

Real-Life MS Project: Task Calendars

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Task Calendars are one of the most powerful tools available for scheduling special events. Introduced in MS Project 2000, they help project managers precisely schedule certain types of work.

Some project work takes place only at certain times of the day or certain times of the month:

- Run batch jobs only at a certain time of night
- Prepare month-end reports starting and ending on specific dates each month
- Work on road construction certain times of the week to avoid disrupting rush hour

Modeling these situations by hand can be error prone. Task Calendars let the manager schedule these tasks more accurately and more easily.

The Scheduling Problem

Assume that your company only allows programmers to access production data on a restricted schedule:

- 5 a.m. to 9 a.m. weekdays
- 5 p.m. to 8 p.m. weekdays
- all day on weekends (midnight to midnight)

How many hours can a full-time resource spend on a task that requires access to production data?

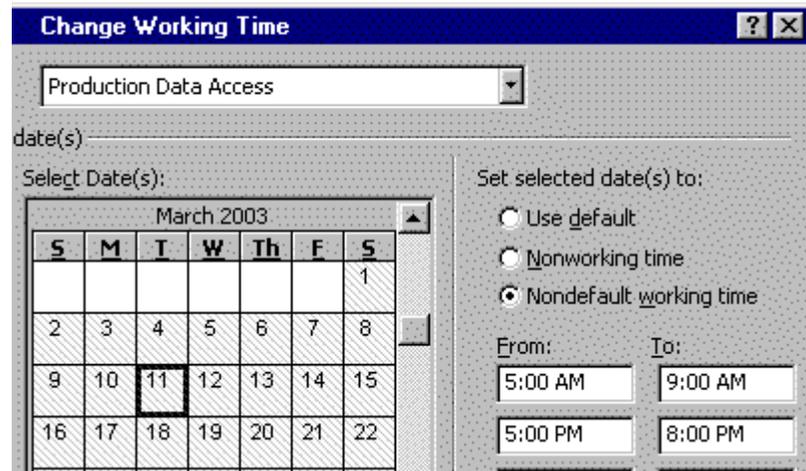
The answer depends upon their schedule. Working a 4/40 week, four days per week, 8 a.m. to 7 p.m. with an hour off at noon, a resource can work three hours per day, four days per week. He or she can work 8 a.m. to 9 a.m. and 5 p.m. to 7 p.m. Someone working a standard 8 a.m. to 5 p.m. schedule will only be able to apply an hour per day. MS Project will automatically reconcile task and resource schedules.

Solving the Problem with a Task Calendar

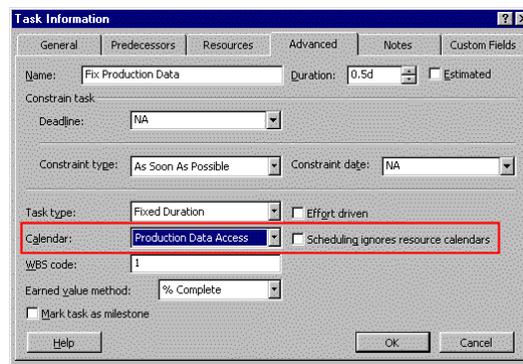
First create a calendar for the task. Create a calendar named "Production Data Access" with the work-hours listed above.

Apply this calendar to a task. Go to the Advanced tab in the Task Properties dialog box. Under Task Calendar, select the new calendar.

Assign a 4/40 resource to this task. Each day spent on the task will result in just three hours work. Assign a 9 to 5 resource, and they cannot apply any work-hours to the task. MS Project will only schedule work when the task calendar matches the resource calendar.



Create a calendar with the work hours available for Production Data Access



Set the task calendar to Production Data Access

	Task Name	Assignment Units	Work	Duration	Start	Finish
	<input type="checkbox"/> Fix Production Data		4 hrs	0.5 days	Tue 8:00 AM	Tue 8:00 PM
	Standard Worker	100%	1 hr		Tue 8:00 AM	Tue 9:00 AM
	Compressed Wk W	100%	3 hrs		Tue 8:00 AM	Tue 7:00 PM
	<input type="checkbox"/> Work a Standard Task		16 hrs	1 day	Tue 8:00 AM	Tue 5:00 PM
	Standard Worker	100%	8 hrs		Tue 8:00 AM	Tue 5:00 PM
	Compressed Wk W	100%	8 hrs		Tue 8:00 AM	Tue 5:00 PM

A standard task runs a full eight-hour day for either a standard resource, or a resource on a compressed work week. A Production Data task runs only part of the day; an hour

With this technique time-of-day becomes important. If a predecessor task finishes at 10 a.m. on Monday, MS Project will not allow its successor task to start before 10 a.m. In our example, the resource would miss the morning window and will start at 5 p.m. at the earliest. Since you may need to see the start and end time for tasks, become familiar with the choices for date/time formats under Tools...Options...View.

Must-Do Tasks – Ignore Resource Calendars

Some tasks require a certain schedule from everyone involved, no matter what their normal schedule. The day of a move, certain people will be on-site from early morning until the job is done. Without task calendars, the calendars for every person involved should be adjusted for the day of the move.

Task calendars simplify schedule maintenance. Create a calendar with no work any day, EXCEPT the day of the move. Work is 8 a.m. to 8 p.m. on that day. Attach the new schedule to the task, and check off “Ignore resource calendars”. Any resource assigned to that task will perform it sometime from 8 a.m. to 8 p.m. on the day of the move, no matter what their normal schedule might be. If the day of the move changes, only the task calendar needs to be updated, not the work calendars for everyone involved in the move.

Beware of scheduling mistakes while using that feature. MS Project ignores vacations, long-term leaves, and alternate work schedules when you check off “ignore resource calendars”. Make sure the resource is committed to off-schedule or overtime work before assigning him or her to the task. For a true must-do task, the task calendars can make administration of the schedule simpler. Use them too often, though, and your schedule becomes difficult to maintain.

A Time Saver, But Not a Silver Bullet

Using task calendars make complex schedules easier. When a task must happen on a certain day or a certain time of day, MS Project can enforce that rule and do all the associated calculations. You can even force the allocation of resources, regardless of their personal work schedule.

These techniques make resource leveling more complex, though. When resources work on more than one task simultaneously, you need a solid strategy to schedule their work realistically. Task calendars can easily create scheduling conflicts between multiple tasks. With a mature approach to resource leveling, though, you can overcome all these problems. Recognize the limits of this technique, but go ahead and use it. You can save yourself hours of schedule maintenance with task calendars.

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