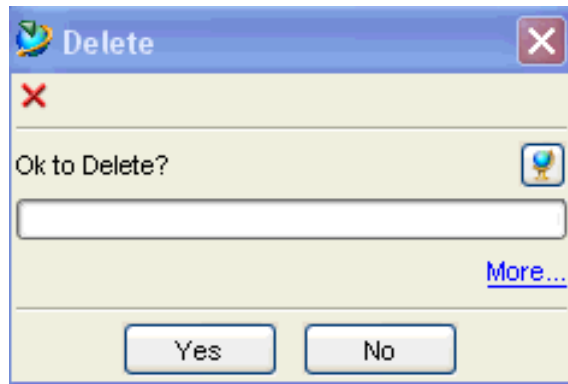
Choose **File® Print...** to access additional print options.



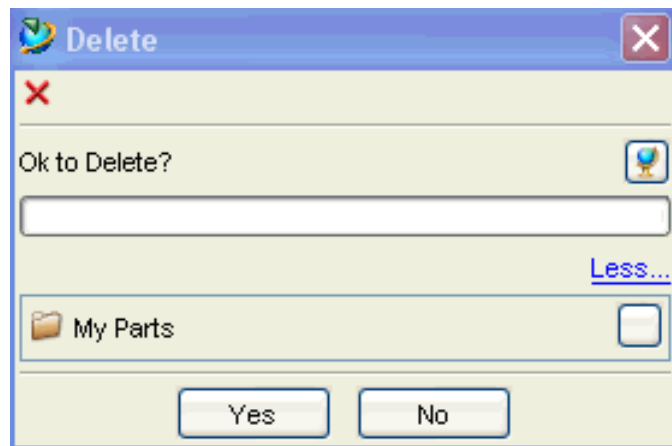
Delete a folder

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

A confirmation dialog appears so you can confirm the deletion.



2. Click **More** to list the object or objects selected for deletion.



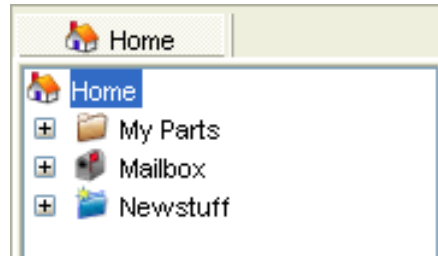
3. Click **Yes** if you want to delete the folder.

Note

When deleting 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.

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 folder

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

Mailbox folder

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

Newstuff folder

The **Newstuff** folder is the default folder for newly created database objects. You can designate other folders as the default location for newly created database objects.

Sending and receiving Teamcenter mail

Teamcenter mail enables you to send mail from within the Teamcenter interface, including attachments, to other Teamcenter users. In addition, you can send mail from Teamcenter to people who are not Teamcenter users by specifying a valid SMTP address.

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

Note


Entering the wildcard character in this box displays the entire recipient 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  and following the instructions described in [Create an address list](#).

- 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.

6. (Optional) Click the **Add** button  to the right of the **Attachments** section to copy items from the clipboard as attachments.
7. Click **Send** to send the message.

Receive and read mail

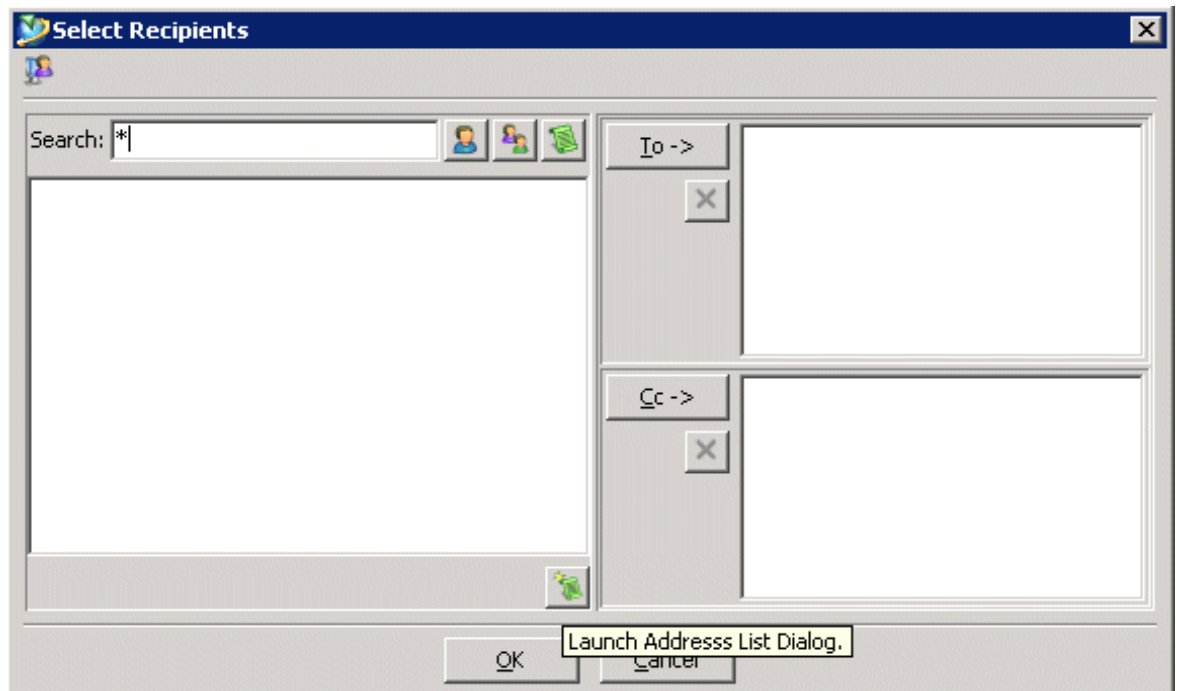
An envelope is delivered to the mailbox of each user whose name appears in the **TO** or **CC** list of sent mail.

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


Using 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.

In addition to the procedure described below, you can create address lists when selecting mail recipients by clicking the **Launch Address List** button located beneath the **Search** pane in the **Select Recipients** dialog box.



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.
4. Click **Close**.

Viewing online help

Teamcenter provides help for each application, as well as a series of getting started guides.

Access help for the current application

- In the rich client, choose **Help® Help® Current Application** or press the F1 key.

Note

You cannot access application-specific help in the thin client.

Access the help library

- In the rich client, choose **Help® Help® Help Library** or press the F2 key.
- In the thin client, choose **Help® Web Collection** to access thin client help or choose **Help® General Collection** to access the full library.

Access information about the application

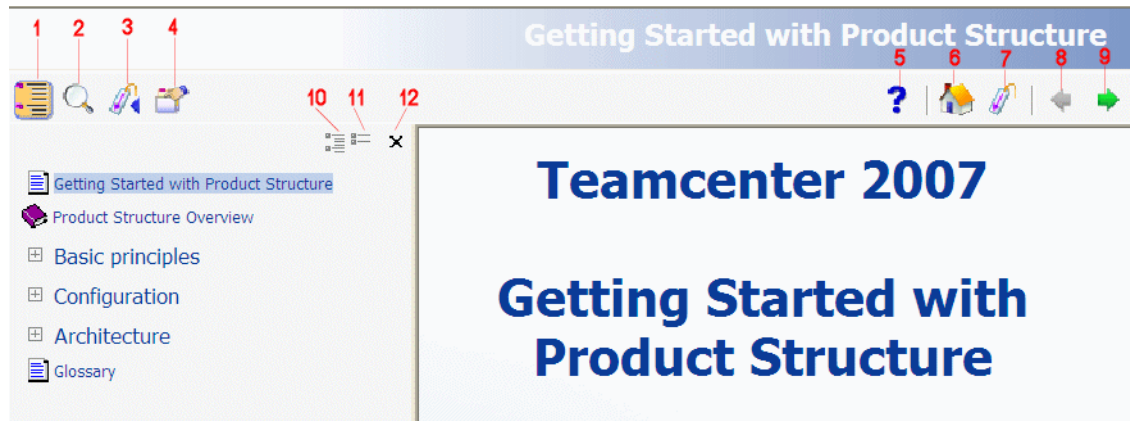
- In the rich client, choose **Help® About**.

The system displays information about the application, including information about plug-ins and configuration details.

- In the thin client, choose **Help® About**.

Navigating the help system

The following figure shows the Teamcenter help system navigation buttons.



The following table describes how each button can be used to navigate the help system.

Table 2-1. Teamcenter help system usage

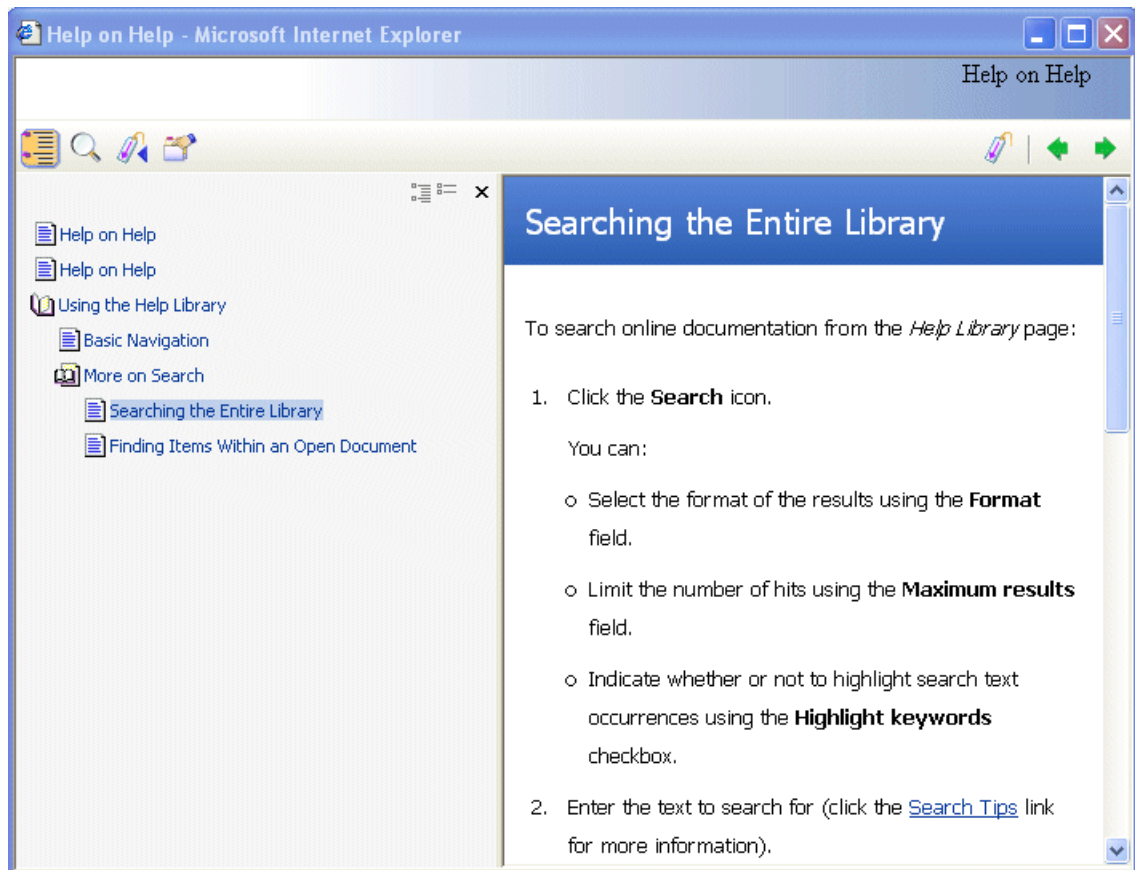
Component	Purpose
1	Displays the table of contents.
2	Launches the search tool. You can use this tool to search for information within the application help or within the entire help collection.
3	Lists bookmarks to help topics that you reference frequently.
4	Displays the index for the help module.
5	Provides information about using the help system, including tips on using Search to find the information you need.
6	Takes you to the main index page for the help collection.
7	Enables you to create a bookmark to the topic displayed in your browser window.
8	Moves to the previous topic, as shown in the table of contents.
9	Moves to the next topic, as shown in the table of contents.
10	Expands the table of contents.
11	Collapses the table of contents.
12	Hides the table of contents.

Using Help on Help

In the online help, you can click the **Help** button  to access **Help on Help**.

You can navigate **Help on Help** to find information such as tips on using the **Search** function to find the information you need.

Search tips include using the wild card characters * and ? in the search string.



Activities

Complete the following activities to reinforce the material taught in this lesson.

1. Start Teamcenter and configure the navigation pane.
2. Log on to My Teamcenter.

In this activity, you log on to My Teamcenter and explore the user interface.

3. Create and rename a folder.

In this activity, you create a folder to organize your data.

4. Send and receive Teamcenter mail.

In this activity, you practice sending and receiving Teamcenter mail.

5. Navigate the Teamcenter 2007 Help Library.

In this activity, you access and navigate the Getting Started with Teamcenter 2007 online help and search for a help topic.

Review questions

1. The procedures for starting Teamcenter differs depending on if you want to run a rich client or a thin client session

Select all that apply.

- True
- False

2. What is the initial start application of Teamcenter?

Select one answer.

- Getting Started
- My Teamcenter
- My Worklist
- Organization

3. You can configure the navigation pane as follows:

Select all that apply.

- Add, remove, and organize links to your most frequently used applications.
- Add, remove, organize, and rename quick link containers and data.
- Add, remove, organize, and rename users.
- Add, remove, organize, and rename your saved searches.

4. What is the primary working application of Teamcenter?

Select one answer.

- Getting Started
- My Teamcenter
- My Worklist
- Organization

5. What folder is the default folder for newly created database objects?

Select one answer.

- Home folder
- Mail folder
- New folder
- Newstuff folder

6. Address lists can contain any combination of valid Teamcenter users and groups.

- True
- False

7. Which function key opens the help library in the rich client?

Summary

Topics learned in this lesson:

1. Start the Teamcenter software.
2. Use the Getting Started application.
3. Configure the navigation pane.
4. Start the My Teamcenter application.
5. Navigate the My Teamcenter user interface.
6. Organize data in folders.
7. Use Teamcenter mail.
8. Access online help and find the information you need.

Lesson

3 *Working in Teamcenter*

Purpose

The purpose of this lesson is to learn the basics of working in Teamcenter using the rich client interface and the My Teamcenter application.

Objectives

After you complete this lesson, you will be able to:

- Identify items and the item structure.
- Create an item and populate it with master data.
- Use checkout to create an item revision sequence.
- Identify datasets and dataset types.
- Create a dataset and work with versions.
- Create an object reference.
- Create new data from existing data.

Help topics

Additional information for this lesson can be found in:

- *Getting Started with Teamcenter 2007*
- *My Teamcenter Guide*

Items and item revisions

Items and item revisions are the fundamental data objects used to manage information in Teamcenter.

- Items are structures that are generally used to represent a product, part, or component. Items can contain other data objects including other items and folders.
- Item revisions are data objects used to manage revisions to items.
- Each item revision has one or more associated sequence IDs. Checkout actions increment the sequence ID for the item revision, with the most recent sequence ID becoming the default.

Key points

- An item can be thought of as a "package" which contains all data related to that item.
- Each item has at least one item revision.
- Each item revision has at least one sequence ID.
- Items store all revisions of the item.

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**

 **Item Master (Form)**

 **ItemRevision**

 **ItemRevision Master (Form)**

Key points

- **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 to include data unique to the customer.

- **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 to include data unique to the customer.

Item types

The term *item* is used to generically describe all *types* of items that exist in the system.

The system comes with several generic item types including:

- **Item**
- **Document**
- **EngChange**

Note

Many customers define additional item types in their system. This allows for more specific categorization of data beyond the types described above.

Creating items

The **New Item** dialog box provides a wizard-like tool for creating items, entering item and item revision attribute information, creating alternate identifiers for the item, assigning the item to a project, and defining options for displaying the item and alternate identifiers.

Mandatory steps required to create a new item are indicated by a red asterisk. Once the mandatory steps are performed, you can then continue through the remaining steps in order, select individual steps from the list, or exit the wizard. It is not necessary to work through the steps sequentially, nor is it necessary to complete all of the steps. If mandatory item master or item revision master attributes are defined for the item business object, values must be entered before the system can create the item.

Create an item

1. Select a container for the item, such as a folder or another item.

2. Choose **File**→**New**→**Item** or press Ctrl+T.

The system displays the **New Item** dialog box.

3. Select the item type that you want to create.

Note

The item types displayed in this dialog box are controlled by your administrator. It is possible that you may be unable to create item types that are visible to you in your workspace.

4. Optionally, select the **Configuration Item** check box. Configuration items define the point in a product structure where the effectivity context changes.

5. Click **Next**.

The system displays the item information pane.

Note

The **Name** and **Description** fields 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 field. If you clear the field, the initial value will be reapplied to the property when you save the new item.

6. Enter an item ID, revision, and name for the item, or click **Assign** to automatically generate the item ID and revision identifiers. The **Assign** button is active 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.

7. Optionally, enter a description of the item and select a unit of measure.

At this point, you have provided all of the information necessary to define the item.

8. To define the item and proceed to another step, click **Next**.

Note

The item is not created until you click **Finish**. If mandatory item master or item revision master attributes are defined for the item type, the attribute values must be supplied before you create the item.

Populate an item with data

After an item is created, the next step may be filling out forms to add data to the item.

Add master data

Every time a new item is created, an **Item Master** form object is created automatically. 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 the **ItemMaster** or **ItemRevision Master** form object after it has been created.

Creating item revisions

The initial item revision associated with an item is automatically created when the item is created.

To create subsequent revisions for the item, select an existing item revision and choose **File® Revise**.

- Creating a new revision copies the objects and object references related to the existing item revision to the new revision.
- The related objects can be copied as references, new objects, or not at all.

Item revision sequences

When an item revision is created, an initial sequence and sequence ID is also created. This sequence ID becomes the active, or default, sequence.

The integrity of Teamcenter data is protected by checkin/checkout features used to lock other users out of work that is in process, allowing them to view but not modify the information. The sequence ID increments or decrements based on the checkin and checkout operations performed on an item revision.

- When an item revision is checked out for modification, the sequence ID increments and the most recent sequence ID becomes the default.
- Canceling a checkout decrements the sequence ID and discards any changes that have been saved to the database.
- Only one sequence can be active at any given time for an item revision.
- The number of sequences stored in the database for an item revision is limited to the number set by your site administrator. When the limit is reached, the system automatically removes the oldest sequence at checkin.

Sequence ID display

Teamcenter 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 third checkin for item revision 3540/A of part Bumper is displayed as follows:

3540/A;3-Bumper

- By default, the system displays only the active sequence.
- All sequences for an item revision can be found and displayed using a search query.

Managing revision sequences

- When you create a new item revision, such as from revision A to revision B, the new revision starts with the first sequence ID.
- You can set immunity for sequences to prevent their automatic removal.
- 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.

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. These include:

- Automatically defined relation types
- Special relation types

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 existing item, the new item revision is automatically defined as a revision relation. The automatically defined relation types include:

- Revision
- Item master and item revision master
- BOM view and BOM view revision
- Alternate ID

Special relation types

In addition to the automatically defined relation types, the following relation types relate objects to items and item revisions:

- Specification relations
- Requirement relations
- Manifestation relations
- Reference relations

These relation types are used throughout Teamcenter to aide in workflow and business rules.






These relationships are typically defined when you paste an object reference into an item or item revision using the **Edit® Paste** or **Edit® Paste...** menu commands.

Dataset objects

When non-Teamcenter applications are launched from Teamcenter, the files generated are maintained by Teamcenter. The object used to manage these files is called a *dataset*.

Datasets are typically stored in item revisions. The symbol preceding the dataset name may vary depending on the associated application.

Examples of some dataset types:

Symbol type	Type	File	Purpose
	Text	.txt	Text document
	MSWord	.doc	MSWord document
	MSExcel	.xls	MSXExcel spreadsheet
	DirectModel	.jt	3D visualization model
	UGMASTER	.prt	NX part file

Double-clicking a dataset object launches the associated software application and loads the file in the application.

Create a new dataset

1. Select the folder, item, or item revision under which the new dataset will reside.

2. Choose **File**→**New**→**Dataset...** or press Ctrl+D.

The **New Dataset** dialog box appears.

Note

You can create a new dataset from an existing file by using the **Import** option on the **New Dataset** dialog box.

3. Type a descriptive name (up to 32 ASCII characters) in the **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.

4. Optionally, type a description (up to 240 ASCII characters) that will help to identify this dataset in the **Description** box.


5. Select a dataset 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 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.

6. Select the **Tool Used:** option to edit the dataset file if more than one option is available.

7. To create the dataset from an existing file, click **Import** .

The system displays the **Import File** dialog box.

8. Navigate to the file to be imported, select the file, and click **Import**.

The system closes the **Import 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 5.

9. Select **Open on Create** to launch the tool associated with the dataset and immediately open the file upon creation.
10. 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 system displays the **Paste** dialog box. Clicking the **Stop** button ends the dataset creation process.

The system displays the new dataset object in your My Teamcenter tree. If you selected the **Open on Create** option, the tool associated with the dataset is launched and the file is opened.

Dataset versions

Whereas changes to items are captured in item revision sequences, changes to datasets are captured in versions. In Teamcenter dataset versions can be:

- Used to track changes and undo changes to a dataset by reverting to a previous version of the dataset.
- Used as the basis for creating a duplicate of an existing dataset.

Key points about dataset versions

- As work progresses and you successively modify a particular dataset, new versions are added to the database but, version 0 (no value) always references the *latest* version of the dataset.
- The default version is the latest. In most cases, you should work with this version unless you have some specific reason to open an earlier version.
- Dataset 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 an existing dataset.
- Normally, you only see the version 0 dataset in My Teamcenter. Teamcenter hides other dataset versions to reduce clutter.

Revert to a previous dataset version

Revert to a previous dataset version to track changes and undo changes to a dataset.

To revert to a previous version of a dataset, select the dataset and choose **File® Open With....**

Using the **Open...** dialog box, you can specify a particular version of a dataset and/or a specific software application (tool) to use for the current editing session.

Purge dataset versions

Purge versions to explicitly remove old versions of a dataset from the database.

- Teamcenter manages multiple dataset versions until the *version limit* is reached.

When the version limit is exceeded, the *earliest* version of the dataset is automatically purged from the database in order to make room for the new version.

- The **Edit® Purge** command can be used to explicitly 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.
 - The **Purge** command completely and permanently removes old versions of a dataset from the database.

Note

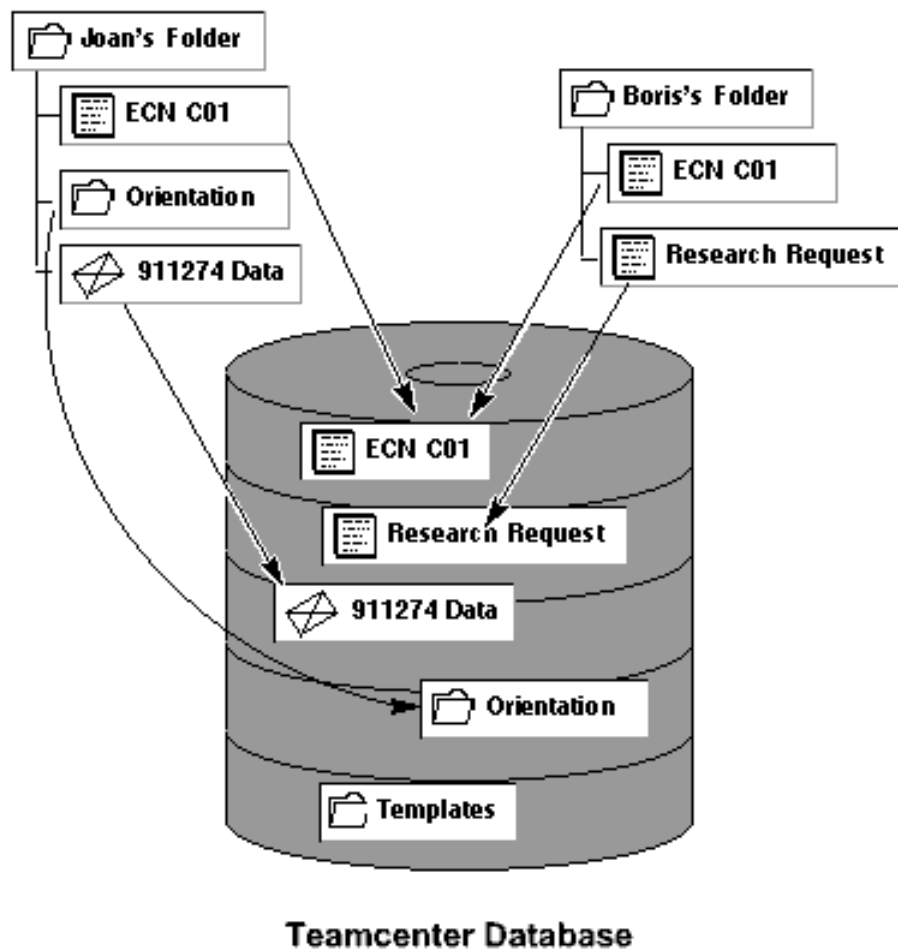
When a dataset is assigned a release status, all earlier versions are automatically purged.

Object references

While it appears that object folders *contain* other objects (because that is what you *see*) the folders actually contain *references* to the objects.

The distinction is subtle but very important. Several folders can contain references to the *same* object, however, that object is only stored *once* in the Teamcenter database.

Therefore, these folders provide references to the same product information and allow product information to be shared throughout your enterprise without having to make multiple physical copies of the data.



Creating object references

To create an object reference, you can select the desired object and use the **Cut**, **Copy**, and **Paste** buttons.

The **Append** option can be used to retain the existing objects in the clipboard while adding to the clipboard contents using the cut and copy commands.

Using cut, copy, paste, and append commands

Key points about the cut, copy, paste, and append commands:

- These are *clipboard* commands, which means that they place information on the clipboard (via cut or copy) and *paste* it to another location.
- These commands affect only the *references* to objects stored in the database; they do not cut, copy and paste actual objects.
- **Cut** takes the object's reference out of the folder and puts it on the clipboard. It does not delete an object from the database.

Any existing objects in the clipboard are overwritten by the cut objects.

Note

To actually delete an object from the database, use the **Delete** command.

- **Copy** puts a new reference to the object on the clipboard; the original reference to the object remains in the folder.

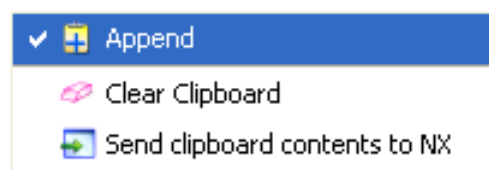
Any existing objects in the clipboard are overwritten by the copied objects.

- Toggle the **Append** option to add the selected objects to the clipboard contents.

The existing objects in the clipboard are retained.

Note

The **Append** option is located on the clipboard menu. The clipboard menu can be accessed by right-clicking the **Clipboard** button when the clipboard contains one or more objects.



The menu is not available when the clipboard is empty.

- **Paste** places a reference to the object or objects that are in the clipboard into the selected folders. The object reference is not removed from the clipboard, so you can perform multiple paste operations.

Tip

To highlight multiple objects, you can hold down the Shift key to select objects in a range or the Ctrl key to select objects in a discontinuous range.

Dataset 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.

Access the **Named References** dialog box to view or modify the named references (files) for a dataset.

1. Select the dataset in the tree or **Details** table.
2. Choose **View® Named References**.

The **Named References** dialog box appears, listing all the named references of the selected dataset.

3. Optionally, you can cut, copy, paste, import, and export named reference files, or edit the name of the reference file.

Note

Using the **Open** button in the **Named References** dialog box is not recommended for opening dataset part files.

Creating new data from existing data

Use the **File® Save As** command to create new items and datasets based on existing data.

Create a new item based on an existing item or item revision.

- When the new item is created based on an existing item, related objects are copied to the new item as references.
- When the new item is created based on an existing item revision, related objects can be copied to the new item as references, new objects, or not at all.

Create a new dataset based on an existing dataset.

- When a new dataset is created based on an existing dataset, you can specify which version of the selected dataset to use in creating the new dataset. The latest version is used by default.

Activities

Complete the following activities to reinforce the material taught in this lesson.

1. Create an item and add master data.

2. Create a new dataset.

In this activity, create a text dataset to document specifications for an item.

3. Import a dataset.

In this activity, create a dataset using import and modify the relation type.

4. Modify a dataset and work with versions.

5. Create a new item revision.

In this activity, create a new item revision using the **Revise** command.

6. Create a new item based on existing data.

In this activity, create a new document item based on an existing document revision.

Review questions

1. What objects are included in the item structure, by default?

Select all that apply.

- Item master form
- Item revision
- Dataset
- Item revision master form

2. What is an item?

Select all that apply.

- A fundamental data object used to manage information in Teamcenter.
- A package which contains all data related to the item.
- Collects data that is applicable to a single revision of the item.
- Generically describes all types of objects that exist in the system.

3. Only one sequence can be active at any given time for an item revision.

- True
- False

4. Which are special relation types?

Select all that apply.

- Alternate ID
- BOM view and BOM view revision
- Manifestation relations
- Specification relations

5. What Teamcenter object is used to manage non-Teamcenter files?

Select one answer.

- Dataset
- Form
- Item
- Revision

6. What do folder objects contain?

Select one answer.

- Items
- Named References
- References to other objects
- Revisions

Summary

Topics learned in this lesson:

- Identify items and the item structure.
- Create an item and populate it with master data.
- Use checkout to create an item revision sequence.
- Identify datasets and dataset types.
- Create a dataset and work with versions.
- Create an object reference.
- Create new data from existing data.

Lesson

4 *Find and view Teamcenter data*

Purpose

The purpose of this lesson is to use various methods to locate and view Teamcenter data.

Objectives

After you complete this lesson, you will be able to:

- Perform queries and view search results.
- View objects and their properties.
- Perform where-referenced and where-used searches.
- Use favorites for easy access to your data.
- Print information about your data.

Help topics

Additional information for this lesson can be found in:

- *Getting Started with Teamcenter 2007*
- *My Teamcenter Guide*

Searching the database

Teamcenter provides tools that enable you to use saved queries (both standard queries and custom queries defined by your Teamcenter administrator) to search for your work in the Teamcenter database or in databases that are part of a Multi-Site Collaboration network.

The **Quick Search** feature in the navigation pane enables you to search for data by specifying the dataset name, item ID, item name, or a keyword.

You can run a form-based search by selecting the **Advanced** option from the quick search feature or by clicking the **Search** button on the toolbar.




You can save the results of a search and add them to your **My Saved Searches** list. Once saved to the list, you can display the results and refresh the search to update the display with the latest results.

Note

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

Search History lists 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.

Perform a quick search

1. Locate the quick search input field, execute button, and menu   at the top of the navigation pane.
2. Click the menu icon ▼ and select a search type.
3. Enter the appropriate criteria for your search.
4. Click **Execute this query**  to start the search.

The system displays **Quick Open Results** dialog box with a list of objects that match the specified criteria.

Note

If you do not find the object you seek using the quick search, click **Cancel**. Choose **Advanced** from the **Quick Search** menu or click **Search** on the toolbar to display the **Search** pane, which lets you use detailed criteria.

5. Double-click an object to open from the list or select an object and click **Open**.

The object is retrieved and displayed in the **Folders** pane.


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 system displays the **Search** pane with the default search name and description followed by the search criteria form.


Note

The software ships with **Item ID** selected as the default search. The **Item ID** search form has only the **Item ID** box for criteria.

2. Enter search criteria.
3. Click the execute button  to perform the search.

Results are displayed in the **Folders** navigation pane and the data pane.

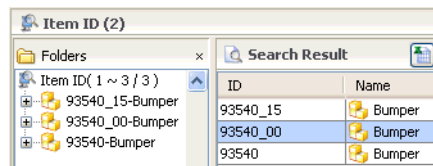
Note

The **Abort** button  in the upper left corner of the Teamcenter window is active while a query is running, but it cannot stop the database query process once it starts.

Search results display

The search results are displayed in a search results window.

- The name on the search results window matches the name of the search form.
- If multiple queries are run using the same search form, a number is added to the name for the search results window so that you can differentiate between search results. Because multiple search windows can be open simultaneously, you may want to rename them to make your workspace easier to use.



Renaming search results

If you plan to keep a search open in your My Teamcenter window for an extended period of time, or if you have multiple queries open, renaming the search results is a convenient way to make your My Teamcenter window more manageable.

Rename search results

1. Right-click the search pane label that you want to rename.

The system displays **Explorer Popup Menu**.

2. Choose **Rename**.

The **Rename** dialog box displays the current name of the search in the banner.

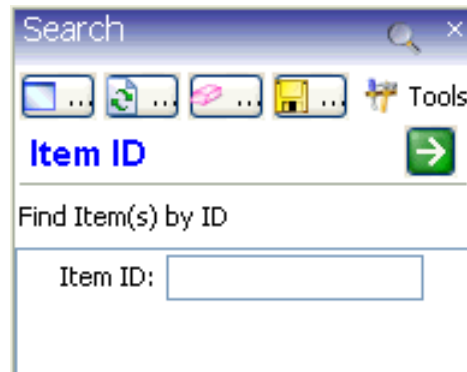
3. Type a new name for the search results in the text box.

4. Click **OK**.

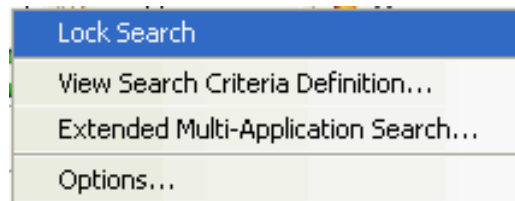
The name on the search tab is changed to reflect the new name.

Search pane buttons

Search pane buttons let you change, rerun, clear, and save a search.



Use the **Tools** menu to access additional search functions.



Click the **Execute** button  to perform the defined search.

Change your search

1. Click **Change** in the **Search** pane to display the **Change Search** dialog box.
2. Select a new search from the **System Defined Searches**, **Search History**, or **My Saved Searches** tabs.
3. Click **Change Search** to load the selected search criteria into the **Search** pane.

Note

When you change the search, the content of the currently displayed search pane is overwritten to display the form associated with the new search.

For example, if you are defining criteria for an item revision search and you want to use data from an item query as criteria for your search, you can click the item query tab to copy the data and the item revision search fields are overwritten with the data in the item query.

To prevent your original query data from being overwritten, you can choose **Tools**→**Lock Search** at the top of the search pane.

Save searches


You can save searches to the **My Saved Searches** folder, or you can create a hierarchy of subfolders in which to save searches.

Note

If the **Search** pane is not open, you can access your saved searches from the **My Saved Searches** expand button » under **Quick Links** in the navigation pane.

Save search results to your My Saved Searches folder


1. Display the search pane with the search results you want to save.

2. Click **Save**  at the top of the **Search** pane.


The system displays the **Add Search to My Saved Searches** dialog box.

3. Type a unique name in the **Name** box, and then click **OK**.

Save search results to subfolder of My Saved Searches

1. Display the search pane with the search results you want to save.
2. Click **Save**  at the top of the **Search** pane.

The system displays the **Add Search to My Saved Searches** dialog box, letting you perform either of the following actions:

- In the **Created In** box, accept the indicated folder or select an existing folder from the list .
- Click **More Folders...**, then **New Folder...** and provide a new folder name in the **New Saved Search Folder** dialog box.



3. Click **OK**.

The system stores the search in the selected folder. The search appears in the **My Saved Searches** list.

My Saved Searches

Searches saved from the **Search** pane are listed in the **My Saved Searches** menu in the **Quick Links** section on the navigation pane.

Perform a saved search





1. Click the **Search** button  on the My Teamcenter toolbar.
2. Expand the **My Saved Searches** menu  in the **Quick Links** section on the navigation pane.
3. Choose a saved search.

The system displays the criteria in the **Seach** pane and the results in the **Folders** and **Data** panes.

Customize saved searches

1. Click the **My Saved Searches** text in the **Quick Links** section on the navigation pane.

The system displays the **Customize My Saved Searches** dialog box.

2. Select a saved search.
3. Use the buttons to delete , rename , or reorder   the saved searches.
4. Click **Apply** to accept your changes; **OK** to accept your changes and close the dialog box, or **Cancel** to discard changes and close the dialog box.

Working with searches

Search results are displayed in panes in the My Teamcenter window.

- Each time you execute a search, a new pane is created.
- You can right-click the pane label to display the **Explorer Popup Menu** to work with the objects found by the searches and to compare the results of one search to another or to the contents of your other lists.

Compare search results

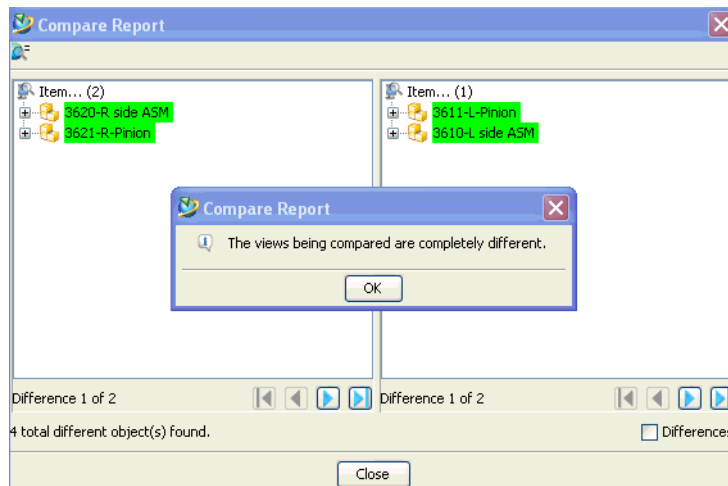
You can also compare the results of one search to those of another search.

1. Display the search that you want to compare.
2. Right-click the search pane label to display the **Explorer Popup Menu**.
3. Choose **Compare To** from the menu.

A submenu displays all open components to which the selected component can be compared.


4. Select a component from the **Compare To** submenu.

The **Compare Report** dialog box displays the contents of the selected components. Differences between the selected components are highlighted in green, identical objects have a transparent background, and the object currently selected is highlighted in purple.



5. Optionally, browse the differences using the navigational buttons at the lower-right corner of each pane. This can be useful when comparing components containing a large number of objects.
6. Optionally, select the **Differences** option to display only the differences between the components.
7. Click **Close** to exit the dialog box.

Refresh a search


You can refresh queries to update results by clicking the **Rerun** button  at the top of the **Search** pane.

Close search results

Search results that have not been saved to a folder are lost when you close the pane.

1. Right-click the search pane label to display **Explorer Popup Menu**.
2. Choose **Close** to close the current search or choose **Close All** to close all open searches.

Note

The **Close All** option closes all open components, including your **Home** folder. To restore the **Home** folder, click **Home**  .

Print search results

You can print a snapshot of the search results tree.

1. Right-click the search pane label for the search that you want to print.

The **Explorer Popup Menu** appears.

2. Choose **Print**.

The **Print** dialog box appears.

3. Optionally, modify the print options and properties.

4. Click **OK**.

The search results displayed in the tree are 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.

View and modify object properties

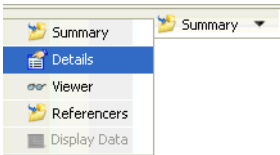
The properties associated with your data objects can be viewed in the **Details** pane, **Summary** pane, or in the **Properties** dialog box.

You can modify object properties, such as name, description, and unit of measure, using the **Summary** pane or the **Properties** dialog box.

View properties in the Details pane

To view properties in the **Details** pane:

- 1. In the tree pane, select the object or objects that you want to view.
- 2. Choose **Details** as the display pane.



The system displays the properties of the selected objects in the **Details** pane.

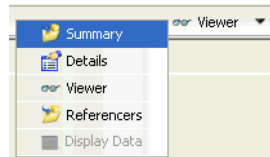
A screenshot of a software interface showing a table of properties. The table has columns: Object, Type, Relation, Ow..., Gro..., and Date Modified. The table contains three rows of data. The second row is highlighted in blue. Above the table, the text '3700-Rear ASM' is visible, and to the right, there is a 'Details' button and a dropdown arrow.

Object	Type	Relation	Ow...	Gro...	Date Modified
3700/A-Rear ASM	CCC_Item Re...	Revisions	Andr...	Body	15-May-2007 ...
3700	CCC_Item Ma...	Item Mast...	Andr...	Body	15-May-2007 ...
3700-assembly	assembly BO...	BOM Views	Andr...	Body	15-May-2007 ...

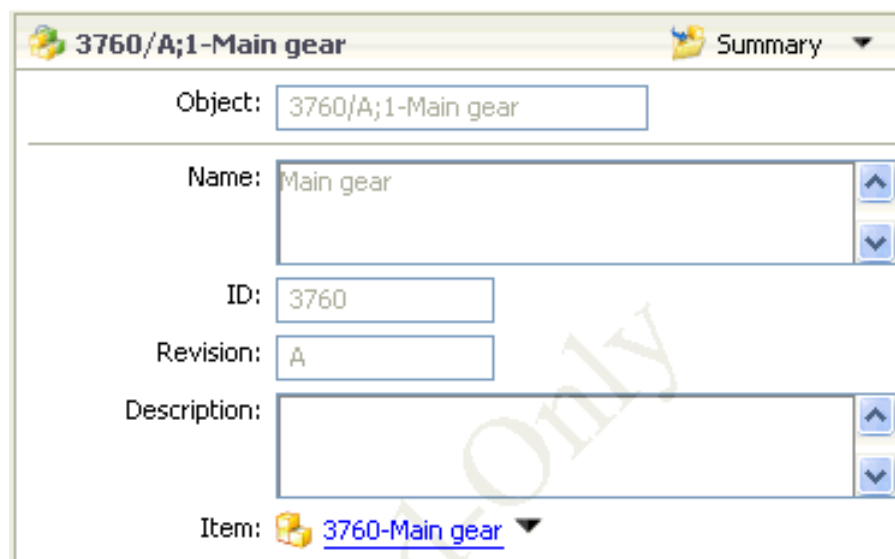
View properties in the Summary pane

To view properties in the **Summary** pane:

1. In the tree pane, select the object or objects that you want to view.
2. Choose **Summary** as the display pane.



The system displays the properties of the selected objects in the **Summary** pane.

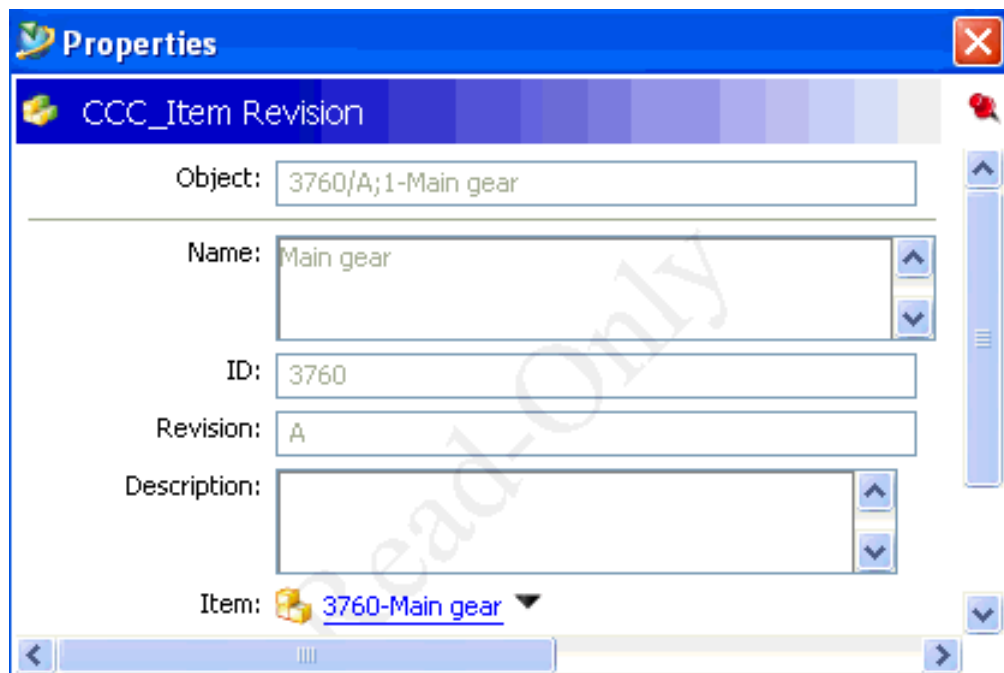
A screenshot of a software window titled '3760/A;1-Main gear'. The window has a 'Summary' tab selected. It displays the following fields: 'Object:' with the value '3760/A;1-Main gear', 'Name:' with the value 'Main gear' and up/down arrows, 'ID:' with the value '3760', 'Revision:' with the value 'A', 'Description:' with an empty text box and up/down arrows, and 'Item:' with a dropdown menu showing '3760-Main gear'.

View properties in the Properties dialog box

To view and modify object properties in the **Properties** dialog box:

1. In the tree pane or **Details** tab, select the object that you want to view.
2. Choose **View® Properties** or right-click the object and choose **Properties**.

The system displays the properties of the selected object in the **Properties** dialog box.



Modify object properties

The properties that can be modified vary from object to object, and you must have write access to make modifications.

Note

If any revision of an item has been released, the unit of measure cannot be modified.

Note

You cannot change ownership of the selected object using this method. Instead, use the **Edit® Change Ownership** menu command.

1. Select the object in the tree pane or the **Details** pane.
2. Choose **Summary** as the display pane, or right-click the object and choose **Properties**.
3. Click the **Checkout and Edit** button.
4. Modify the property values, as required.
5. Click **Save**, **Check In**, or **Cancel Check Out**.
 - Use the **Save** button to save the change and keep the object checked out for further modification.
 - Use the **Check In** button to save the change and check the object back into the database.
 - Use the **Cancel Check Out** button to revert any changes and cancel the checkout.

Customizing the Details pane data display

You can customize the display of information in the **Details** pane to best suit your needs. You can:

- Reposition columns.
- Insert columns.
- Apply sorting criteria.
- Remove columns.

Reposition columns

1. Click the header of the column that you want to move and hold the mouse button.
2. Drag the column to the desired position in the table and release the mouse button.

Note

Leaving the **Object** and **Type** columns in the first and second positions in the table allows you to easily identify the data displayed in the table.

The column is displayed in the new position.

Insert columns

1. Right-click a column header in the **Details** view and choose **Insert Columns**.

The **Change Columns** dialog box appears.

2. In the **Category and Type** box, expand the category list and select the type of object for which you want to display a property.
3. Select attributes from the **Available Columns** list and click the **Add** button.

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.

4. Set the display order of the columns using the **Up** and **Down** arrow buttons.
5. (Optional) Clear the **Use displayable name** box to display the attribute names rather than the displayable names in the column headers.
6. Click **Apply** to insert the columns into the current view.
7. Click **Cancel** to close the **Change Columns** dialog box.

Apply sorting criteria

1. Right-click one of the column headings and choose **Sort**.
2. In the **Sort** dialog box, select the primary property to be sorted on from the list in the **Sort By** area, and select whether to display the property values in ascending or descending order.
3. (Optional) Select a property in the **Then By** section of the dialog box and select whether to display the property values in ascending or descending order.

Note

You can use up to three properties as sort criteria.

Remove columns

1. Right-click the header of the column that you want to remove and choose **Remove this column**.
2. Click **Yes** to remove the column.

Using favorites to organize your data

If you have data that you access frequently, for example, parts, forms, or processes, you can track them by adding links to your **Favorites** list in the navigation pane.

Note


To display the data, click the link in the **Favorites** list. The file is opened in the application associated with the 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.

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 **Organize Favorites** dialog box, click the **Add to favorites** button




Add a subfolder to your Favorites list

1. Click the **Organize** link in **Favorites** section.
2. In the **Organize Favorites** dialog box, click the **Create New Folder** button  .
3. Type a name for the new folder and click **OK**.
4. Click **Close**.

Remove a link or folder from the Favorites list

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

Tip

You can rename favorites folders by selecting the folder and clicking the **Rename** button .

Where-referenced and where-used searches

In addition to locating your data, you can also perform where-used searches and where-referenced searches. These searches are available in the **Referencers** pane.

- Where-referenced searches determine where a part or component is referenced within the Teamcenter database. The database objects that include a reference to the item or item revision are found.
- Where-used searches enable you to identify all assemblies that contain, or use, a particular item or item revision. All assemblies that contain, or use, an item or item revision are found.

Using these searches, you can determine the effect that modifying an item or item revision have on assemblies and database objects. You can assess the impact of engineering changes to the product structure and determine if changes in one assembly affect other assemblies.

Perform a where-referenced search

1. Select the **Referencers** pane from the menu in the upper right of the **My Teamcenter** window.
2. Select an object in the data pane tree.
3. Select **Referenced** from the **Where** option list, located in the upper-left of the pane.
4. Select a depth level from the **Depth** list 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.

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.

5. Double-click the object in the **Referencers** pane to start 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 graphical where-used search

1. Select the **Referencers** tab.
2. Select an item or item revision in the tree.
3. Select **Used** from the **Where** option list, located in the upper-left of the pane.
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 **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 this rule is selected.

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 item or item revision in the **Referencers** pane to start the search.

If the item or item revision is not part of an assembly that matches the selected revision rule, Teamcenter 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 in the **Referencers** pane. The results can be used as a basis for another where used or where referenced search or they can be formatted and printed.

Printing information about your data

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

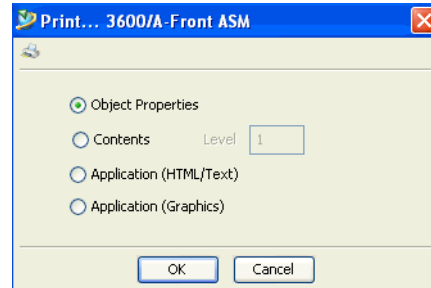
You can only print information related to a single selected object.

Print object properties

Use the **File® Print** command to report object properties.

1. Select the object and choose **File ® Print**.

The **Print** dialog box appears.



Object Properties is selected, by default.

2. Click **OK**.

The system displays the object properties report for the selected object.

If you specify a level greater than 1, the system displays the object report showing the specified level of descendant objects.

3. Select the output type, **HTML** or **Text**.
4. Depending on the output you choose, you can select the applicable icon to print to a web browser or printer, or save the report to a file.
5. Click **Close** to close the **Print** dialog box.

Print the active Referencers pane

The application options on the **Print** dialog box enable you to print the active table, tree display, or **Referencers** pane as it appears in your Teamcenter window.

1. Click in the **Referencers** pane to activate the window.
2. Choose **File® Print**.
3. Choose either of the application options, **Application (HTML/Text)** or **Application (Graphics)**, depending on the desired output display.
4. Choose **OK**.

The Where Reference report appears showing the contents of the active **Referencers** pane.

Note

The report title is **Where Reference** irrespective of whether the pane shows the results of a where used or a where referenced search.

5. Select the output type and media.
6. Click **Close** to close the **Print** window.

Generating reports

Use **Tools® Reports** to access the report options and launch the report generation wizard.



The report generation wizard in My Teamcenter guides you through the steps required to generate a report:

- Select a design format.
- Specify the information you want to extract from the database.
- Choose an output format.

Some reports are available as part of the standard Teamcenter installation. In addition to the standard report designs, Teamcenter administrators can create custom reports.

Activities

Complete the following activities to reinforce the material taught in this lesson.

1. Perform quick and advanced searches.
2. Rename and save a search.
3. Customize the Details pane data display.
4. Add items to a favorites folder.

In this activity, create a favorites folder and add items to it.

5. Perform where-used and where referenced searches.
6. Print information about your data.

In this activity, print object contents.

Review questions

1. Why is a number added to the name for the search results window?

Select all that apply.

- Because multiple search windows can be open simultaneously.
- So that you can differentiate between search results.
- So the name on the search results window matches the name of the search form.

2. In which areas can you modify properties?

Select all that apply.

- Details pane
- Properties dialog box
- Summary pane
- Viewer pane

3. What can you track in your Favorites list?

Select one answer.

- Data
- Worklist
- Saved searches
- Web sites

4. Where-referenced searches are used to:

Select one answer.

- Find objects in the Teamcenter database that contain a reference to the selected part or component.
- Find all assemblies that contain, or use, the selected item or item revision.
- List the child parts of the assembly.
- Show the saved queries that find the part.

5. Where-used searches are used to:

Choose one answer.

- Find objects in the Teamcenter database that contain a reference to the selected part or component.
- Find all assemblies that contain, or use, the selected item or item revision.
- List the child parts of the assembly.
- Show the saved queries that find the part.

6. The report generation wizard in My Teamcenter guides you through the steps required to generate a report.

- True
- False

Summary

Topics learned in this lesson:

1. Items and item types.
2. Item and item revision relationships.
3. Search the database.
4. View object properties.
5. Create favorites.
6. Perform where-used and where-referenced searches.
7. Print information about your data.

Lesson

5 *Protect and access data*

Purpose

The purpose of this lesson is to learn how data is secured and access is controlled when working in a collaborative product data management environment.

Objectives

After you complete this lesson, you should be able to:

- Identify your group and role.
- Check in and check out data.
- View data access settings.

Help topics

Additional information for this lesson can be found in:

- *Getting Started with Teamcenter 2007*
- *My Teamcenter Guide*

User groups and roles

Your account has been set up by your system administrator. The account includes the following:

- **Person Name**

Your actual name and e-mail address.

- **User ID**

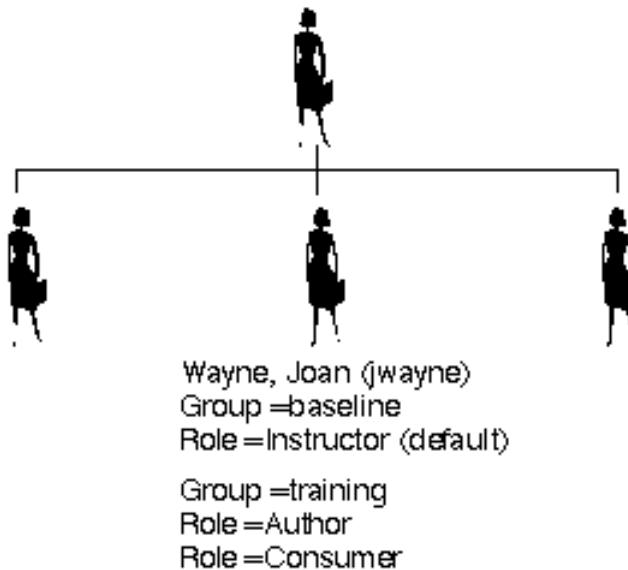
Your Teamcenter account name.

Your system administrator has also set up the necessary groups in the software.

- A user may be in multiple groups.
- One group is designated as your default group.
- Inside a group, you (as a user) can perform multiple roles.

The user name, group, and role for the logged-on user appears in the My Teamcenter window, as shown in the following example:

(Hope, Roberta (rho)) - body/Design Engineer



In this example, the person name is **Joan Wayne**. The user name for this person is **jwayne**.

Joan is in two groups, **baseline** and **training**.

- Inside the baseline group, Joan performs the role **Instructor**.
- Inside the training group, Joan performs the roles **Author** and **Consumer**.

Why have user groups and roles?

There are several reasons why using different groups and roles is beneficial:

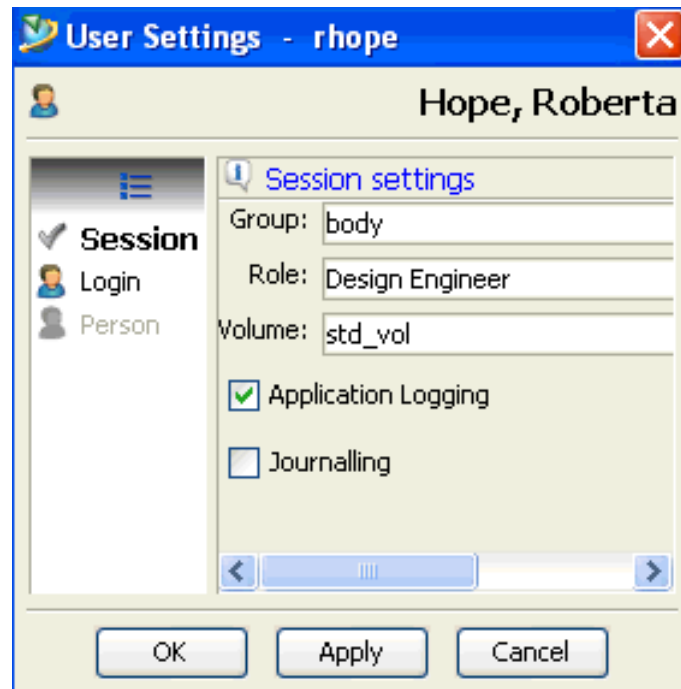
- Manage data access privileges (read, write, and delete) per group and role.
- Define and control review/approve processes based on group and role.
- Organize data according to which group created it.

Change your group and role setting

Typically you work in your default group and role and the data you create is owned by that group. During a logon session, you may need to change your group or role, so you can find and access data owned by another group.

1. Choose **Edit® User Setting**.

The **User Settings** dialog box appears.



2. If necessary, click **Session**.
3. Select the desired group and role setting from the respective menus.

Note

Only the groups of which you are a member and your possible roles are available for selection.

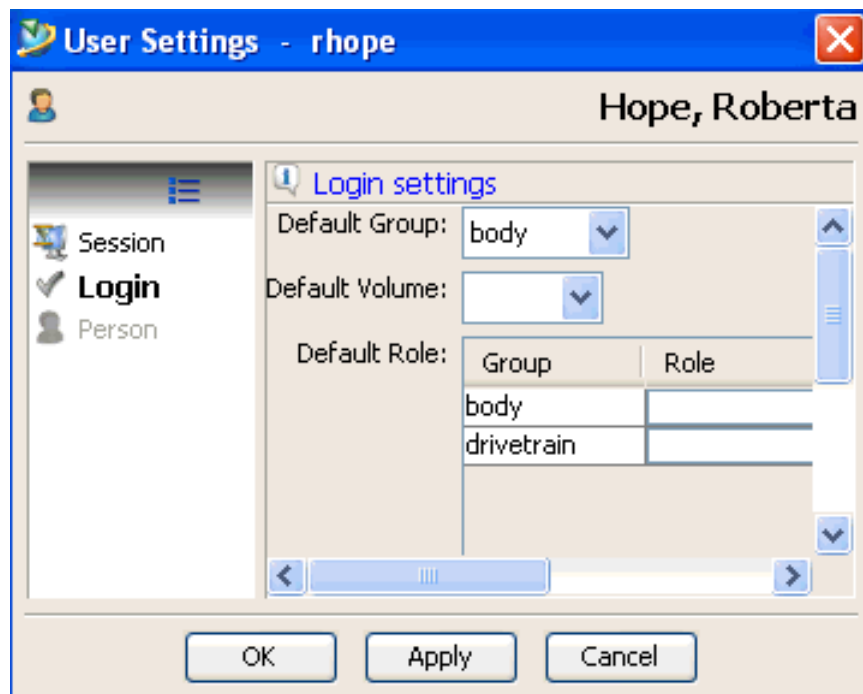
4. Click **OK**.

Set your default group and role

You can set the group and role you typically work in as the default setting. This is used by the system at logon.

1. Choose **Edit® User Setting**.
2. Click **Logon**.

The **Logon settings** dialog box appears.



3. Set your default group and role.

- In the **Default Group** box, select the default group for logon.

Note

Only the groups of which you are a member are available for selection.

- In the **Default Role** section of the dialog box, select the default role for the group.

Note

If desired, you can select a default role for each of the groups you are a member.

4. Click **OK**.

Note

You can also change your logon password from the **Login settings** dialog box by clicking the **Change Password** button.

Data checkin and checkout

The integrity of your data is protected by the managed checkin/checkout features that allow you to lock out other users from work that is in process, allowing them to view, but not modify, the information.

- The checkout feature locks an object in the database so that only you can modify it.
- The checkin feature releases the lock, allowing other users to access the object.
- The **Check-Out** and **Check-In** commands are available on the **Tools** menu and as buttons on the **Summary** pane and **Properties** dialog box.
 - Use the **Tools** menu options to reserve the object for modification.
 - Use the buttons on the **Summary** pane and the **Properties** dialog box when you modify object properties.
- Only your administrator can circumvent the security that the checkout function provides.

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 use the **Check-In/Out** commands on the **Tools** menu to check out an object, you explicitly check the object out of the database. Explicit checkout ensures exclusive modification access to an object.

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



Teamcenter automatically creates an implicit checkout to ensure that two processes are not allowed to simultaneously update a 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 in to the database.
- You cannot 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.

Check an object out of the database

1. Select objects in the My Teamcenter tree or a BOM line in Product Structure Editor.
2. Choose **Tools**→**Check-In/Out**→**Check-Out....**
The system displays the **Reserve** 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. Optionally, check out component objects or attachments along with the selected objects.
5. Click **Yes** (on the **Reserve** dialog box) to check out the selected objects.

Note

The  symbol in the right margin of the dialog box (opposite the object) indicates that the check-out process was successfully completed. If an error occurs during the process, the error  symbol is displayed for that object. You can double-click the button to display details about the error.

Check an object in to the database

1. Select one or more objects that are currently checked out or select a checked-out BOM line in PSE.



The **Check-In** option unlocks objects in the database, including assemblies in PSE, that have been previously checked out.

2. Choose **Tools**→**Check-In/Out**→**Check-In....**

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

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. Optionally, check in component objects or attachments along with the selected objects.
5. Click **Yes** (on the **Unreserve** dialog box) to check in the selected objects.

Note


The  symbol in the right margin of the dialog box (opposite the object) indicates that the check-in process was successfully completed. If an error occurs during the process, the error  symbol is displayed for that object. You can double-click the 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. Click **LOV**  to search for a user.

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

4. Select a user name from the list, and click **OK**.

The system closes the dialog box, and the user is designated as the **New User** to whom checkout will be transferred.

5. Click **Yes** to transfer checkout.

Canceling a checkout request

You can select a dataset that is checked out and right-click to choose the **Cancel Check-Out** command.

The system displays the **Cancel Check-Out** confirmation dialog box.

- Click **Yes** to cancel the checkout.
- Click **No** to stop the cancellation operation.

Note

The **Cancel Check-Out** command cancels only explicit dataset checkout.

If the dataset has not been modified, the checkout is canceled immediately.

If the dataset has been modified, a **Cancel Check-Out** information box appears showing the following message: **Modifications made to the dataset may be lost.**

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
- Name 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

Note

You can also determine to which user an object is currently checked out by right-clicking the object and choosing **Properties**, then clicking the **Reservation** link.

2. Click **Close** to exit the **Check-Out History** dialog box.

Data access 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 access, modification, and deletion.

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.

View access privileges based on your group and role

1. Select an object in the tree or **Details** table.

2. Click the **Access** button  on the toolbar.

The system displays the **Access** dialog box, showing the privileges for the user and group under which you are logged on.



3. To view privileges assigned to your other roles and groups, select the role or group from the list.

The system updates the **Access** table to reflect the privileges of the selected group or role.

4. Click the **Display extra protection** button to display additional information about the privileges.

The system displays the **Extra Protection** dialog box listing the privileges, along with the verdict (grant or deny), named ACL, accessor, and rule path information.

View access privileges assigned to an object

1. Select an object in the tree and click the **Access** button  on the toolbar or right-click the object and choose **Access**.
2. Click the **Access** button  to display the **ACL Control List** box.
3. When you finish viewing the ACLs, click **Close**.

Activities

Complete the following activities to reinforce the material taught in this lesson.

1. Change your group setting.

In this activity, change your group setting and observe the current setting display.

2. Use implicit and explicit checkout.

In this activity, use implicit and explicit checkout to manage access to your data.

3. View checkout history of an object.
4. View access privileges for an object.

Review questions

1. What is the purpose for using different groups and roles?

Select all that apply.

- Define and control the review/approve processes.
- Manage data access privileges.
- Organize data.
- All of the above.

2. After you log in, you cannot change your user group and role settings.

- True
- False

3. You can set the group and role you typically work in as the default setting.

- True
- False

4. What action can other users take on an item checked out by another user?

Select all that apply.

- Modify the item properties.
- Check out the item.
- View the item.
- None of the above.

5. What user action initiates an implicit checkout?

Select one answer.

- Log out of Teamcenter.
- Open a dataset for modification and an automatic check out occurs.
- Use the Check-In/Out commands on the Tools menu to check out an object.
- View item properties.

6. What are the two types of data protection?

Select all that apply.

- Group-based protection
- Item-based protection
- Object-based protection
- Rules-based protection

Summary

Topics learned in this lesson:

1. Data access based on group and role.
2. Protecting data using check in and check out.
3. Viewing data access settings.

Lesson

6 *Course Summary*

Course objectives

The overall objective of this course was to become familiar with the rich client user interface and learn the basics of using the Teamcenter software.

- To understand the concept of collaborative product data management (cPDM).
- To become familiar with the rich client and thin client user interfaces.
- To use the rich client user interface to perform basic user tasks.
- To use various navigation methods to locate, view, and report on product data.
- To create Teamcenter items and populate the items with master data.
- To learn how data is secured and access is controlled in a collaborative data management environment.

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Appendix

A Classroom system information

Using Teamcenter class data sheet

Values in this table should be blank and are provided for students to document their classroom setup. Optionally, instructors may hand out a preprinted data sheet.

Data Item	Data Value	Domain
OS user ID		Local Computer
OS password		
Teamcenter user ID		Virtual Image
Teamcenter password		
Host name		Virtual Image
Root directory		Virtual Image
Volume directory		Virtual Image
Rich client		Virtual Image
Thin client		Virtual Image
Templates directory		Virtual Image

Appendix

B Course agenda

Introduction to Teamcenter course agenda

Daily schedule based on 9:00 a.m. to 5:00 p.m. schedule.

Day 1	Morning	
	Introduction	
	Course overview	
	Lesson 1	Introduction to Teamcenter
	Lesson 2	Getting Started with Teamcenter
	Lesson 3	Working in Teamcenter
	Afternoon	
	Lesson 4	Find and view Teamcenter data
	Lesson 5	Data access and protection

Appendix

C Student profile

Teamcenter student profile

Name _____ Date _____

Employer _____

U.S. citizen? Yes / No

When is your planned departure time? _____ am/pm

Please answer the following questions as honestly as you can. We strive to provide training that meets your needs. If you have any additional comments, please write them on the back of this form.

1. Job title: _____

2. Current responsibilities: _____

3. How long have you held these responsibilities? Years _____

4. How long have you been working with PDM and CAD/CAM systems?
Years _____

5. What other PDM systems are you familiar with?

6. What other CAD/CAM systems are you familiar with?

7. Are you currently using Teamcenter? Yes / No Product _____
Version _____ Hours per week? _____

8. Are you currently using NX? Yes / No Version _____ Hours per week? _____

9. What are the primary uses of Teamcenter at your site? _____

10. What do you model in your NX part files (castings, assemblies, and so on)?

11. List other completed PDM or CAD/CAM courses and the provider including self-paced/computer-based training:

Course	Provider

12. Check the box that best describes your current skill level in the various Teamcenter and NX disciplines listed in the following table.

	None	Novice	Intermediate	Advanced	Future
NX user					
Teamcenter Integrations for NX					
Teamcenter user					
Teamcenter admin					
Teamcenter customizer (BM)					

Additional comments:

Appendix

D Course evaluation

Course Evaluation



You may instead complete this evaluation online at:

<http://training.ugs.com/eval>

The online evaluation will require you to enter a "session ID" for this class. This should be provided by your instructor and noted here: Session ID _____

Course Name _____ Course # _____
 Dates _____ thru _____

Please share your opinion in all of the following sections with a "check" in the appropriate box:

Instructor: _____ ☒

If there were 2 instructors, please evaluate the 2nd instructor with "X's"

Instructor: _____ ☒

	STRONGLY DISAGREE	DISAGREE	SOMEWHAT DISAGREE	SOMEWHAT AGREE	AGREE	STRONGLY AGREE
1. ...clearly explained the course objectives.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. ...was knowledgeable about the subject.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. ...answered my questions appropriately.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. ... encouraged questions in class.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. ...was well spoken and a good communicator.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. ...was well prepared to deliver the course.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. ...made good use of the training time.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. ...conducted themselves professionally.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. ...used examples relevant to the course and audience.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. ...provided enough time to complete the exercises.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. ...used review and summary to emphasize important information.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. ...did all they could to help the class meet the course objectives.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments on overall impression of instructor(s):

Overall impression of instructor(s).....Poor ☐ ☐ ☐ ☐ ☐ ☐ Excellent

Suggestions for improvement of course delivery: _____

What you liked best about the course delivery: _____

Class Logistics:

1. The training facilities were comfortable, clean, and provided a good learning environment.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The computer equipment was reliable.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The software performed properly.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The overhead projection unit was clear and working properly.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The registration and confirmation process was efficient.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SEE BACK

Course Evaluation

Course Name _____ Course # _____
 Dates _____ thru _____

Please share your opinion for all of the following sections with a "check" in the appropriate box:

Material:

- | | STRONGLY
DISAGREE | DISAGREE | SOMEWHAT
DISAGREE | SOMEWHAT
AGREE | AGREE | STRONGLY
AGREE |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. The training material supported the course and lesson objectives..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. The training material contained all topics needed to complete the projects..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. The training material provided clear and descriptive directions..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. The training material was easy to read and understand..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. The course flowed in a logical and meaningful manner..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. How appropriate was the length of the course relative to the material?..... <input type="checkbox"/> Too short <input type="checkbox"/> Too long <input type="checkbox"/> Just right | | | | | | |

Comments on Course and Material: _____

Overall impression of course.....Poor ☐ ☐ ☐ ☐ ☐ ☐ Excellent

Hotels: (We try to leverage this information to better accommodate our customers)

1. Name of the hotel _____ Best hotel I've stayed at... ☐ ☐ ☐ ☐ ☐ ☐
2. Was this hotel recommended during your registration process?.....☐ YES ☐ NO
3. Problem? (brief description) _____

Student:

- | | | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. I met the prerequisites for the class (I had the skills I needed)..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. My objectives were consistent with the course objectives..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. I will be able to use the skills I have learned on my job..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. My expectations for this course were met..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. I am confident that with practice I will become proficient..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Student Name (optional): _____ Location/room _____

☐ Please "check" this box if you would like your comments featured in our training publications.

☐ Please "check" this box if you would like to receive more information on our other courses and services.

*Thank you for your business.
 We hope to continue to provide your training and personal development for the future!*

Rev-2/1/06-btr