

Focus on Task Relationships to Focus on Smooth Execution

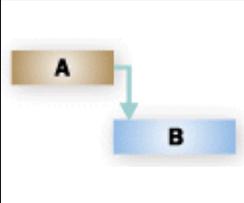
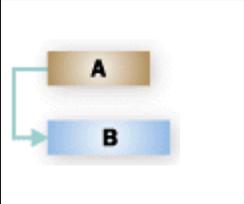
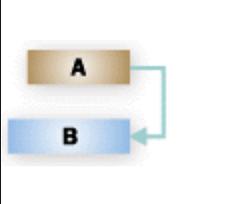
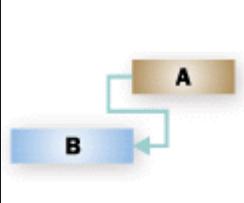
Speaker: B Sai Prasad, PMP®, PMI-SP®, MVP Project & K P Prakash, MCTS

• **Task Dependencies**

Predecessor: Driving task. Successor: Driven task

• **Dependency type can be**

1. Finish-to-Start (FS - Default)
2. Start-to-Start (SS)
3. Finish-to-Finish (FF)
4. Start-to-Finish (SF)

Link type	Example	Description
Finish-to-start (FS)		The dependent task (B) cannot begin until the task that it depends on (A) is complete. For example, if you have two tasks, "Dig foundation" and "Pour concrete," the "Pour concrete" task cannot begin until the "Dig foundation" task is completed.
Start-to-start (SS)		The dependent task (B) cannot begin until the task that it depends on (A) begins. For example, if you have two tasks, "Pour concrete" and "Level concrete," the "Level concrete" task cannot begin until the "Pour concrete" task begins.
Finish-to-finish (FF)		The dependent task (B) cannot be completed until the task that it depends on (A) is completed. For example, if you have two tasks, "Add wiring" and "Inspect electrical," the "Inspect electrical" task cannot be completed until the "Add wiring" task is completed.
Start-to-finish (SF)		The dependent task (B) cannot be completed until the task that it depends on (A) begins. For example, the roof trusses for your construction project are built off-site. Two of the tasks in your project are "Truss delivery" and "Assemble roof." The "Assemble roof" task cannot be completed until the "Truss delivery" task begins.

• **Choose the right dependency**

• **Identify the predecessors to a task**

- Identifying predecessors is often easier than finding successors.

• **Determine whether the start or finish of the predecessor controls the scheduling of the successor**

- For example, if the finish of the predecessor controls the second task, the dependency type must be either finish-to-finish or finish-to-start.

• **Determine whether the predecessor triggers the start or finish of the successor**

- For example, if the result in the previous step is "finish" and the result for this step is "start," the dependency type is finish-to-start.

• **To further define the task relationships, identify whether the dependency uses lead time or lag time**

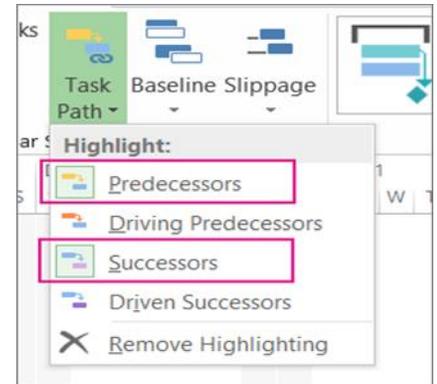
- For example, if you can't start to add the second coat of paint until the first coat has dried, the finish-to-start dependency between the "Paint first coat" task and the "Paint second coat" task includes a four-hour lag.

• **Trace Task Path**

<http://www.mpug.com>
<http://chennai.mpug.com>

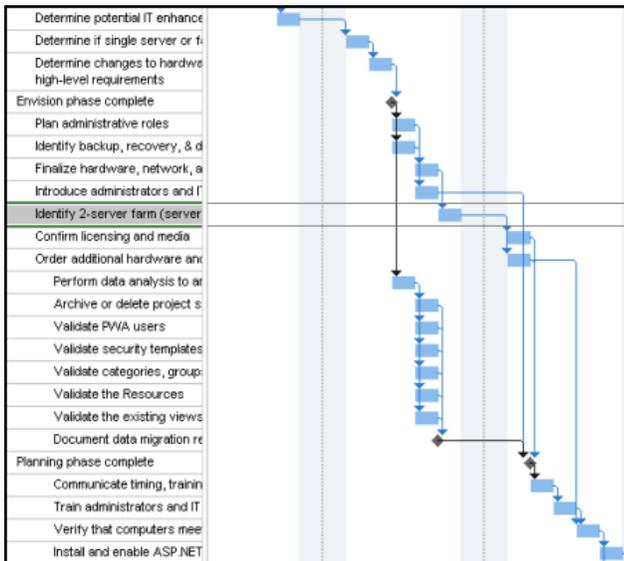
- With a complex project, the bar side of the Gantt Chart can start to look crowded with multi-colored bars and link lines flying everywhere. To sort this out visually, you can display a task path to highlight how tasks link to each other.

- On the Gantt Chart, click the Format tab.
- Click Task Path, and then pick the related task to highlight.
 - Predecessors** Tasks that link to and come before the selected task.
 - Driving Predecessors** Tasks that come before the selected task and directly impact it. When the driving predecessor task moves, the selected task also moves.
 - Successors** Tasks that link to and follow the selected task.
 - Driven Successors** Tasks that follow the selected task and are directly impacted by it. When the selected task moves, the driven successor task also moves.
 - This image shows that predecessors and successors are highlighted on the Gantt Chart.
- To remove the task path highlighting,
 - Click Remove Highlighting.



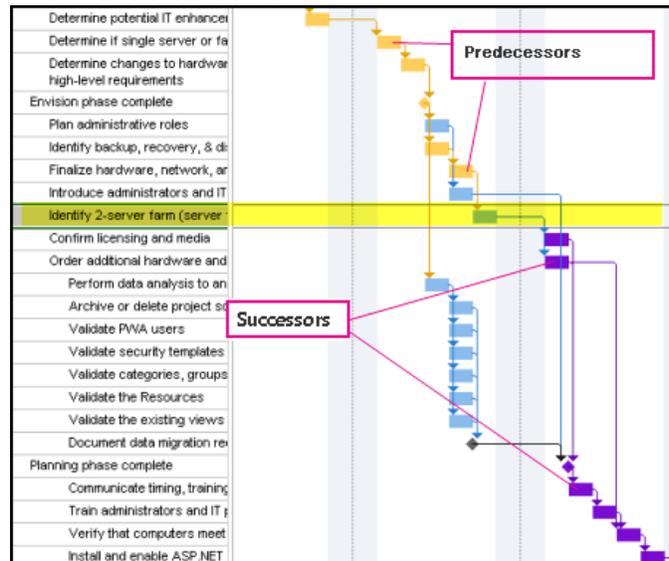
Before

A schedule without task paths.



After

A selected task showing predecessors and successors. When a task is selected, it's "path" is highlighted, telling you instantly what the related task is.

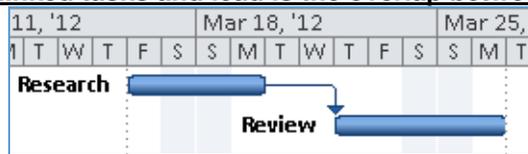


Schedule Related Risks

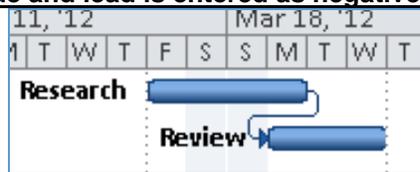
The key concept here is buffer.

Delay or overlap tasks

- Lag is the delay between linked tasks and lead is the overlap between linked tasks**



- Lag is entered as positive value and lead is entered as negative value**



- Value can be duration or a percentage of the duration of the predecessor**

Task Information

General | **Predecessors** | Resources | Advanced | Notes | Custom Fields

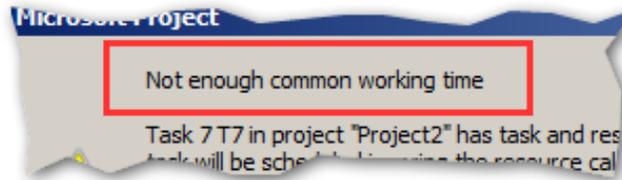
Name: Duration:

Predecessors:

ID	Task Name	Type	Lag
1	Prepare	Finish-to-Start (FS)	0d

• **Schedule a Task**

- By default, tasks are scheduled based upon the project calendar.
- To define unique or specific exceptions/work weeks for tasks you can create a task calendar.
- A task calendar that is associated with a task overrides the project calendar.
- To create a task calendar click the **Project** tab, and click **Change Working Time**. Click **Create New Calendar** and, set the exceptions and workweeks.
- After you create a base calendar, you assign it to the task by selecting the calendar in Calendars list in Advanced tab of Task Information.
- If the task has non-intersecting task and resource calendars, Project alerts Not enough common working time.



- To change how this task is scheduled, either change the task or resource calendar (or) select the Scheduling ignores resource calendars check box in Advanced tab

• **Validate Task Relationships**

- A predecessor task is one that must be completed before one or more other tasks can begin
- Then of course, a successor task is one that cannot start until its “predecessor(s)” have been completed.