

## Choosing Task Type in MS Project

Each of the task types affects scheduling when you edit one of the three elements as follows.

In a	If you revise units	If you revise duration	If you revise work
<b>Fixed units task</b>	Duration is recalculated.	Work is recalculated.	Duration is recalculated.
<b>Fixed work task</b>	Duration is recalculated.	Units are recalculated.	Duration is recalculated.
<b>Fixed duration task</b>	Work is recalculated.	Work is recalculated.	Units are recalculated.

Note in MS Project Work = Effort

### Examples illustrating the difference

1. Let's say you have a **fixed-units task**, with 1 full-time resource unit available for 8 hours each day. You set the task up with a 10-day duration and 80 hours of work (work = effort in MS Project: For tasks, work = the total labor required to complete a task. For assignments, the amount of work to which a resource is assigned. For resources, the total amount of work to which a resource is assigned for all tasks. Work is different from task duration.).

1.1 If you find out that another full-time resource can assist on the task, Project recalculates the task's duration. The task now has two units assigned, with a 5-day duration and 80 hours of work.

1.2 If you find out that you have 8 days to complete the task rather than 10, Project recalculates the task's work. The task now has an 8-day duration, with 64 hours of work and 1 resource unit.

1.3 If you find out that the task will take 20 hours of additional work, Project recalculates the task's duration. The task now has 100 hours of work, with duration of 12.5 days and 1 resource unit.

2. Now let's say you make the same task a **fixed-work task**. This means that the task can take only the amount of work that you specify: no more, no less. In this example, the task has 1 full-time resource available for 8 hours each day, and it has a 10-day duration with 80 hours of work.

2.1 If you find out that another full-time resource can assist on the task, Project recalculates the task's duration. The task now has 2 units assigned, with a 5-day duration and 80 hours of work.

2.2 If you find out that you have 8 days to complete the task rather than 10, Project recalculates the task's resource units. In order to get the task done in 80 hours over 8 days, 1.25 resource units must be assigned. The resource unit that is currently assigned to the task is allocated at 125%. You need to assign another resource to account for the additional 25% allocation.

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2.3 If you find out that the task will take 20 hours of additional work, Project recalculates the task's duration. The task now has 100 hours of work, with a duration of 12.5 days and 1 resource unit.

3. Finally, let's say you make the same task a **fixed-duration task**. This means that the task must be completed in the duration that you specify. Again, in this example, the task has 1 full-time resource available for 8 hours each day, and it has a 10-day duration with 80 hours of work.

3.1 If you find out that another resource can assist on the task, Project recalculates the work assigned to each resource. When just 1 resource was assigned to the task, that resource had 80 hours of work to complete. When you assign another resource to the task, each resource has 40 hours of work to complete over the same 10-day duration, for a total of 80 hours of work. By adding another resource unit, you also revise the allocation of both units to 50% each, making them both available to work 50% on other tasks.

3.2 If you find out that you have 8 days to complete the task rather than 10, Project recalculates the task's work. The task now has an 8-day duration, with 64 hours of work and 1 resource unit.

3.3 If you find out that the task will take 20 hours of additional work, Project recalculates the task's resource units, so that the additional work can still be completed within the 10-day duration. The task now has 100 hours of work, with a duration of 10 days and 1.25 resource units. The resource unit that is currently assigned to the task is allocated at 125%. You need to assign another resource to account for the additional 25% allocation.

**Note:** Because assignments of **cost resources** (cost resources: Resources that don't depend on the amount of work on a task or the duration of a task, such as airfare or lodging.) don't have values for work or units, these values will not be recalculated when the task's start date or finish date is modified. *Dates also are never recalculated for a cost resource assignment, because you cannot modify the work or units.*

## Removing Effort-Driven from Activities (Tasks)

For all tasks, after you assign a **resource** (resources: The people, equipment, and material that are used to complete tasks in a project.), the task is scheduled according to the formula  $Duration = Work / Units$ .

For any task, you can choose which piece of the equation Project calculates by setting the task type. When you assign or remove people from a task, Project lengthens or shortens the duration of the task based on the number of resources that are assigned to it, but Project does not change the total work (= effort) for the task. This is called **effort-driven scheduling** (effort-driven scheduling: The default method of scheduling in Project; the duration of a task shortens or lengthens as resources are added or removed from a task, while the amount of effort necessary to complete a task remains unchanged.) and is the default that Project uses when you assign resources to tasks.

Although effort-driven scheduling can work in most scenarios, you may want to change this behavior to more accurately reflect what happens on a particular task when resources are added or removed. For example, you may want to see the total work increase as you add more people to a particular task.

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**Note:** You **cannot remove** effort-driven scheduling from **fixed work tasks**. Fixed work tasks do not have flexible work values, and are therefore always effort-driven.

1. On the **View** menu, click **Gantt Chart**.
2. Click the row for the task that you do not want to use effort-driven scheduling.

To change up to 10 tasks at once, hold down CTRL and click the row for each task. If the tasks appear next to each other in the grid, click the first task and then hold down SHIFT and click the last task to select the entire block of tasks.

3. Click **Task Information**

, and then click the **Advanced** tab.

4. Clear the **Effort driven** check box.

When you work with effort-driven scheduling, keep the following in mind:

The effort-driven calculations apply only after the first resources are initially assigned to the task. After the first resources are assigned, the work value doesn't change as new resources are assigned to or removed from the same task.

If the assigned task type is **Fixed Units**, assigning additional resources shortens the duration of the task.

If the assigned task type is **Fixed Duration**, assigning additional resources decreases the individual unit values for resources.

If the assigned task type is **Fixed Work**, assigning additional resources shortens the duration of the task.

Summary tasks and inserted projects cannot be set to **Effort driven**.

**Excerpts above taken from Microsoft Project 2007 Help Information.  
Provided by Robertson Consulting Ltd for Project Management students.**