

# *Schedule Manager*

**Student Guide**

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# *Course overview*

This course describes the process and procedures for creating schedules within the Schedule Manager application, including using templates to create new schedules and creating phase gate schedules.

## **Course objectives**

- How to create schedules.
- How to create phase gate schedules.
- How to use schedule templates.

## **Key benefits**

In this course you will learn the process to create and use schedules.

Key benefits for completing the course objectives include:

- Use Schedule Manager to create schedules.
- Use Schedule Manager to integrate workflow with project planning.
- Use Schedule Manager to integrate user output (deliverables) to project planning.
- Use Schedule Manager to create similar project plans using templates.

## **Prerequisites**

Prerequisites for this course include an intermediate knowledge of PDM and Teamcenter. The specific functional prerequisites are:

- Knowledge of workflows, including how to use a workflow, how to create a workflow, and how to sign off a workflow.
- Knowledge of the Organization application, including how to create users, groups, roles, and disciplines.
- Knowledge of the My Teamcenter application including how to create folders, how to cut and paste, and how to open and log on to applications.

## Audience

The audience for this course includes:

| User profile              | Job responsibility  |
|---------------------------|---|
| Power user                | Mentors other users and administers data with additional access permissions   |
| Application administrator | Administers users, administers security, defines workflows, and configures the data model   |
| Project administrator     | Create and manage projects  |
| Team leader               | Assign work to people and manage projects   |
| Senior leader             | Executives and leaders who track projects, track resource planning, and use the information to make project execution based decisions |

## Learning tracks

Learning tracks for Teamcenter are found on the Siemens PLM Software training Web site:

<http://training.ugs.com/tracks/index.shtml>

## Training materials provided

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

## Accessing Teamcenter online help

The *Teamcenter Help Library* covers functionality from end-user tasks to customization instructions.

To access the *Teamcenter 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 the thin client help, or choose **Help® General Collection** to access the full library.

To 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.





## Lesson

# *1 Introduction to Schedule Manager*

### **Purpose**

The purpose of this lesson is to introduce you to the basic procedures for using Schedule Manager functionality.

### **Objectives**

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

- Create a schedule.
- Create tasks and milestones for a schedule.
- Add members to a schedule.
- Create dependencies between tasks and milestones.
- Create constraints between tasks and milestones.

### **Help topics**

Additional information for this lesson can be found in:

- [\*Schedule Manager Guide\*](#)

## **Introduction to Schedule Manager**

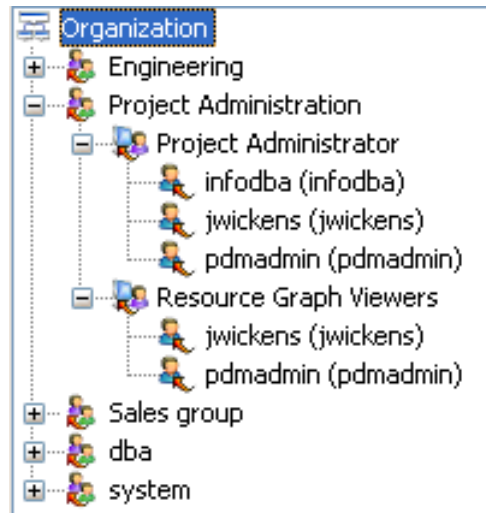
The basic process for creating and using a new schedule is:

1. Assign user permissions to create a schedule.
2. Create a schedule.
3. Create a task or milestone. Repeat this step as needed.
4. Link tasks and milestones.
5. Assign members to the schedule.
6. Assign members to a task.
7. Assign workflow to a task.
8. Manage the schedule, modify properties, and run reports.





## Assign user permissions to create a schedule



As a best practice, it is suggested that people creating schedules be assigned to the **Project Administrator** role in the **Project Administration** group.

### Note

Any user has permissions to create a schedule in the base product. Implementing the best practice simplifies some issues downstream.

### Note

Assigning users to groups and roles requires **dba/DBA** group/role access.



## Creating a schedule

Before creating tasks, milestones, deliverables, or assigning responsibilities to people, you must first create a schedule.

The following guidelines will help a user create an effective schedule:

- The user creating the schedule must be a **Project Administrator** within the organization to create the schedule.
- Other users cannot view or use a schedule until it is made public.
- Schedules are private by default, meaning only their creator can view them.
- New schedules are placed in the **Newstuff** folder within My Teamcenter.





## Create a schedule

1. Choose **File**→**New**→**Schedule**.
2. Enter a **Schedule Name**. This is a required field.
3. Type a **Customer Name** and **Customer Number**. These are optional fields.
4. If you are copying a template to create the new schedule, select **Use an existing schedule template for this new schedule**.

### Note

There are additional optional fields.

- Enter a **Schedule Description**.
- To create a template, share the schedule, or perform similar actions, use **Schedule Options**.
- To input the **Start Date** and **End Date** while creating a schedule, use **Schedule Date**.

5. Click **OK**.



## **Create tasks**

Tasks are used to define steps of a larger process. Tasks have the following properties:

- **Task Name**
- **Task Type**
- **Start Date**
- **End Date**
- **Task Status**
- **Task Assignments**



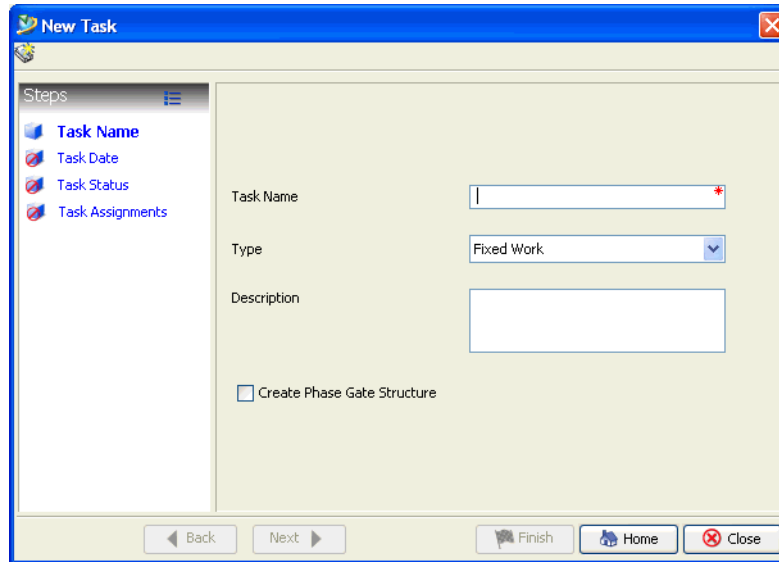
### **Required task attributes**

**Task Name** is the only required attribute which needs to be filled in. All others have a default value that allow task creation.

The required task attributes are:

- **Task Name**
- **Task Type**
- **Task Status**
- **Task Date**



*Create task from the menu*The image shows a 'New Task' dialog box with a blue title bar. On the left, a 'Steps' pane lists 'Task Name' (selected), 'Task Date', 'Task Status', and 'Task Assignments'. The main area contains a 'Task Name' text field, a 'Type' dropdown menu set to 'Fixed Work', a 'Description' text area, and an unchecked checkbox for 'Create Phase Gate Structure'. At the bottom are 'Back', 'Next', 'Finish', 'Home', and 'Close' buttons.

Tasks can be created from the menu. This technique allows appropriate information to be included in task while creating the task.

1. Choose **File**→**New**→**Task**.
2. Fill in the **New Task** dialog box.
3. Click **OK**.
4. Repeat these steps as needed.





Complete the create task dialog

Use the following procedure to fill in the **New Task** dialog box.

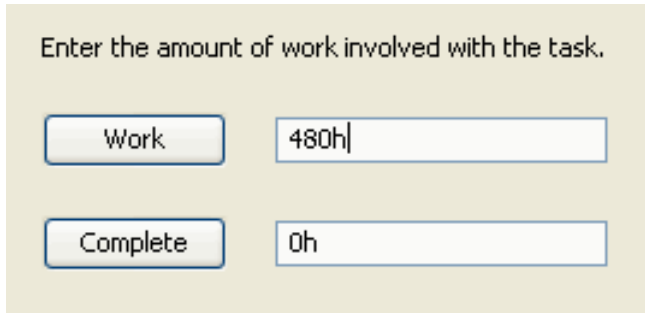
1. Type a **Task Name** in the dialog box.

- **Task Name** is a required field.
  - Select a task **Type** to drive effort-driven scheduling.
    - **Type** is a required field. This drives effort based scheduling.
    - The default type is **Fixed Work**.
    - Use **Fixed Work** to keep the hours constant if duration or resource to task is modified.
    - Use **Fixed Duration** to keep the length of time constant if the work or resource is modified.
    - Use **Fixed Resource** to keep the resource constant if duration or work is modified.
  - Type a **Description** in the dialog box, which is an optional field.
2. Complete the **Task Date** step.

- The date a task starts is the **Start Date**.

- The date a task ends is the **Due Date**.
  - **Due Date** must be on or after **Start Date**.
  - **Due Date** defaults to be same as **Start Date**.

3. Complete the **Task Status** step.



Enter the amount of work involved with the task.

|          |      |
|----------|------|
| Work     | 480h |
| Complete | 0h   |

**Task Status** is used to help define the duration for the task. **Task Status** has two properties:

- The length of time, in hours, to complete a task is called **Work**.
- The length of time, in hours, already spent on the task is called **Complete**.
- If no units are specified, system defaults to hours. There are other choices:
  - Use **h** for hours.
  - Use **d** for days.
  - Use **w** for weeks.
  - Click the **Work** button for options that include minutes, hours, days, weeks, months, and years.

4. Complete the **Task Assignments** step.

Assign Member to Task: [CCC Product Improvement Process]

| Member/Disci... | Assigned                            | Resource Load | R |
|-----------------|-------------------------------------|---------------|---|
| Members         | <input type="checkbox"/>            |               |   |
| jwickens (jv)   | <input type="checkbox"/>            |               |   |
| Sales2 (sale)   | <input checked="" type="checkbox"/> | 100.0%        |   |
| Sales3 (sale)   | <input checked="" type="checkbox"/> | 100.0%        |   |
| Salesmgr1       | <input type="checkbox"/>            |               |   |
| sales1 (sale)   | <input checked="" type="checkbox"/> | 100.0%        |   |

- Use this function to add resources to this task.
- The resources must already be assigned to schedule through schedule membership.
- Groups and roles cannot be assigned to a task. They appear as a method of finding a user.
- Users and disciplines are the only two resources that can be assigned to a task.



### **Create a milestone**

Milestones are used in a schedule to identify a key date or a key deliverable.

A milestone has two key properties:

- **Name**
- **Date**

*Key points for creating a milestone*

To create a milestone:

- A schedule must already be created.
- You must to be logged in as a user with write privilege to the schedule.
- Choose **File→New→Milestone**.

The milestone appears as a diamond on the schedule.

- A milestone has zero hours as its work estimate.



## Tasks constraints

*Constrain* is the term used to define making sure one task starts or ends at a time controlled by a person managing the project. Constraining tasks and milestones will account for dependencies already set within the schedule. Example dependencies include:

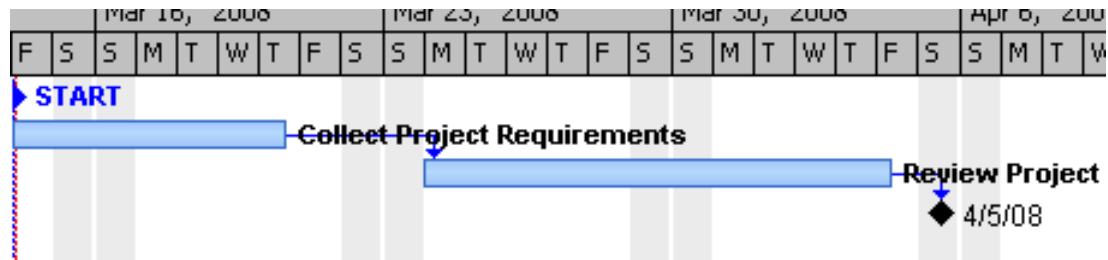
- *Predecessors* refers to a link requiring some tasks or milestones come before the selected task or milestone.
- *Successors* refers to a link requiring some tasks or milestones come after the selected task or milestone.

Constraints can be added once predecessors and successors are established.

- To move the schedule item to furthest date in future as possible, select **As late as possible**.
- To move the schedule item to earliest date in future as possible, select **As soon as possible**.
- To keep the schedule item at its current position on schedule, select **Fixed** (other schedule objects may adjust to this if constrained effectively).
- To remove any constraint already applied to the schedule item, select **No Constraint**.





*Create task links*

Task links are dependencies between tasks. One task or milestone can drive the start of another task or milestone.

1. Select the task you want to link.
2. Identify the number of the task you want to link to.
  - If the task identified comes after the selected task, you must define a predecessor.
  - If the task identified comes before the selected task, you must define a successor.
3. In the appropriate successor or predecessor column, type the number of the task to link to.

|   | Name                         | Predeces... | Successors |
|---|------------------------------|-------------|------------|
|   | CCC Development Project      |             |            |
| 1 | Collect Project Requirements |             | 2          |
| 2 | Review Project Requirements  | 1           |            |
| 3 | Milestone                    |             |            |

- After typing number, press Enter. This updates the linked task.
- If 1 is a predecessor of 2, 2 must also be a successor of 1. Both columns update after pressing Enter.
- There is an arrow between the tasks in the Gantt chart to display the link.
- If a task is linked to multiple tasks, the numbers of the tasks can be separated by a comma.
  - For example, if 1 and 2 must precede 3, go to the predecessors column for 3 and enter **1,2**.
  - For example if 2 and 3 must succeed 1, go to the successors column for 1 and enter **2,3**.



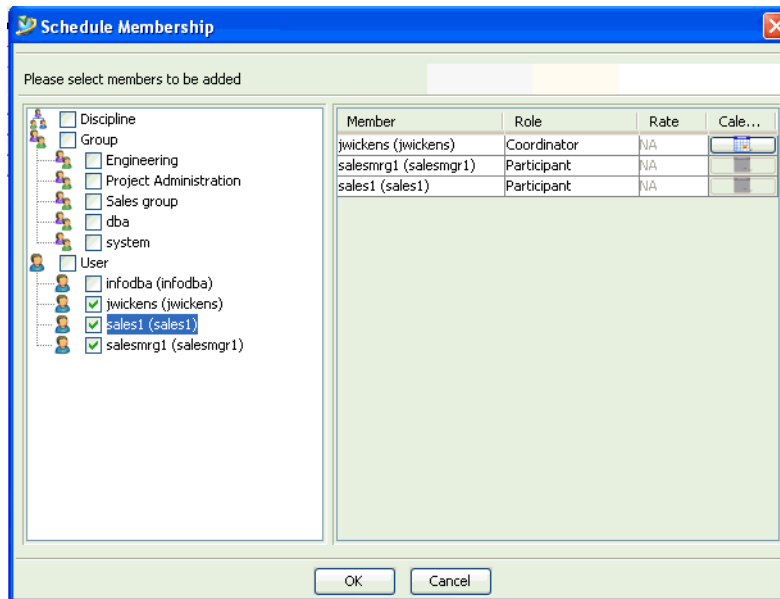
## **Task assignments**

Task assignments are used to define the users, groups, roles, or disciplines used to complete a specific task. A task assignment has the following requirements:

- The schedule must have the users defined within its schedule membership.
- The task must be created before an assignment can be made.



## Schedule membership

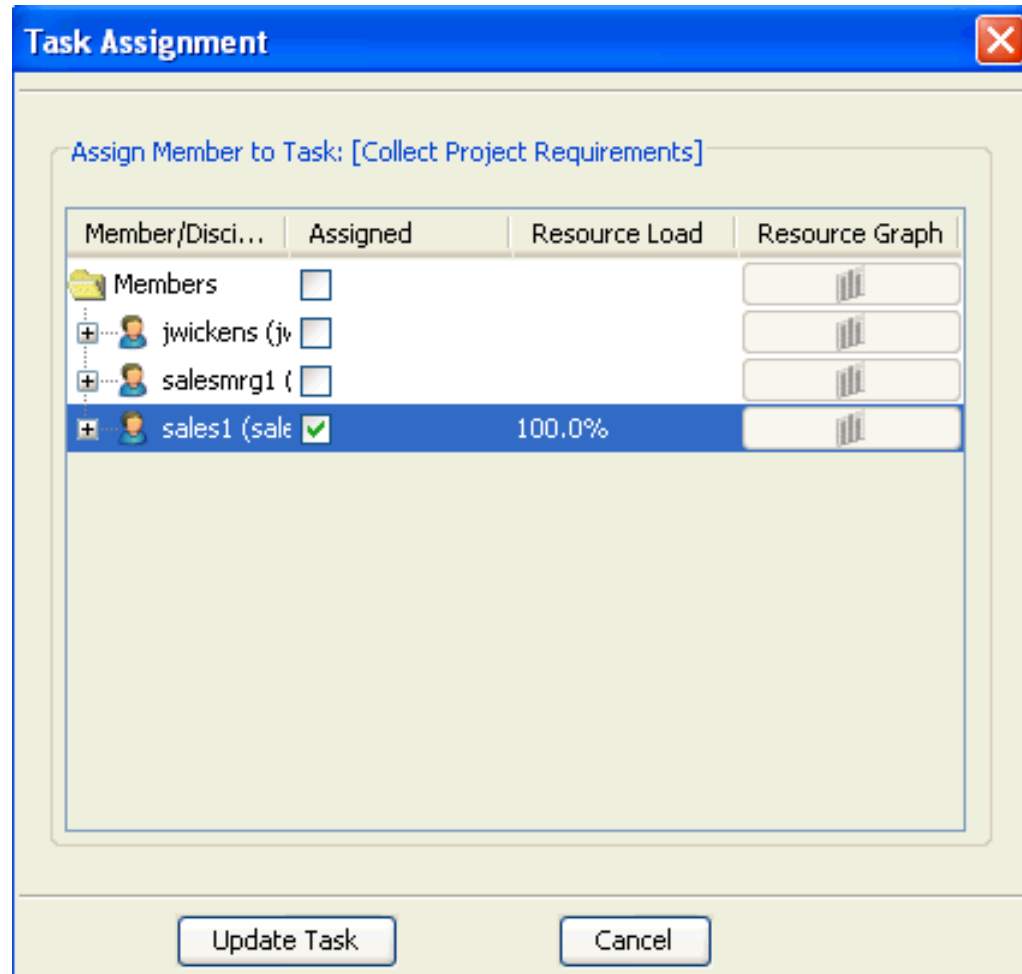


Choose **Team**→**Schedule Membership** to define which users, groups, roles, and disciplines can be assigned within a schedule. A user or discipline is ultimately the object assigned to a given task. Schedule membership assigns users to participate within the schedule. It does not identify the user of any given task. Some key considerations:

- Select a user to allow that user to perform tasks within this schedule.
- Select a group to assign all roles within a group to a given schedule.
- Select a role to assign any user within that role to a given schedule.
- Select a discipline to assign the discipline or user within discipline to a given schedule.

**Note**

Use the **Assignments**→**Assign To Task** menu command to assign the user, user within a group, or user within a role to a specific task.







## Activities

In the *Introduction to Schedule Manager* section, do the following activities:

- Create a schedule.
- Create tasks and milestones.
- Link tasks and milestones.
- Create task assignments.
- Import a workflow.
- Create workflow tasks.



## Review questions

1. What are the requirements to create a schedule?

Select all that apply.

- Member of **project administrator/project administration** group
- Member of **dba/DBA** group
- Anyone can create a schedule

2. What are the requirements to create a task?

Select all that apply.

- Schedule created first
- Schedule membership updated
- Calendar updated
- Task assignments created first

3. What are the requirements to create a task assignment for another user?

- Schedule created first
- Schedule membership updated
- Calendar updated
- Task created first
- Task links created first

4. What are the requirements to link two tasks together?

- Tasks created first
- Task assignments created first
- Task dates cannot be the same
- Task durations must be different



## **Summary**

The following topics were taught in this lesson:

- The process to create a schedule.
- The procedure to add tasks and milestones to the schedule.
- The procedure to add constraints to the tasks.
- The procedure to add members to a schedule.
- The procedure to add schedule members to task assignments.



## Lesson

# 2 *Using Schedule Manager*

### **Purpose**

The purpose of this lesson is to cover the details for each step of the Schedule Manager process.

### **Objectives**

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

- Identify which steps to create a schedule are required and which are optional.
- Demonstrate efficient ways to create schedules.
- Demonstrate a detailed knowledge of effort-driven scheduling.
- Demonstrate how to group tasks together.
- Add members to the schedule and create task assignments.
- Assign deliverables to tasks.
- Assign workflows to tasks.

### **Help topics**

Additional information for this lesson can be found in:

- [\*Schedule Manager Guide\*](#)





## Review the Schedule Manager process

1. Update calendar information within the Organization application.
2. Update permissions within the Organization application.
3. Create a schedule.
4. Assign schedule membership.
5. Update schedule specific calendars.
6. Create a task or milestone. Repeat this step as needed.
7. Link tasks and milestones.
8. Assign members to a task.
9. Assign workflow to a task.
10. Manage the schedule.



## Calendars

Each schedule needs a calendar. There are four types of calendars:

- Base calendar
  - Default calendar is the base calendar.
  - Establishes hours in work day, work week, and holidays.
  - Modified by an administrator for the site.
- User calendar
  - Sets holidays and vacation time for a given user.
  - Created by an administrator in the My Teamcenter or Organization application.
- Schedule calendar
  - Allows the project manager to set days off, holidays, and work week for a given schedule.
  - Created in the Schedule Manager application.
- Schedule user calendar
  - Sets days off, holidays, and hours in a day for a given user or discipline.
  - Created in the Schedule Manager application.

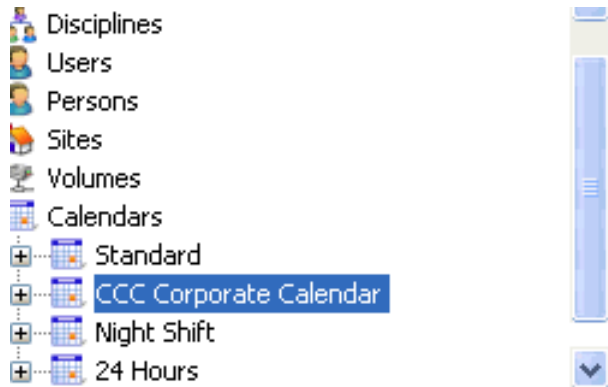


### **Set the time zone**

To set the time zone for a calendar, choose **Edit→options→index→Schedule Manager→set time zone**.



### Base calendars



Base calendars are provided with a base installation of Teamcenter. When other types of calendars are created, they copy the base calendar to some degree or another.

- Use the Organization application to modify the base calendar for the system.
- A person must be an administrator (**dba/DBA** group/role) to modify the base calendar.





## User calendars

User calendars allow for changes to the base calendar for a specific user. This can be helpful to specify vacation, overtime, or other issues that are applicable for a given user, regardless of how many projects they are assigned to. Whenever a user is assigned to a task, the user calendar is used to control work resource.

- User calendars are created in the Organization application.
- You must be an administrator (**dba/DBA** group/role) to create a user calendar.

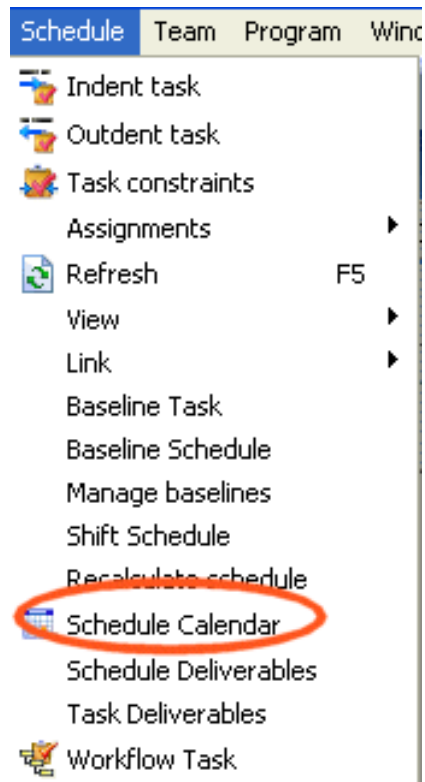


*Create a user calendar*

1. Select the user object.
2. Right-click and choose **Calendar**→**Create Calendar**.
3. Select **Yes** in the dialog window.
4. Edit the calendar as needed.
5. Click **OK**.



### Schedule calendars



Choose **Schedule**→**Schedule Calendar** in Schedule Manager. The purpose of the schedule calendar is to modify dates and times specific to the project. This could account for mandatory overtime (for all workers), assembly line downtime for a specific project, or similar events that impact the project specifically.



*Create a schedule calendar*

1. Verify the schedule is not published.

**Note**

If the schedule is already created, the **Public** attribute should be set to **False** under schedule properties.

2. Choose **Schedule**→**Schedule Calendar**.
3. Edit the calendar.

**Note**

You can choose which calendar to copy when editing the schedule calendar.

4. Click **OK**.





### Schedule user calendars

Schedule user calendars customize a calendar for a specific person working on a specific project. For example, use a schedule user calendar to account for a person working mandatory overtime on a given project.

- You must be a project administrator to create a schedule user calendar.
- Create a schedule user calendar using the **Schedule Membership** dialog box.



### **Calendars hierarchy**

Calendars have a natural progression. To leverage this, creating them in the appropriate order, or hierarchy, is important.

1. Create a base calendar.
  - This reflects your company's typical work schedule.
  - You can have more than one base schedule. They can be geographically dependant, for example.
2. Create a user calendar.
  - This includes holidays and vacation specific to that user.
  - This should be copied from the base calendar created previously (to account for company holidays).
  - Include the user's typical workday if flex time is used.
3. Create a schedule calendar.
  - Include any project specific information, such as mandatory overtime.
  - The base calendar can be copied to include holidays and other information previously entered.
4. Create a schedule user calendar.
  - Copy this from either the schedule calendar or the user calendar. The user calendar has vacation time, the schedule calendar includes items like mandatory overtime.
  - If there are no scheduling issues for a user specific to a given project, the user calendar can interact with the schedule calendar for the project. This step is optional.



## Assigning Schedule Manager permissions

Schedule Manager requires that some permissions be set prior to creating schedules. Schedule Manager also provides an additional choice in disciplines, which may simplify permissions and assignments.

Required Teamcenter permissions (all applications have the same requirements)

- User
- Group
- Role

Recommended Schedule Manager permissions:

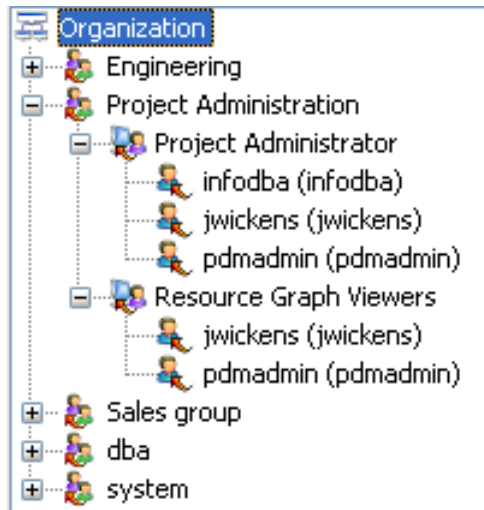
- **Project Administration** group
- **Project Administrator** role

Optional Schedule Manager permissions:

- Disciplines

## Project administration

As best practice, use one group/role to perform high-level Schedule Manager functions.



- The **Project Administration** group allows any user in this group to create schedules, add tasks and milestones, and modify schedule membership (including adding members). Users must be added to a role within this group to get these permissions.
- The **Project Administrator** role is the default role in the **Project Administration** group. Any user added to this role can create schedules, modify schedule membership (including adding and removing members), and add tasks and milestones to the schedule.

### Note

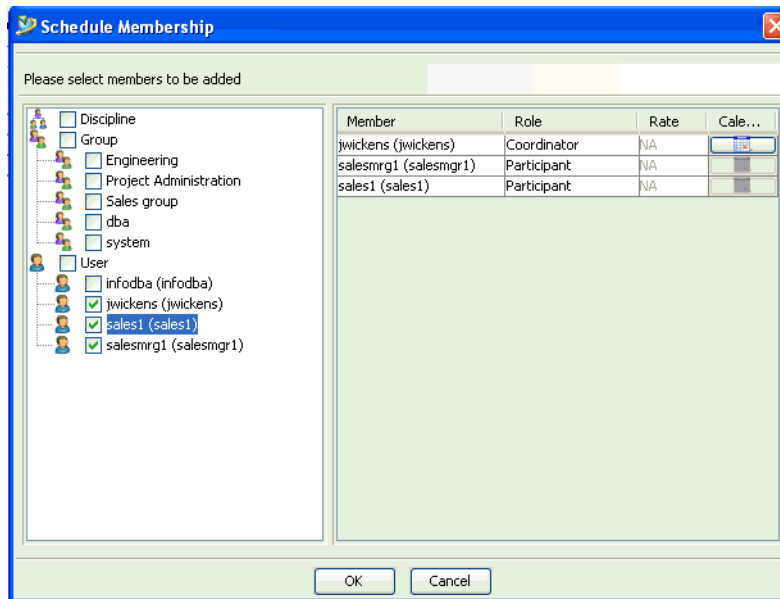
You can add additional roles to the **Project Administration** group if you want every member of that role to be given permissions to create schedules and assign people and tasks to those schedules. One example is the **Resource Graph Viewers** role.







## Schedule membership

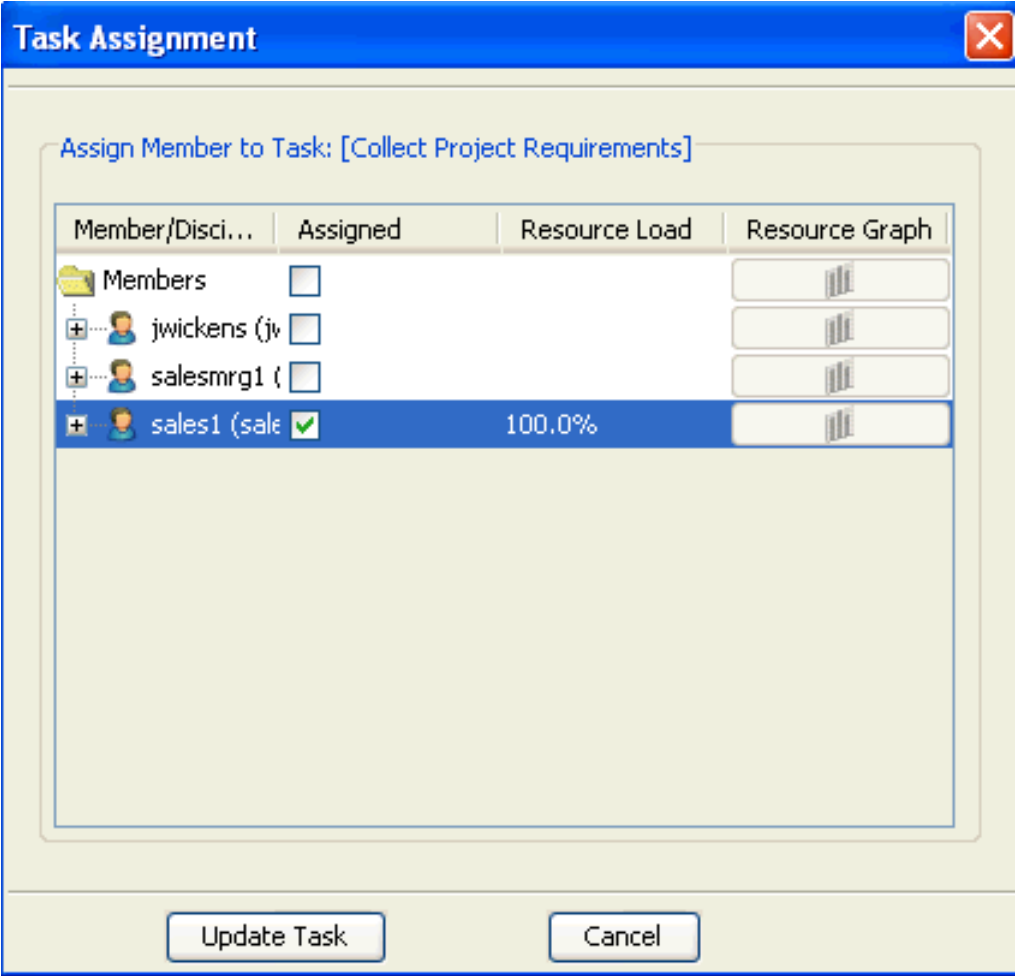


Choose **Team**→**Schedule Membership** to define which users, groups, roles, and disciplines can be assigned within a schedule. A user or discipline is ultimately the object assigned to a given task. Schedule membership assigns users to participate within the schedule. It does not identify the user of any given task. Some key considerations:

- Select a user to allow that user to perform tasks within this schedule.
- Select a group to assign all roles within a group to a given schedule.
- Select a role to assign any user within that role to a given schedule.
- Select a discipline to assign the discipline or user within discipline to a given schedule.

**Note**

Use the **Assignments**→**Assign To Task** menu command to assign the user, user within a group, or user within a role to a specific task.





## Create tasks

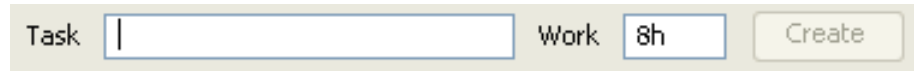
Tasks are used to define steps of a larger process. Tasks have many properties:

- **Task Name**
- **Task Type**
- **Start Date**
- **End Date**
- **Task Status**
- **Task Assignments**



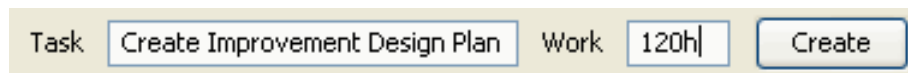
**Create a task quickly**

The **Create Task** command at the top of the schedule display allows a task to be created while skipping most attributes.

A screenshot of a web form for creating a task. It has a light beige background. On the left, the word "Task" is followed by a text input field containing a single vertical bar "|". To the right of this is the word "Work" followed by a text input field containing "8h". Further right is a button labeled "Create".

|      |                                |      |                                 |                                       |
|------|--------------------------------|------|---------------------------------|---------------------------------------|
| Task | <input type="text" value=" "/> | Work | <input type="text" value="8h"/> | <input type="button" value="Create"/> |
|------|--------------------------------|------|---------------------------------|---------------------------------------|

1. Click to activate the command.
2. Type the name of task.
3. Click **Create**.

A screenshot of the same web form as above, but now the text input fields are filled. The "Task" field contains "Create Improvement Design Plan" and the "Work" field contains "120h". The "Create" button is still present.

|      |   |      |                                   |                                       |
|------|---|------|-----------------------------------|---------------------------------------|
| Task | <input type="text" value="Create Improvement Design Plan"/> | Work | <input type="text" value="120h"/> | <input type="button" value="Create"/> |
|------|---|------|-----------------------------------|---------------------------------------|

The task is added at end of list.

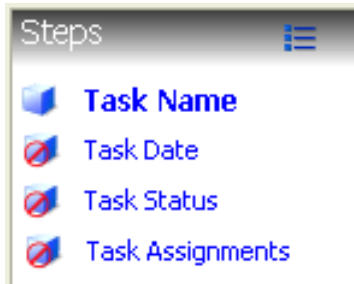
**Note**

To add a task in middle of sequence, select the task to precede the new task prior to filling in quick task information.

4. Modify the task attributes as needed.



### Create a task from the shortcut menu

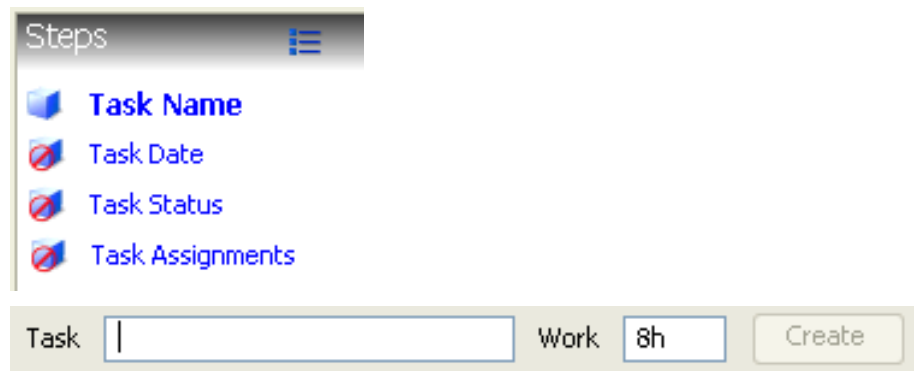


1. Select a task in the schedule.
2. Right-click and choose **New→Task**.  
The new task dialog box appears.
3. Complete the **New Task** dialog box.  
This allows attributes of the task to be modified while creating the task.
4. Click **OK**.





### Task creation strategy



Steps

- Task Name
- Task Date
- Task Status
- Task Assignments

Task  Work

Tasks can be created from the menu (**File**→**New**→**Task**), from the shortcut menu (**New**→**Task**) or using the create task command at the top of the display.

- The quick menu names the task and assigns it an amount of work.
  - Tasks use the **Fixed Work** attribute, have no task assignments, and start at beginning of schedule.
  - These attributes can be modified through task properties or other commands.
  - If you select a task, the quick create technique inserts the new task after the one that is highlighted, at same indentation level of the one highlighted.
- The menu and shortcut menu choices give the same number of options because they both use the **New Task** dialog box and provide the step list shown above.
  - Names the task and allows modification of the **Fixed Work** attribute when creating the task.
  - Allows a start date and due date to be specified.
  - Allows work for a task to be specified.
  - Allows task assignments to be created.

#### Note

Task assignments assume that schedule membership has been completed before creating the task.

- None of these techniques for creating tasks provide:
  - The capability to link tasks while creating the task.
  - The capability to create task deliverables while creating the task.
  - The capability to assign workflows to a task while creating the task.
  - The capability to indent tasks differently than the default.

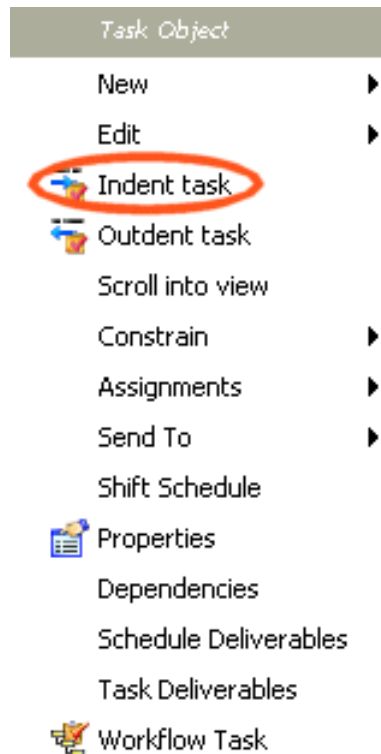


### *Gantt zoom factor*

To change the display of the Gantt chart while creating tasks or doing other functions, choose **Schedule→View→Zoom Factor**.



## Grouping tasks



Tasks can be grouped together using the **Indent Task** command, on the shortcut menu. The **Outdent task** command removes one task from a group and is also available from the shortcut menu.

- Using **Indent task** makes the selected task a subtask of the one above it.
- If the task above a task is a subtask, the task indents one level from where it is in current task structure.
- The parent task appears as a solid black task in the Gantt chart.
  - The parent task duration is derived from the subtasks that make up the parent task.
  - The parent task does not require task assignments or workflow assignments.

- The subtask (child task) appears as a light-blue task in the Gantt chart.
  - Subtasks drive the completion of the parent task.
  - Subtasks can be assigned to different workflows.
  - Subtasks can have different deliverables.
  - Subtasks can have different resource assignments.





### Effort-driven scheduling overview

Effort-driven scheduling refers to the concept that a given schedule has three variables.

- Duration (time between start and due date).
- Resources (people assigned to tasks).
- Work (an amount of time it takes all people to get a task done).

The equation for calculating due dates is  $\text{Work} = \text{Duration} * \text{Resource}$ .

For example:

- If a task takes 80 hours of work, one 100 percent resource is assigned 40 hours for a two-week duration.
- If a task takes 80 hours of work, two 100 percent resources are assigned 40 hours for a one-week duration.
- If a task takes 80 hours of work, a 50 percent resource is assigned 160 hours or for a four-week duration.

#### Note

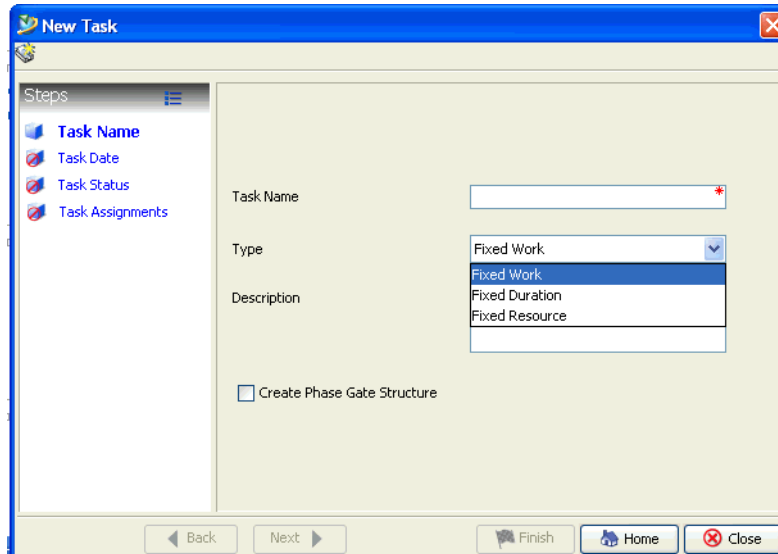
This implies the 50 percent resource has other tasks that fill the schedule in a 40-hour workweek.

#### Note

There is nothing within the system that prevents a task from becoming overdue.



## Effort driven scheduling details



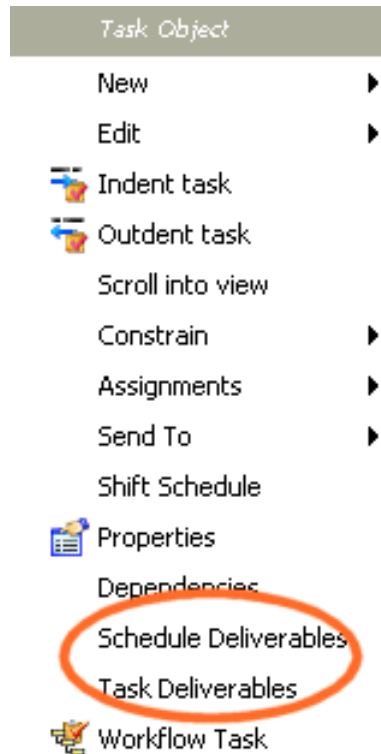
The three task type options are **Fixed Duration**, **Fixed Resource**, and **Fixed Work**. Use these three attributes to control how the schedule reacts when other variables change.

- If a task is **Fixed Work** (the default), the amount of work is always the same.
  - If more resources are added, duration is reduced.
  - If resources are reduced, duration is lengthened.
  - If duration is doubled, the resources reduce their utilization (100 percent dedicated to 50 percent contribution).
  - If duration is halved (task is done quicker), the resources have their utilization increased. In this case, the task may become overdue.
- If a task is **Fixed Duration**, the start date and due date must be the same, regardless of changes to resource or work. For example, if the plant shutdown begins on Monday and ends on the following Friday, the length of time of the shutdown does not change regardless of work done or resources used.
  - If more resources are added, more work is completed.
  - If resources are reduced, work is decreased. In this case, the task may become overdue.
- If the task is **Fixed Resource**, the percent utilization of a person does not change as duration or work are modified. An example of this is to control the requirement that a person spends 25 percent of their time on a given project.

- If duration is increased, the amount of work decreases.
- If duration is reduced, the amount of work decreases. In this case the task may become overdue.
- If the amount of work increases, the duration is reduced.
- If the amount of work decreases, the duration is increased.



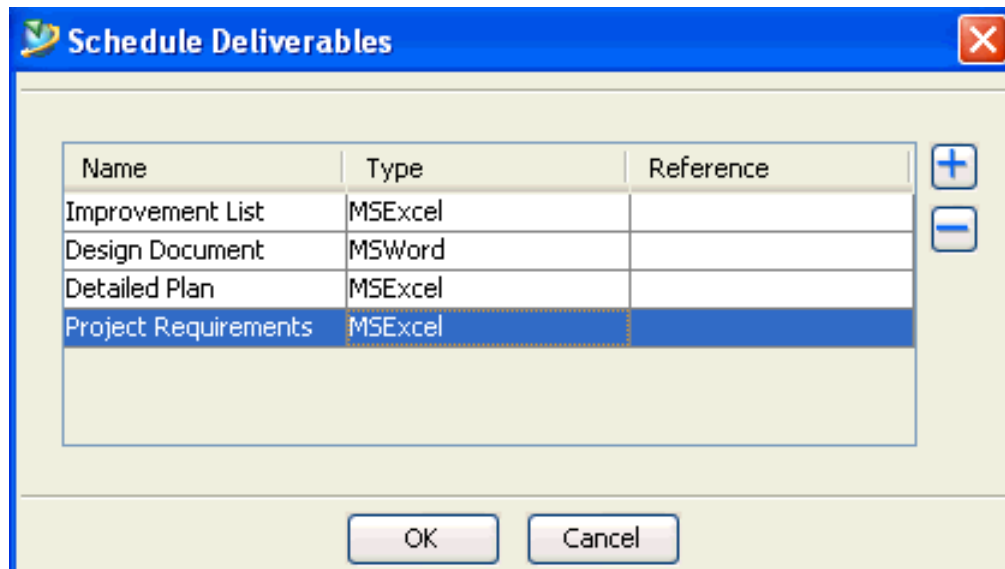
## Deliverables



A *deliverable* refers to a dataset which is used at a given step in the schedule. Deliverables can be added to either tasks or milestones. Deliverables can also be included with templates. There are two types of deliverables.

- Schedule deliverable
- Task deliverable

## Schedule deliverable



A schedule deliverable represents something that is created or used at some point within a given project. You must create schedule deliverables before task deliverables. Schedule deliverables have three attributes.

- **Name** (required) reflects what is created anywhere in the project.

**Note**

Examples may include a requirement, design specification, sales survey, or CAD prototype.

- **Type** (required) refers to the Teamcenter data type for the deliverable.

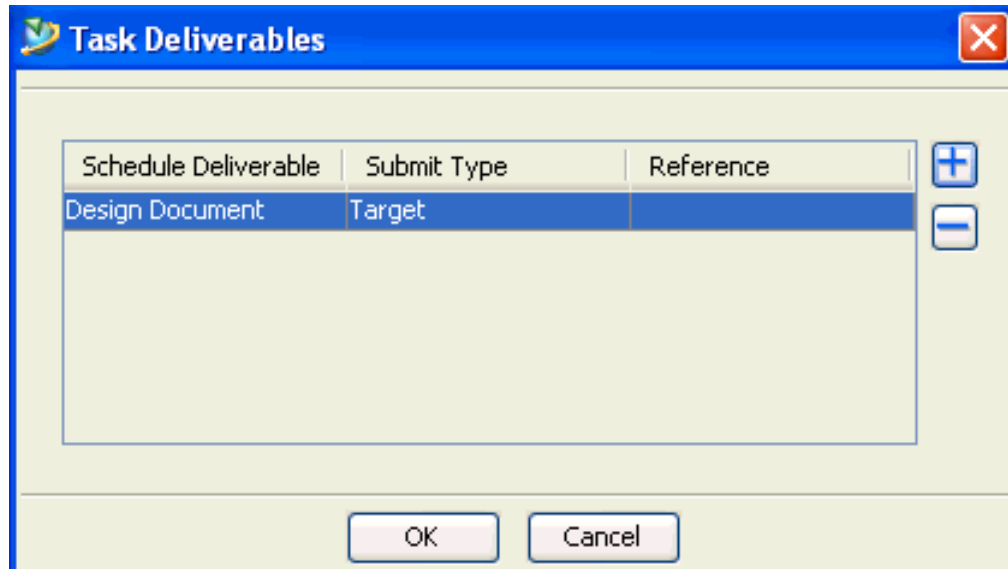
**Note**

Examples include **MSWord**, **UGPART**, or **EcRevMaster**.

- **Reference** refers to whether the deliverable is a target within the workflow or a reference within the workflow.
  - If the deliverable is created or modified as part of the workflow, use **Target**.
  - If the workflow evaluates or reviews that deliverable, use **Reference**.





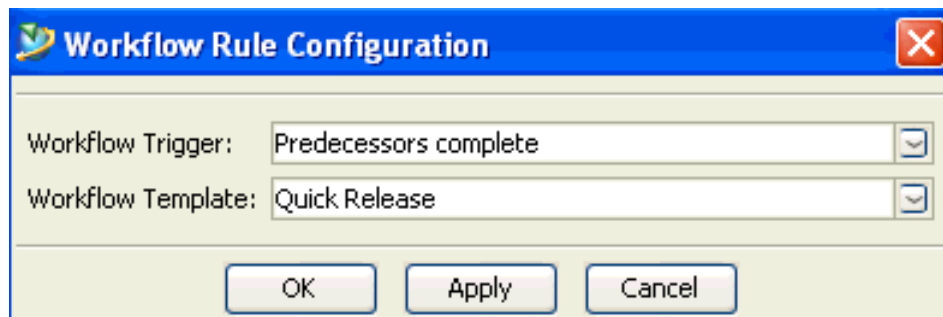
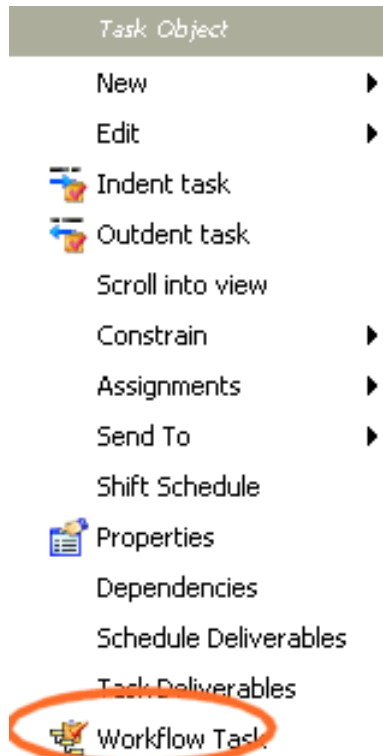
**Task deliverable**

A task deliverable refers to a schedule deliverable created or worked on as part of a specific task. The task must be created before this attribute is applied. The schedule deliverable must also be created before this attribute is applied. A task deliverable has three attributes:

- **Name** (required) refers to the schedule deliverable name.  
The only choices for task deliverable names are from the schedule deliverables for this specific schedule.
- **Submit Type** (required) refers to how this task presents the deliverable to a workflow. There are four options:
  - **Target**
  - **Reference**
  - **Scheduled Task**
  - **Do Not Submit**



## Linking workflows to tasks



Depending on the level of implementation, tasks within Schedule Manager can be connected to workflow processes. Schedule Manager can merge numerous small workflows into a single, higher level process. When connecting workflows to schedules, consider these points:

- Workflows must be created prior to linking to a task within Schedule Manager.
- The deliverable for that task should reflect the data being created or manipulated within the workflow.
- Linking tasks to workflows and assigning tasks to users is communicated through the user's inbox.

- When a user signs off a task as complete, the schedule is updated to reflect what tasks are considered complete. This may start other workflows for subsequent tasks linked in the schedule.



## Notifications in Schedule Manager

There are two types of notifications. The first type is the *item and subscription* type, which is used in other portions of the software. The other type is Schedule Manager notifications. The primary difference is Schedule Manager notifications use e-mail that is outside of Teamcenter, creating notifications in other portions of Teamcenter communicate using the Teamcenter inbox.

Schedule Manager notifications track the events of a schedule, such as:

- Task completion.
- Milestone completion.
- Deliverable addition and completion.

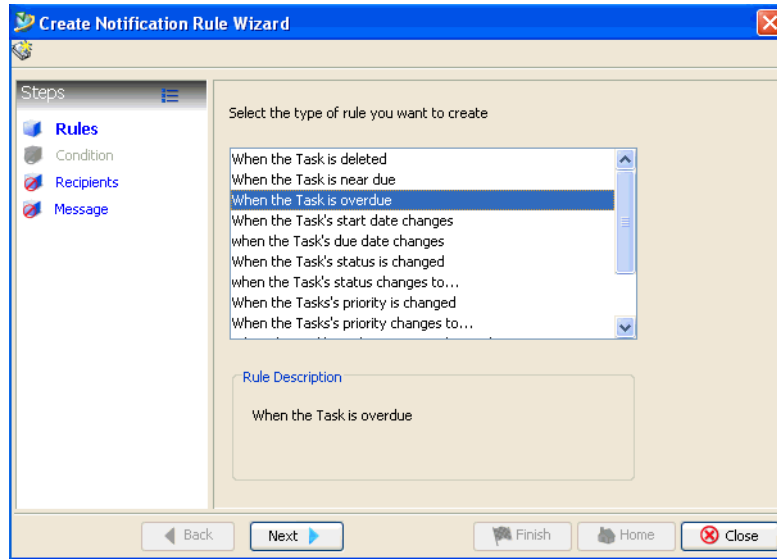
## Create notifications



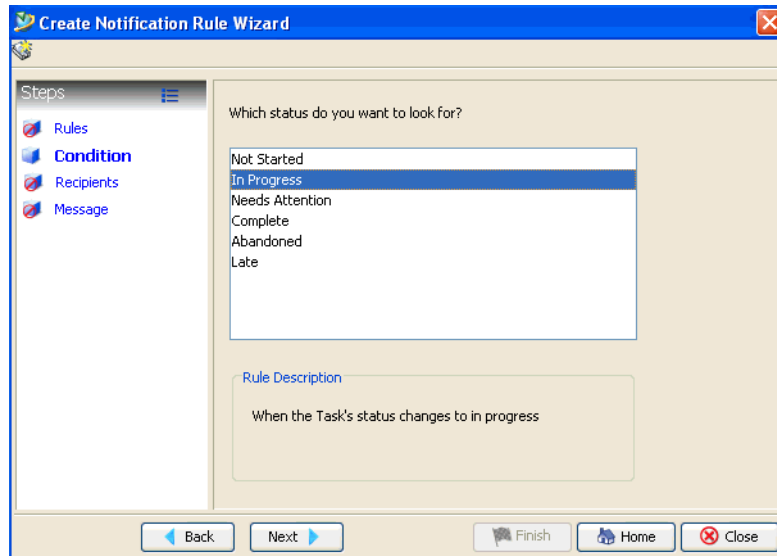
1. Select one or more tasks.
2. Choose **Edit**→**Notification Rules**.
3. Click **New**.



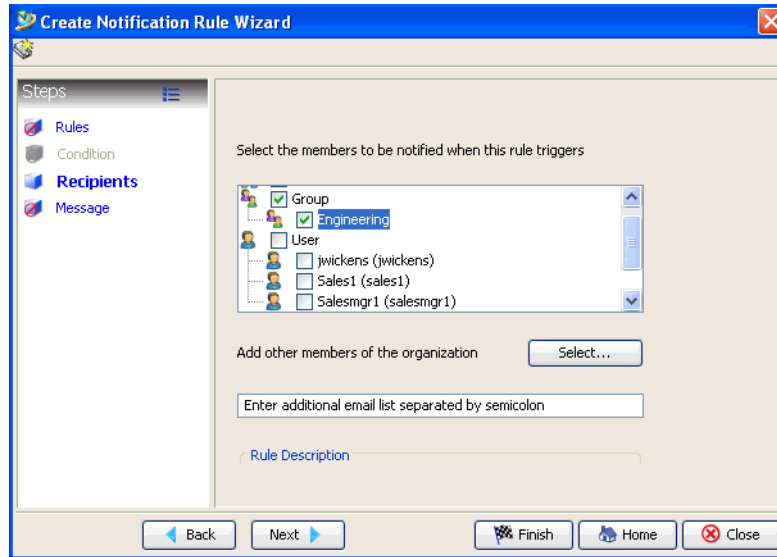
4. Select the appropriate rule.



5. Select a condition (not all rules require a condition).

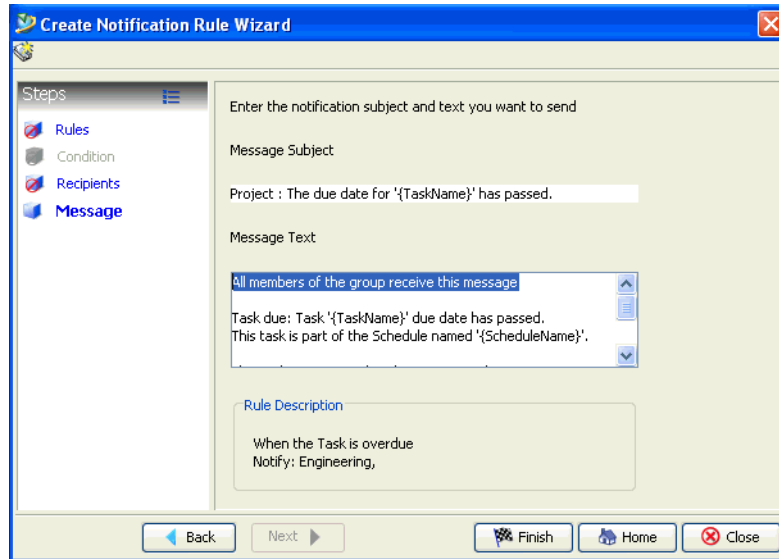


6. Select a recipient. A recipient can be:



- A user assigned to the schedule.
- A role assigned to the schedule.
- A group assigned to the schedule.
- A person within organization, but not assigned to the schedule.
- Any other person not assigned to the organization or schedule.

7. Edit the message text box.



**Note**

A default message is provided. It can be customized.

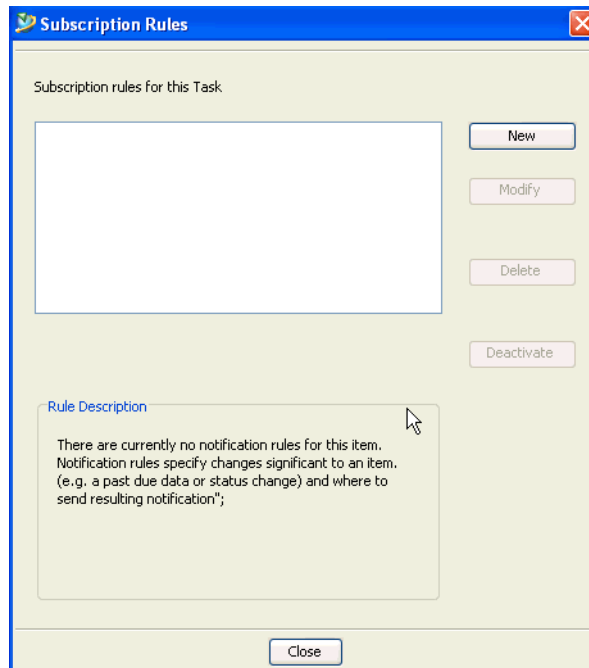
8. Click **OK**.



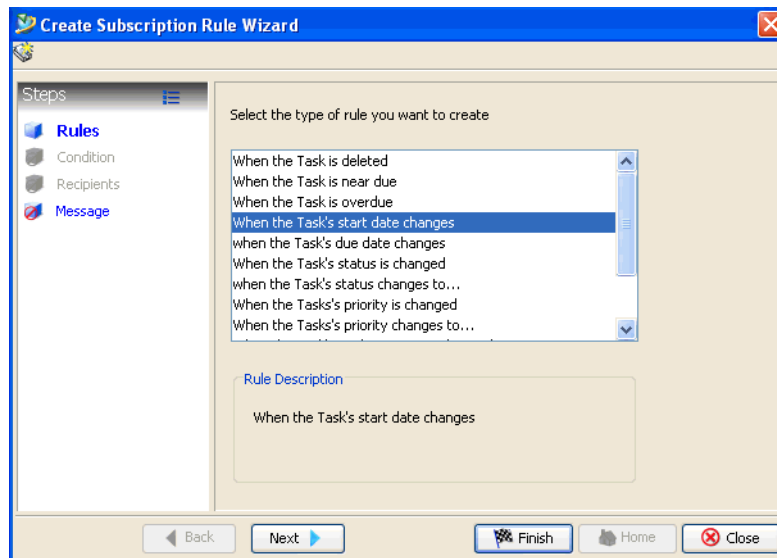
## **Subscriptions**

A subscription notifies you when a specific task or event in the project is completed. A subscription applies only to the user creating the subscription.

## Create subscriptions



1. Choose **Edit**→**Subscription Rules**.
2. Click **New**.
3. Select a rule.



4. Select a condition.
5. Edit the message text box.

**Note**

A default message is provided and can be customized.

6. Click **OK**.





## Activities

In the *Using Schedule Manager* section, do the following activities:

- Create and use calendars.
- Create schedule membership.
- Create tasks and task assignments simultaneously.
- Create indented tasks.
- Link tasks and create deliverables.
- Create disciplines.
- Verify effort-driven scheduling.
- Create constraints between tasks.
- Assign tasks to workflow.
- Create notifications and subscriptions in Schedule Manager.
- Create and modify task status and priority.



## Review questions

1. Which schedules will your company use most frequently?  
Select all that apply.
  - Base calendar
  - User calendar
  - Schedule calendar
  - Schedule user calendar.
2. What ways could you account for a machine (or nonperson) doing work in the schedule (such as a machine on an assembly line)?
  - Create a calendar that has no time off and assign that calendar to a schedule.
  - Create a separate schedule for that machine, with a separate calendar.
  - Create an extra user and have that user represent the machine doing the work.
  - Assign a 300 percent resource to the task with a fixed duration setting.
3. What is the formula to determine effort driven scheduling?  
Select one.
  - $\text{Work} = \text{resources} * \text{duration}$
  - $\text{Work} = \text{fixed} * \text{duration}$
  - $\text{Work} = \text{fixed} * \text{resource}$
4. When assigning a workflow to a task, what are the requirements?  
Select all that apply.
  - The task is already created.
  - The workflow is already created.
  - The team member is added through schedule membership.
  - The task assignments are updated.
5. Which of these situations suggest a notification is needed?  
Select all that apply.

- A new task is added to schedule.
  - Managers want to know if a task is complete.
  - The status of a deliverable is changed to released.
  - The user wants to track which tasks are out of date.
6. How would you design a schedule around an end date?
- Create a milestone for the end date.
  - Set a fixed constraint on the end date milestone.
  - Use the **as soon as possible** constraint on tasks before the milestone.
  - Use the **as late as possible** constraint on tasks before the milestone.
  - Link the tasks together.
7. What are the advantages of using workflow with a schedule?
- The project manager controls repeatable best practices.
  - Prevent users from controlling how busy they are or what projects they accept.
  - Allows company to leverage OOTB workflows in the base product.
  - Allows use of standard schedule templates provided OOTB in base product.



## Summary

The following topics were taught in this lesson:

- Calendars
- Effort-driven scheduling
- Assigning tasks to workflows
- Notifications and subscriptions

## Lesson

# 3 *Using phase gate*

### **Purpose**

The purpose of this lesson is to learn how phase gate schedules are used within Schedule Manager.

### **Objectives**

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

- Demonstrate how to create a phase gate schedule.
- Identify key differences between phase gate schedules and other schedules.
- Build complex schedules using already learned concepts and some new applications of those concepts.

### **Help topics**

Additional information for this lesson can be found in:

- [\*Schedule Manager Guide\*](#)





## Phase gate process overview

1. Update calendar information within the Organization application.
2. Update permissions within the Organization application.
3. Create a schedule.
4. Assign schedule membership.
5. Update schedule specific calendars.
6. Create phases and gates. Repeat this step as needed.
7. Create a task or milestone. Repeat this step as needed.
8. Link phases, gates, tasks and milestones.
9. Assign members to a task.
10. Assign workflow to a task.
11. Manage the schedule.



## Phase gate

|   | Name                         | Predecessors | Successors |
|---|------------------------------|--------------|------------|
|   | CCC Phase Project Process    |              |            |
| 1 | Collect Requirements (Phase) |              | 4PG        |
| 2 | Collect Requirements (Start) |              |            |
| 3 | Collect Requirements (End)   |              |            |
| 4 | Collect Requirements (Gate)  | 1PG          |            |

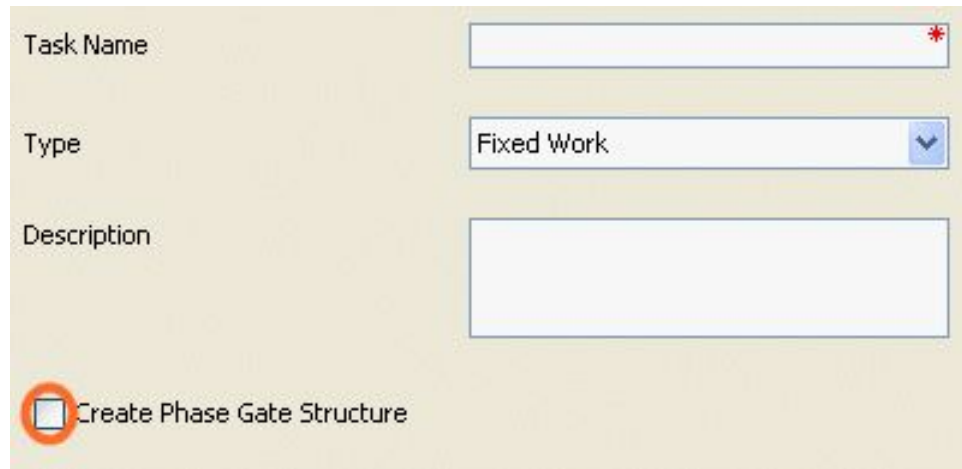
*Phase gate* is a term used to describe a specific type of schedule. Not all companies use phase gate. Check with your program manager or program leader to see if this functionality is used at your site. Phase gate processes contain high-level process definitions (phases) and gates (decision points) in addition to tasks and milestones.

- Phase gate is typically used with implementations of the Consumer Packed Goods and High Tech Electronics industry solutions.
- Phase gate is typically used when companies want executive signoff at various stages of a project to verify funding and other requirements.
- Phase
  - A phase is a task. It is a high-level task used to define structure or best practice for a given activity.
  - A phase is made up of activities (tasks and milestones) that define the detailed actions of a process or best practice.
  - A phase has other tasks and milestones beneath it (indented). These represent the activities within the high-level phase.
  - The subtasks and milestones comprise the content of the overall task.
  - Phases have a different appearance on the schedule. Because many tasks make up one task, the larger task is a checkered pattern, whereas the more detailed subtasks are light blue.

- Gate
  - A gate is a checkpoint within the phase to decide if all tasks, as a whole, passed or failed.
  - The gate appears as a task, immediately following a milestone.
  - Gates are typically accomplished using a review workflow. The workflow tallies votes of people (project leaders and executives) who evaluate deliverables and decide if the project passes the criteria defined for that gate.



## Creating phase gate Structure



Task Name

Type

Description

☒ Create Phase Gate Structure

1. **File**→**New**→**Task**.
2. Name the task. Select the **Create Phase Gate Structure** option.
3. Enter the task date.
4. Enter the task status (optional).
5. Enter the task assignments (optional).

### Note

The following objects are added to schedule:

- Phase
- Milestone for beginning of phase
- Milestone for end of phase
- Gate for end of phase

6. Insert more objects or edit the existing objects as needed.

- Add tasks.

**Note**

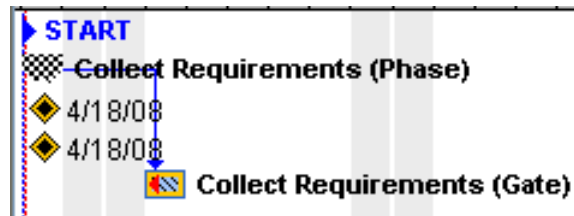
If tasks are added within a phase, they indent under that phase automatically as a subtask.

- Edit task properties.
- Link and constrain tasks, milestones, phases, and gates.
- Add deliverables to schedule and tasks.
- Create task assignments.





## Phase gate milestones



Every phase is assigned two milestones:

- Start
- End

Both milestones are indented under the phase.

### Note

Additional tasks and milestones can be inserted within the phase as needed. The gate appears after the end milestone.



## Completing a gate

At the conclusion of any phase, the gate must be approved. Incorporate the workflow into the schedule to obtain the proper signoff as follows:

1. Create the schedule, including phase gate tasks.
2. Using the Workflow Designer application, create a review process.
  - Use the Review Process template to copy an existing review process.
  - Create signoff profiles within the Review task.

### **Note**

A signoff profile defines which groups, roles, disciplines or users must sign off.

For example, one senior engineer, two subject matter experts, and the project leader all need to sign off. In this example the 3 signoff profiles are the senior engineer, subject matter experts and project leader.

3. In the Schedule Manager application, select the gate task and assign the review process created previously to the gate task.



## **Create phase gate deliverables**

Add deliverables to tasks and milestones in a phase gate schedule as you would any other schedule.

1. Right-click any task or the schedule and add a schedule deliverable.
2. Right-click a specific task or milestone and add a task deliverable.



## Activities

In the *Using phase gate* section, do the following activities:

- Create a phase gate schedule and a first phase.
- Add tasks to a phase.
- Create a second phase.
- Link the tasks and link the phases.





## Review questions

1. What are the advantages of using a phase gate schedule?

Select all that apply.

- Allows signoffs at periodic points in the schedule
- Organizes schedules
- Automatically adds workflows and task assignments to tasks
- Automatically adds deliverables to the schedule and tasks

2. When is it appropriate to use phase gate functionality?

Select all that apply.

- High Tech Electronics
- Consumer Packaged Goods
- Aerospace and Defense Solution
- On projects that require executive signoffs throughout the project



## Summary

The following topics were taught in this lesson:

- Creating a phase gate schedule
- Creating a phase
- Creating a gate and adding tabulation to the gate



## Lesson

# 4 *Using templates*

### **Purpose**

The purpose of this lesson is to use templates to create schedules similar to previously created schedules.

### **Objectives**

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

- Demonstrate how to save an existing schedule as a template.
- Demonstrate how to save a new schedule as a template.
- Demonstrate how to use a template to make a new schedule.

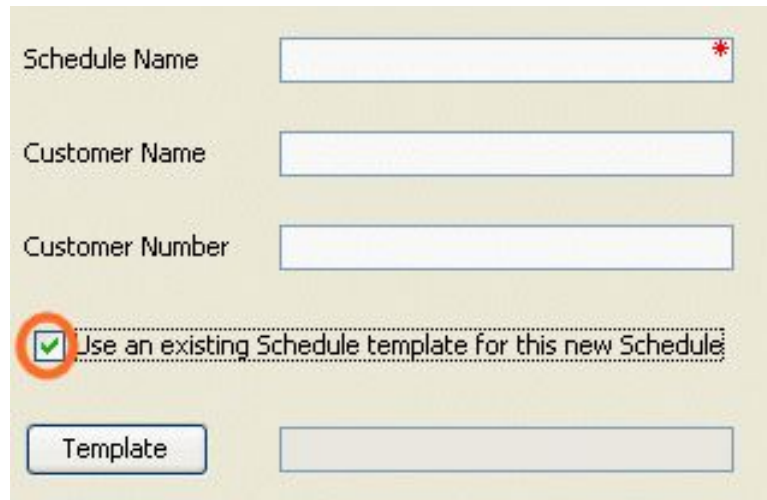
### **Help topics**

Additional information for this lesson can be found in:

- [\*Schedule Manager Guide\*](#)



## Schedule templates



Schedule Name

Customer Name

Customer Number

☒ Use an existing Schedule template for this new Schedule

Template

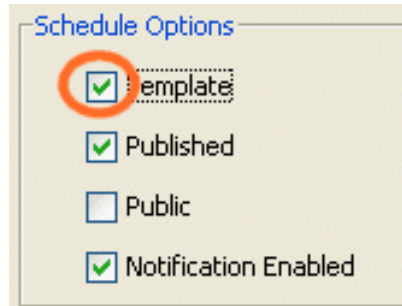
Templates are schedules that are stored with predefined tasks, dependencies, constraints, membership, and other attributes. Templates allow standardized processes from project to project.

- Projects within a company or organization may follow a similar process compared to previous projects.
- Creating a schedule with all the related tasks can take significant time.
- Having a predefined project outline template helps the project manager or team leader manage the details of a project.
- Templates can contain predefined information and allow the project manager to add information when it is used. For example, the people signing off the project may be the same for every schedule, but the people doing the work may change for each project.





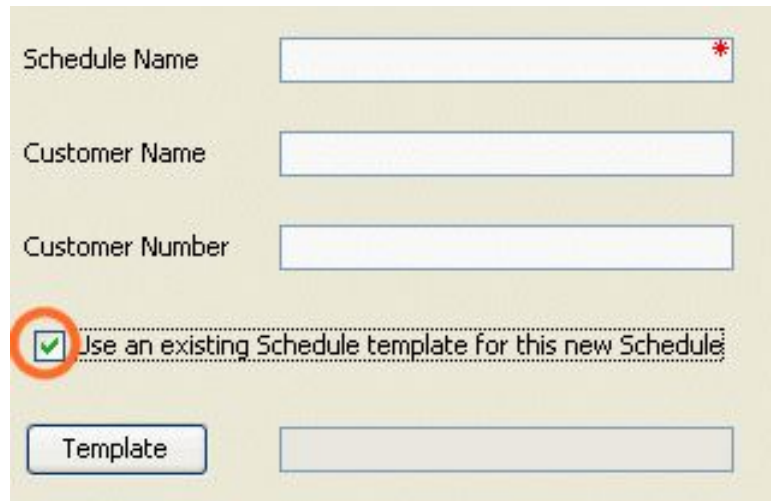
## Create a template



Creating a template requires you to select **Template** when creating the schedule (under **Schedule Options**) . To create a template, follow these basic steps.

1. Create a new schedule.
  - a. Type a name in the **Schedule Name** box (the name used is the name of the template you copy each time).
  - b. Type a description in the **Schedule Description** box (optional).
  - c. Select **Template** under **Schedule Options** (required when making a template).
  - d. Enter the schedule start and due dates.
2. Populate the schedule with tasks and milestones that correspond to all projects for which this template is used.
3. Include deliverables, schedule membership, and other schedule criteria as needed.
4. Close the schedule.

5. Test the template (verify the previous steps worked).
  - a. Create a new schedule. Name the schedule after the project it tracks.
  - b. In the **Name Schedule** dialog box, select **Use an existing Schedule template for this new Schedule**.



Schedule Name

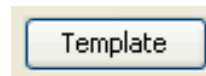
Customer Name

Customer Number

☒ Use an existing Schedule template for this new Schedule

Template

- c. Click the **Template** button and select a template from the list.



- d. Enter other schedule properties as needed.

Teamcenter copies the template, renames the copy, and allows you to modify the schedule as needed for this project.

Other users cannot access the template unless it is made public.



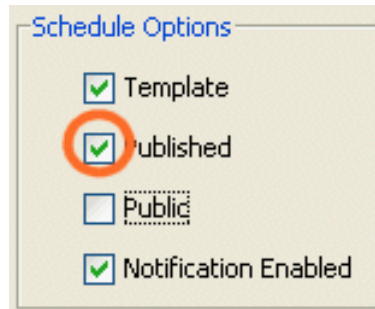
## Create a phase gate template

A phase gate template is similar to a regular template.

1. Create the schedule. Select **Template** under **Schedule Options**.
2. Assign members to the schedule.
3. Assign a schedule calendar.
4. Add tasks using the **Create Phase Gate Structure** option.
5. Add tasks, milestones, phases, and gates as needed.
6. Create dependencies, task assignments, and workflow assignments as needed.
7. When finished, the new schedule is available as a template to copy when a new project is started.



## Share schedules with members

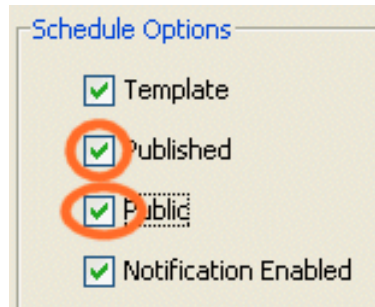


Templates can only be seen by other schedule members if the template is published.

1. Create the schedule.
2. Right-click the schedule and choose **Schedule Options** from the shortcut menu.
3. Set the **Published** attribute to **True**.
4. Click **OK**.



## Share schedules with nonmembers



Templates can only be seen by nonschedule members if the template is published and made public.

1. Create the schedule.
2. Right-click the schedule and choose **Schedule Options** from the shortcut menu.
3. Set the **Published** and **Public** attributes to **True**.
4. Click **OK**.





## Activities

In the *Using templates* section, do the following activities:

- Use a template to create a new schedule.
- Share a schedule.
- Find a schedule.
- Share multiple schedules.
- Finding multiple schedules.
- Searching for schedules.



## Review questions

1. What attribute must be set to share schedules?

Select all that apply.

- Public Schedule
- Published
- Shared
- Statused

2. Where is the attribute needed to share schedules?

Select one.

- Properties
- Task assignments
- Organization application
- My Teamcenter application

3. Using a template to create a new schedule requires the schedule to be shared.

- True
- False



## Summary

The following topics were taught in this lesson:

- How to create templates
- How to use and share templates

## Lesson

# 5 *Creating reports*

### **Purpose**

The purpose of this lesson is to discuss the reporting capability of Schedule Manager.

### **Objectives**

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

- Identify the reporting capabilities within Schedule Manager.
- Identify the reporting capabilities within Teamcenter Reporting and Analytics (TcRA).

### **Help topics**

Additional information for this lesson can be found in:

- [\*Schedule Manager Guide\*](#)





## Reports overview

Once a schedule is set up, and a project manager is assigning tasks, documenting which tasks are completed, and planning subsequent tasks, you can generate reports. There are two primary types of reports.

- Reports run from within Schedule Manager by creating a program view.
- Customized reports and dashboards run from Teamcenter Reporting and Analytics (TcRA).



## Deploying out of the box reports

The available TcRA reports are:

- Big Picture
  - Provides managers and executives a big picture view of selected workplaces.
  - Provides an overlaid executive rollup using the Gantt format.
  - Allows managers to spot inconsistencies and identify interrelationships across related projects.
- Cross Schedule
  - Provides a task-based report.
  - Provides on overview of a member across multiple schedules.
- Milestone Analysis
  - Displays schedule slippage in days between baseline end dates and scheduled end dates in a particular workplace.
  - Presents information in a bar chart or table view.
- Resource Task
  - Provides a task-based report.
  - Shows tasks assigned to a given user for a single schedule.
- Baseline Report
  - Displays the difference between a schedule and its baseline.
- Base Countdown
  - Displays the deliverables in a given workplace.
  - Displays percent complete of the deliverables.



## Teamcenter Reporting and Analytics

To create customized reports or extend the OOTB reports, you must have a Teamcenter Reporting and Analytics license. TcRA allows you to

- Create new reports within all Teamcenter applications (this is not specific to Schedule Manager).
- Create executive dashboards for high-level project summaries.
- Modify OOTB reports for Schedule Manager.



## Program views

A program view describes a way to view multiple schedules at the same time. The view is read-only and can be used to see similar information across multiple projects at same time.

- There are many different ways to see a program view.
- Program views are datasets viewed in Schedule Manager.
- Program views use filters to set conditions and values for the program view.



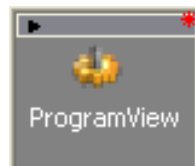


## Creating program view reports

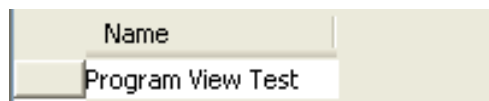


Use the following steps to create a program view. This assumes there are multiple schedules already created and in use within Teamcenter.

1. Create a program view.
  - Within the My Teamcenter application, choose **File→New→Dataset**. This dataset is needed to hold the program view.
    - a. Select the **Programview** dataset type.



- b. Enter a name for the program view.
  - c. Type a description (optional).
  - d. Import an existing program view XML file (optional).
  - e. To see the program view, right-click the program view and choose **Send to→Schedule Manager**.



2. Choose the schedules to view.
  - a. Choose **Program→Choose Schedules**.
  - b. Select the appropriate schedules for the program view.



3. Filter data based on attributes.
  - a. Choose **Program→Filter**
  - b. Select the filtering condition.
  - c. Select the filtering value.

- d. Add additional filtering conditions (optional).

| And/Or | Field Name    | Condition | Value |
|--------|---------------|-----------|-------|
| And    | Task Duration | Less Than | 40    |

4. Group task data and attributes into **group by nodes**.
- Choose **Program→Group Attributes**.
  - Select the box to group information.
  - Use the **Range** function to group date, time, and numerical fields.
  - Use the **Order** function to sort in ascending or descending order.
  - Use the **Rollup** function to summarize a given attribute.
  - Use the **Then by** function to add another attribute and repeat this portion of the process.



## Summary

The following topics were taught in this lesson:

- The types of reports provided
- Basic summaries of the report types

## Lesson

# 6 *Using the Microsoft Project integration*

### **Purpose**

The purpose of this lesson is to discuss the interoperability between Microsoft Project and Schedule Manager.

### **Objectives**

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

- Describe the differences between Microsoft Project and Schedule Manager.
- Import and export schedules between Microsoft Project and Schedule Manager.

### **Help topics**

Additional information for this lesson can be found in:

- [\*Schedule Manager Guide\*](#)



## Comparing Microsoft Project to Schedule Manager

There are several similarities and differences between Microsoft Project and Schedule Manager. The differences include:

- Web-based vs. file-based
  - Microsoft Project is a file that is typically saved to a hard drive or shared drive.
  - Schedule Manager is stored in a database and can be seen wherever Teamcenter is installed.
- User access
  - Microsoft Project is typically managed by one user. This user must update project status and know when tasks are complete, overdue, and what deliverables are required.
  - Schedule Manager has input from numerous sources within the Collaborative Product Data Management (cPDM) system. Deliverables come from tasks, and workflows update the schedule without the need for the project manager to log on and add input to the schedule.





## Linking Schedule Manager and cPDM

Linking the scheduling function of managing projects to cPDM allows the following key management-level directives:

- Project management
  - Gantt chart and task-based scheduling
  - Resource management
  - Budgeting
- Program management
  - Program level rollup of costs and other metrics
  - Executive-level dashboards
  - Program-level planning and tracking.
- Execution management
  - Measuring deliverables
  - Workflow
  - Gate criteria (phase gate) and voting



## Linking Schedule Manager to Microsoft Project

1. Install the Microsoft Project plug-in.
2. In Microsoft Project, click the **Teamcenter Project Integration** button.
3. Select an option.
  - **Export** exports a Microsoft Project project into Schedule Manager.
  - **Import** imports a Schedule Manager project into Microsoft Project.
  - **Clear** removes the linking between Microsoft Project and Schedule Manager.

### Note

When the project is imported after being imported or exported, Microsoft Project data is overwritten with the latest Teamcenter data. Similarly, if you export again after either importing or exporting, Teamcenter data is overwritten with the Microsoft Project data. If you do not want to overwrite the project, click the **Clear** button to remove the Schedule Manager linking information from the current project. You are then able to import/export the project to the end of Schedule Manager/Microsoft Project.

4. Log on to Teamcenter after import or export.



## Summary

The following topics were taught in this lesson:

- Schedule Manager stores information in a database and updates schedules automatically through workflow interaction.
- Schedules can be created in Microsoft Project and imported into Schedule Manager.



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## **Reference tear-out pages**

These reference tear-out pages are provided for your convenience.

## Course agenda

|              |                  |   |
|--------------|------------------|---|
| <b>Day 1</b> | <b>Morning</b>   |   |
|              | Introduction     |   |
|              | Course overview  |   |
|              | Lesson 1         | Introduction to Schedule Manager        |
|              |                  |   |
|              | <b>Afternoon</b> |   |
|              | Lesson 1         | Introduction to Schedule Manager        |
|              | Lesson 2         | Using Schedule Manager                  |
|              |                  |   |
| <b>Day 2</b> | <b>Morning</b>   |   |
|              | Lesson 2         | Using Schedule Manager                  |
|              | Lesson 3         | Using Phase Gate                        |
|              | Lesson 4         | Using Templates                         |
|              | <b>Afternoon</b> |   |
|              | Lesson 5         | Creating Reports                        |
|              | Lesson 6         | Using the Microsoft Project integration |

*Classroom data sheet*

| Data item                 | Data value            | Domain |
|---------------------------|-----------------------|--------|
| OS user ID                | infodba               | es1    |
| OS password               | edtrain               |        |
| Teamcenter user ID        | infodba               |        |
| Teamcenter password       | infodba               |        |
| Training folder directory | student_home/training |        |

# Student profile

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www.siemens.com/plm



## STUDENT PROFILE

To stay in tune with our customers, we ask for some background information. This information will be kept confidential and will not be shared with anyone outside of Education Services.

Please print:

Your name \_\_\_\_\_ U.S. citizen ☐ Yes ☐ No

Course title/Dates \_\_\_\_\_ / \_\_\_\_\_ through \_\_\_\_\_

Hotel/motel(s) while training \_\_\_\_\_ Planned departure time after class \_\_\_\_\_

Employer \_\_\_\_\_ Location \_\_\_\_\_

Supervisor/manager \_\_\_\_\_ (Emergency) Phone \_\_\_\_\_

Your job title/responsibilities \_\_\_\_\_ / \_\_\_\_\_

Industry: ☐ Auto ☐ Aero ☐ Consumer products ☐ Machining ☐ Tooling ☐ Medical ☐ Other

Types of products/parts/data that you work with \_\_\_\_\_

Platform (operating system) \_\_\_\_\_

Reason for training \_\_\_\_\_

Please verify/add to this list of training for NX, I-deas, Imageware, Teamcenter, Tecnomatix or Dimensional Mgmt./Visualization.  
Medium means Instructor-lead (IL), Online (OL), or Self-paced (SP)

| Software | From whom | When | Course name | Medium |
|----------|-----------|------|-------------|--------|
|          |           |      |             |        |
|          |           |      |             |        |
|          |           |      |             |        |
|          |           |      |             |        |
|          |           |      |             |        |
|          |           |      |             |        |
|          |           |      |             |        |

Other CAD/CAM/CAE /PDM software you have used \_\_\_\_\_

Please check (✓) your ability/knowledge level in the following areas:

| <u>Subject</u>          | <u>None</u>           | <u>Novice</u>         | <u>Intermediate</u>   | <u>Advanced</u>       |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| CAD modeling            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| CAD assemblies          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| CAD drafting            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| CAM                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| CAE                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| PDM – usage             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| PDM – system management | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| PDM – customization     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

*Thank you for your participation. We hope your training experience will be an outstanding one.*

Course evaluation



PLM Software  
Evaluation – Delivery

Course name: \_\_\_\_\_ Course #: \_\_\_\_\_

Course dates: \_\_\_\_\_ through \_\_\_\_\_

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

Instructor: ☒

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

Instructor: ☒

|   | STRONGLY<br>DISAGREE     | DISAGREE                 | SOMEWHAT<br>DISAGREE     | SOMEWHAT<br>AGREE        | AGREE                    | STRONGLY<br>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"/> |

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) \_\_\_\_\_

SEE BACK

**PLM Software**  
**Evaluation - Courseware**



**Course name:** \_\_\_\_\_ **Course #:** \_\_\_\_\_

**Course dates:** \_\_\_\_\_ **through** \_\_\_\_\_

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

**Material:**

|  | STRONGLY<br>DISAGREE   | DISAGREE                 | SOMEWHAT<br>DISAGREE     | SOMEWHAT<br>AGREE        | AGREE                    | STRONGLY<br>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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**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"/> |

Name (optional): \_\_\_\_\_ Location/room \_\_\_\_\_

- ☐ Please check this box if you would like your comments featured in our training publications.  
(Your name is required at the bottom of this form)
- ☐ Please check this box if you would like to receive more information on our other courses and services.  
(Your name is required at the bottom of this form)

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your training and personal development for the future.*