Create a Project plan in 5 easy steps

APPLIES TO

Microsoft Office Project 2003

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Have you ever created an early Project plan — maybe to get approval for the project — only to find it unworkable when you started tracking progress? With the right start, you can ensure that the plan you create at the beginning of your project is an effective management tool throughout the project.

Use the five-step process outlined in this article to make sure you don't go down the wrong path. This process assumes that you have already defined the project start date, applied the appropriate base calendar, and set up the default task type and other settings in the Options dialog box (Tools menu). If you haven't done so, see the related links in the See Also section of this page. Then perform the following five steps:

1. Create a task list and work breakdown structure (WBS)
2. Indent or outdent tasks to finalize the WBS
3. Enter task durations or work estimates
4. Create dependencies between tasks
5. Assign resources

You can do all of these tasks by using the default view in Project, the Gantt Chart. The Entry table, which is the default table for the Gantt Chart, is also perfect for this process. The following steps will tell you when to insert additional columns.

Step 1: Create a task list and work breakdown structure (WBS)

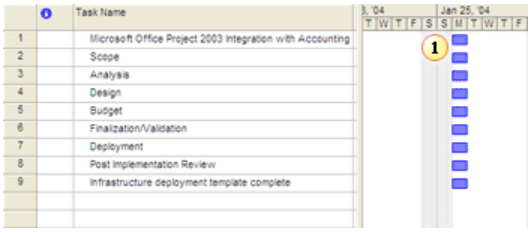
Failing to understand the importance of the work breakdown structure (WBS) is one of the biggest mistakes that planners make. The WBS is the hierarchical list of the project's phases, tasks, and milestones. It's the core of the project schedule. The WBS is critical because it drives the scope of the project. The scope translates into the timeline and budget. Taking the time to map out the WBS will save you significant time later by helping you to avoid rework and false starts.

To build your WBS, start by listing the major pieces (summary tasks) of your project, and then map out the minor pieces (tasks) within each major piece. Continue to break down each piece until you have sufficient level of detail to support your plan. What's sufficient detail? Consider these factors:

- What level of task do you want to track and report status on? Team members will need to give you status on tasks, and you'll need to report status on them. If you break down work to one-day tasks and your project is months long, you and your team will be spending a lot of time entering and tracking status.
- What level of detail gives you early warning about risks? You want to break down your tasks so that you can identify problems early enough to do something about them.
- Can you effectively identify dependencies between tasks? If work on one thing can't start until work on another is finished, you need each work item to be a separate task so that you can indicate that dependency.

+ To enter summary tasks

+ To enter tasks



1 When you enter new task names, Project automatically assigns them an initial duration of one day and schedules them to start at the project start date.

Be sure to also add milestones — markers of important completion points — at the end of each major activity to help measure progress and for benchmarking. It is a good practice to give milestone tasks a name that conveys completion or reaching an important point in the project lifecycle.

NOTE Don't enter a task representing the project as a whole. Let Project do it for you. On the Tools menu, click Options, and then click the View tab. Under Outline options for, select the Show project summary task check box.

Step 2: Indent or outdent tasks to finalize the WBS

After you enter tasks in the Task Name field, it's time to create the hierarchy. You can stay in the Task Name field and use the Indent and Outdent buttons on the Formatting toolbar to establish the right outline levels. The key? Project differentiates between major phases of work, called summary tasks, and the smaller phases of work, called subtasks, based on indentation. Summary tasks have subtasks indented underneath them. Subtasks represent the actual work a resource will do, and they don't have additional subtasks indented under them.

NOTE Usually when people talk about *tasks* in Project they're referring to subtasks, and when they talk about *phases* or *summary tasks* they're referring to summary tasks.

By using up to nine outline levels, you gain the ability to summarize data. Summary tasks consolidate information about the tasks below them. For instance, Project calculates the duration for summary tasks. A summary task's duration represents the total time it will take to complete the work for all of its subtasks. The project summary task summarizes the entire project.

+ To structure the task list

Here's an example of a complete outline, with outline numbers displayed.

		Task Name
1		1 Microsoft Office Project 2003 Integration with Ac
2		1.1 Scope
3		1.1.1 Determine project scope
4		1.1.2 Secure project sponsorship
5		1.1.3 Define preliminary resources
6		1.1.4 Secure core resources
7		1.1.5 Scope complete
8		1.2 Analysis
36		1.3 Design
37		1.3.1 Secure necessary architectural resources
38		1.3.2 Draft Preliminary Infrastructure Design
39		1.3.2.1 Preliminary hardware design
40		1.3.2.2 Preliminary software design
41		1.3.2.3 Preliminary communications design
42		1.3.2.4 Preliminary connectivity LAN/WAN desig
43		1.3.2.5 Preliminary support environment design
44		1.3.2.6 Draft preliminary infrastructure design d
45		1.3.3 Review preliminary design documents
46		1.3.4 Obtain feedback/input on design
47		1.3.5 Develop Detailed Infrastructure Design
48		1.3.5.1 Develop detailed hardware design
49		1.3.5.2 Develop detailed software design
50		1.3.5.3 Develop detailed communications design

1 The outline numbers reflect the hierarchy or outline structure of the Project plan.

NOTES

- Project has the ability to display the outline as a Network Diagram, after the dependency structure has been established as described in the next step. Or you can use the Visio WBS Chart Wizard to view the outline in a more traditional chart or tree format. For more information about network diagrams and the Visio WBS Chart Wizard, see the related links in the See Also section of this page.
- You can easily collapse and expand summary tasks to hide or show different levels of detail. Click Expand or Collapse beside a summary task to show or hide (respectively) its subtasks. You can also quickly show various outline levels by clicking Show on the Formatting toolbar.

Step 3: Enter task durations or work estimates

You can specify the time that you estimate it will take to complete the tasks by entering either work or duration. Work is the amount of effort or person hours needed to complete a task. Duration is the amount of actual time that will pass before the task is completed. Thus, if a task takes 16 hours of work and one person does the work, its duration is two days (assuming an 8-hour work day). If two people do the work, its duration is one day. However, the amount of work is the same either way. If you are using a work-based estimating approach, resource assignments drive the duration for each task. This scheduling approach is called effort-driven scheduling. You can use either method, but you should decide whether you want to use a work-based or a duration-based method of scheduling, and then stick with that method.

Entering work or duration is straightforward. Task work or duration can be entered directly in the Work or Duration field in any table or dialog box that displays those fields. It's important to understand that work and duration are measured in working days. For example, by default, 1 day = 8 hours, 5 days = 1 week, 20 days = 1 month. This means that if you type **30 days** in the Duration field, it is calculated as 6 weeks rather than a month. So make the correct conversions when entering values.

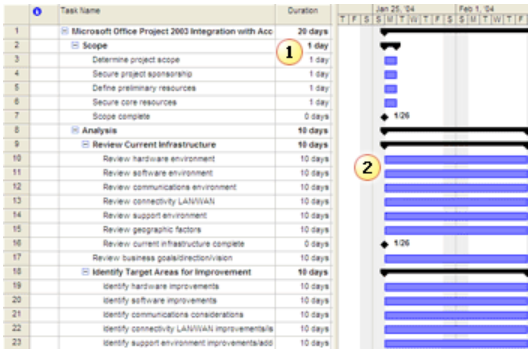
NOTE You can enter different time units on a task-by-task basis by simply typing the time unit after the number. For example, type 8min for minutes, 8h for hours, 8d for days, 8w for weeks, and 8mo for months.

If most of your duration or work estimates will be weeks or months long, you can change the default time unit.

+ To change the default time unit for duration or work

When you enter work or duration in a plan, it is important to enter it at the subtask level because summary tasks are calculated fields. Project does not allow these values to be entered for a summary task.

+ To enter task durations



1 The durations of summary tasks span to include the earliest start and latest finish of their subtasks.

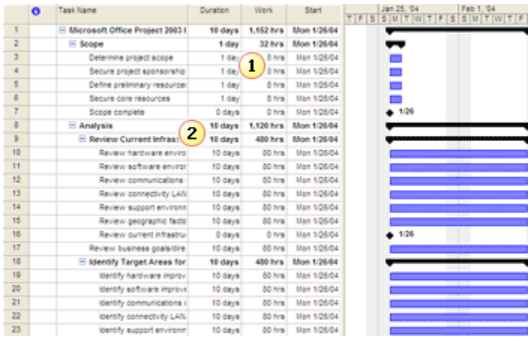
2 As task durations change, Project redraws the task's Gantt bar to show the duration against a timeline.

NOTES

- You can change the duration of a task in many different views, tables, and dialog boxes in Project. If you change the duration in one place, it will change in every other location automatically.
- To mark a task as a milestone, type **0** in the Duration column.

If you are following a work-based scheduling approach, enter work estimates in the Work column. Note that if you choose this approach, durations will not be calculated until you complete step 5, which is assigning resources.

+ To enter work



1 You can enter task duration or work values, or both.

2 Note that a summary task's duration value shows the total amount of time it will take to complete the subtasks, while the summary task's work values show the total number of hours that will be spent working on the subtasks.

Step 4: Create dependencies between tasks

One of the most critical steps in scheduling is to create task dependencies, or links. This step makes the difference between a plan that can be used as an effective management tool and a plan that can only be used as a presentation tool.

A dependency occurs when the start or finish of one task depends upon the start or finish of another. Most tasks are dependent upon other tasks. After the dependencies are set, you can easily identify the critical path and understand the driving factors for the project end date. You can also easily make changes to one task and immediately see the ripple effect it will have on the rest of the plan. This is where Project shows its power as a tool for managing projects.

The challenge planners have is to ensure that all tasks are in the dependency chain. Here is a good rule of thumb: every task should have a predecessor unless it is driven by the start date of the project. Every task should have a successor unless it is the last task or milestone in the project.

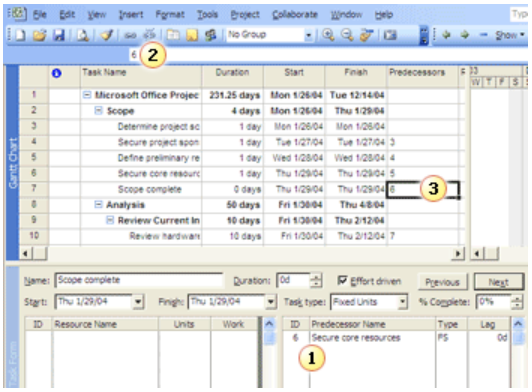
When linking tasks, you can specify different types of dependencies. The most common dependency is Finish-to-Start (FS), which means that the predecessor task must finish before the successor task can start.

There are many ways to set dependencies in Project:

+ To enter predecessor task IDs in the Task Form
+ To use the Link Tasks button
+ To enter task IDs in the Predecessors column

As you set the dependencies, Project adjusts the schedule, even though you have not yet assigned your resources.

NOTE If two tasks need to overlap one another, or if they are dependent but there needs to be a gap between them, use the Lag field. For more information about lead and lage time, see the related links in the See Also section of this page.



1 One way to create task links is to enter predecessor task IDs in the Task Form.

2 Another way is to select two tasks, and then click the Link Tasks button.

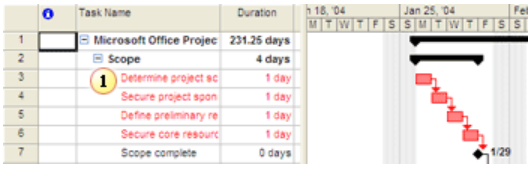
3 Yet another way to link tasks is to enter task IDs in the Predecessors field.

Next, you might want to display your critical path, which identifies the path on which no slippage can occur without effecting the end date of the project.

+ To display the critical path

If you want to further highlight the critical path, you can customize the view.

+ To format task names and Gantt bars of tasks on the critical path



1 This view is formatted to show tasks on the critical path with red task names and Gantt bars.

Step 5: Assign resources

How and which resources you want to assign depends upon your scheduling and tracking needs. There are three possible approaches:

- Use Project to show responsibility for tasks. This approach takes the least effort to enter and maintain. However, it does not give you any real insight into the status of work during the course of the project.
- Use Project to forecast resource requirements. This approach requires additional effort to enter and maintain assignments, and also requires assigning the correct work and unit values up front in the planning process. It provides more accurate information up front, but it does not provide information about the status of work during the project.
- Use Project to forecast resource requirements and track what work resources actually do on tasks. This approach requires the most effort because updates must be entered on tasks, but it also allows you to see how work on tasks is progressing during the course of the project.

Make sure you understand what approach you need early on in the planning cycle to avoid significant rework of your plan. It is also important to determine what types of resources you need to assign. For example, you can assign named resources, such as Judy Lew, or generic resources, such as Programmers. If you are early in the project-planning stage, you might want to use generic resources. Eventually, you will want to assign actual resources. You can also assign material resources such as computers, software, or other types of material (unit) costs.

After you understand what types of resources you need, you can add them to your project schedule.

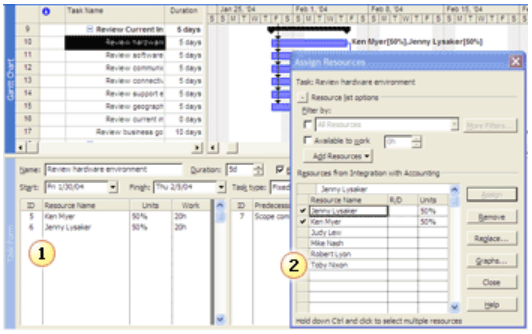
+ To add resources to your project by using the Resource Sheet

After you add the resources to the project, you can begin to assign resources to tasks.

+ To assign resources by using the Resource Name field

+ To assign resources by using the Task Form

+ To use resources by using the Assign Resources dialog box



1 Some ways to assign resources to tasks include selecting resource names from the Resource Name field or in the Task Form.

2 Another way to assign resources is to display the Assign Resources dialog box.

NOTES

- You can select multiple resources and multiple tasks at the same time by holding down CTRL while you click to select them. This allows you to create multiple assignments at one time. You can assign many resources to many tasks, many resources to one task, or one resource to many tasks.
- Assign resources to the subtasks, not summary tasks. This helps to build and maintain a more effective and manageable plan.
- If your task type is Fixed Units and you are using effort-driven scheduling, the duration of the task will shorten as you assign more resources. If you change the task type to Fixed Duration, the duration will remain fixed, and work or units will change.

Next Step

That's it! Now, you're ready to present your plan and to use it to track and manage your project.