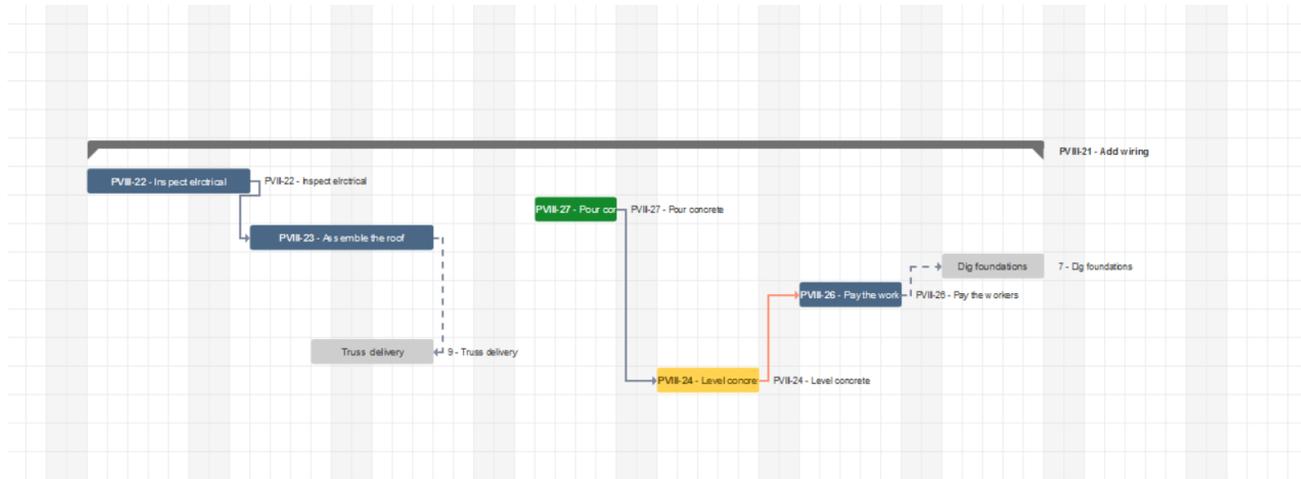# Task dependencies - Link types

Linking Tasks

Tasks can be set to take place in certain order, by adding hard links between them.

There are four types of links to be used within the BigPicture, and those can be synchronized with Jira's dependencies. Although that synchronization can be customized by the user, we recommend using the default setting created by the plugin, as auto scheduling features will help you in planning your tasks.

The Gantt chart is capable of showing both Jira work items (any issue type), it can also show Artificial tasks, as well as, Projects, Versions, Components, Sprints and Backlog. The links between your tasks and non-task items will be indicated with a dashed line. Such links will not be visible in Jira as they exist only within the app.

> ⓘ Setting the task's mode to Manual or Locked will disable any influence a link could possibly have on this task. The link will still impact other linked tasks, that are in Auto Bottom-up or Auto Top-down modes.

The link configuration is described in Global configuration - Link configuration.

Every task on the Gantt chart has two significant sides - to the left and to the right. These symbolize the Start and End Dates. Therefore, by linking two tasks (below referred to as the Task A and Task B) we can expect four following combinations which are **link types**.

End to Start

Source: Task A end date Target: Task B start date

When Task A finishes, then Task B starts. Task B can't start until Task A is done. This is the default link type in Project, and the most commonly used.

Moving Task A to the right will also move Task B, as long as Task A's End Date is moved up to or ahead of Task B's Start Date. Moving Task A to the left has no effect on Task B. When Task B is moved to the left, it will not go further than Task A's End Date. Moving it to the right has no effect on Task A.

Example: *Dig foundation* (Task A) must be complete before your team can start *Pour concrete* (Task B).
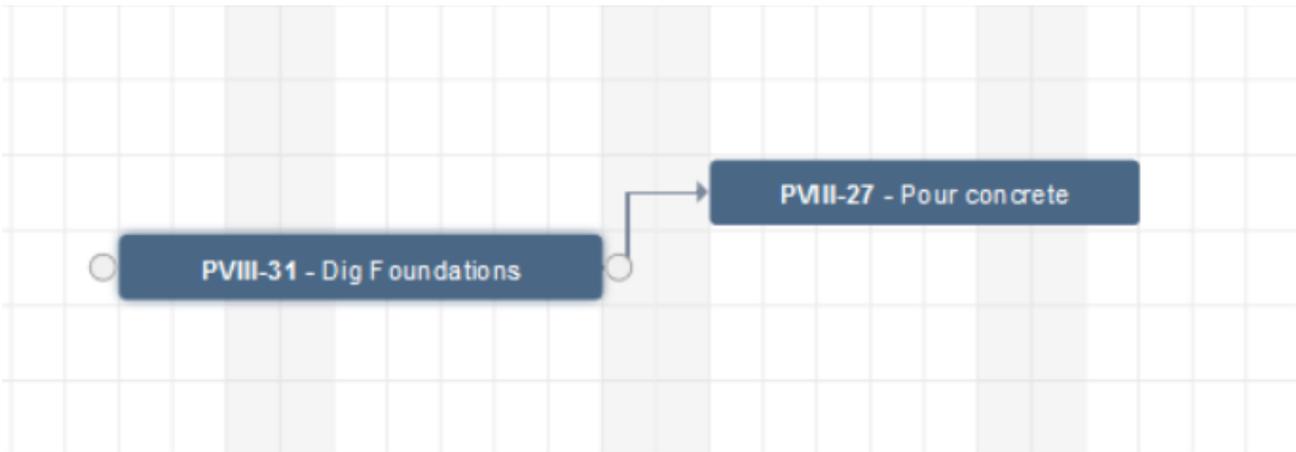
End to End

Source: Task A end date Target: Task B end date

When Task A ends, Task B also immediately ends. Task B can't finish until Task A is done. They don't have to end at the same time: Task B can end any time after Task A ends. Moving Task A to the left changes nothing. However, if Task A is moved further than Task B's End Date, Task B will be moved in order to retain the dependency (and to end at the same time). Moving Task B to the left further than Task A's End Date will automatically move Task B's end at the same time as the end of Task A. Moving Task B to the right has no effect on Task A.

Example: Your team is adding the wiring to the building and inspecting it at the same time. Until *Add wiring* (Task A) gets done, you won't be able to finish *Inspect electrical* (Task B).

Start to Start

Source: Task A start date Target: Task B start date

This means that when Task A starts, Task B will also start. Task B can't start until Task A starts. They don't have to start at the same time: Task B can begin any time after Task A begins.

When two tasks are connected this way and task A is moved to the left, task B remains unchanged. When Task A is moved right and exceeds the Start Date of Task B, then Task B will also be moved to the right in order to start at the same time as Task A.

When Task B is moved to the left, it will never go further than the start date of Task A. If Task B is moved right, Task A remains unchanged

Example: To save time, you want to level concrete at one end of the foundation while it is still being poured at the other end. But *Level concrete* (Task B) can't start until *Pour concrete* (Task A) has also started.

PVIII-24 - Level concre   PVIII-24 - Level concrete

PVIII-25 - Pour concret   PVIII-25 - Pour concrete

Start to End

Source: Task A start date Target: Task B end date

When Task A starts. Task B can't finish until Task A begins. Task B can finish any time after Task A begins. This type of link is rarely used.

In this type of dependency, when Task A is moved to the right, if its Start Date exceeds the End Date of Task B, B will be also moved right. Moving Task A to the left changes nothing.

Example: The roof trusses for your building are built off-site. You can't finish *Assemble roof* (Task B) until *Truss delivery* (Task A) begins.

PVIII-23 - Assemble the roof

PVIII-30 - Truss delivery
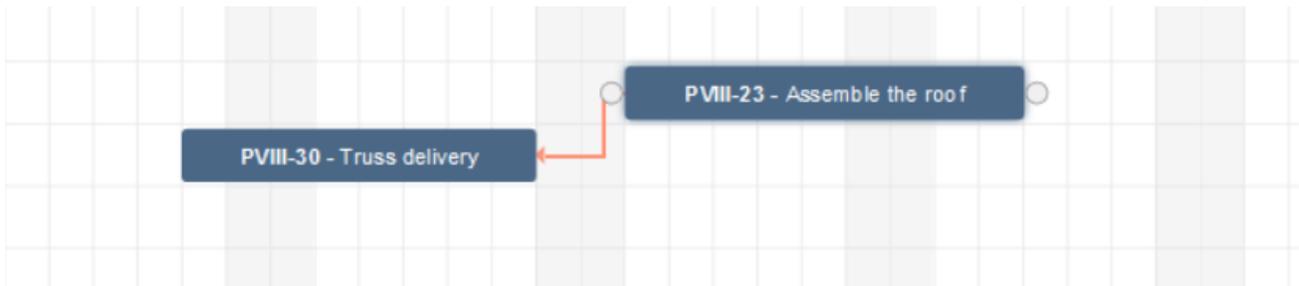
Artificial Tasks Links

Artificial tasks with ASAP links but without Lag Time are displayed with a dotted line in Golden colour.

Artificial tasks with ASAP links and with Lag Time set are displayed with a dotted line in Blue colour.

Pour concrete   8 - Pour concrete

Truss delivery   9 - Truss delivery

Dig foundatio   7 - Dg foundations
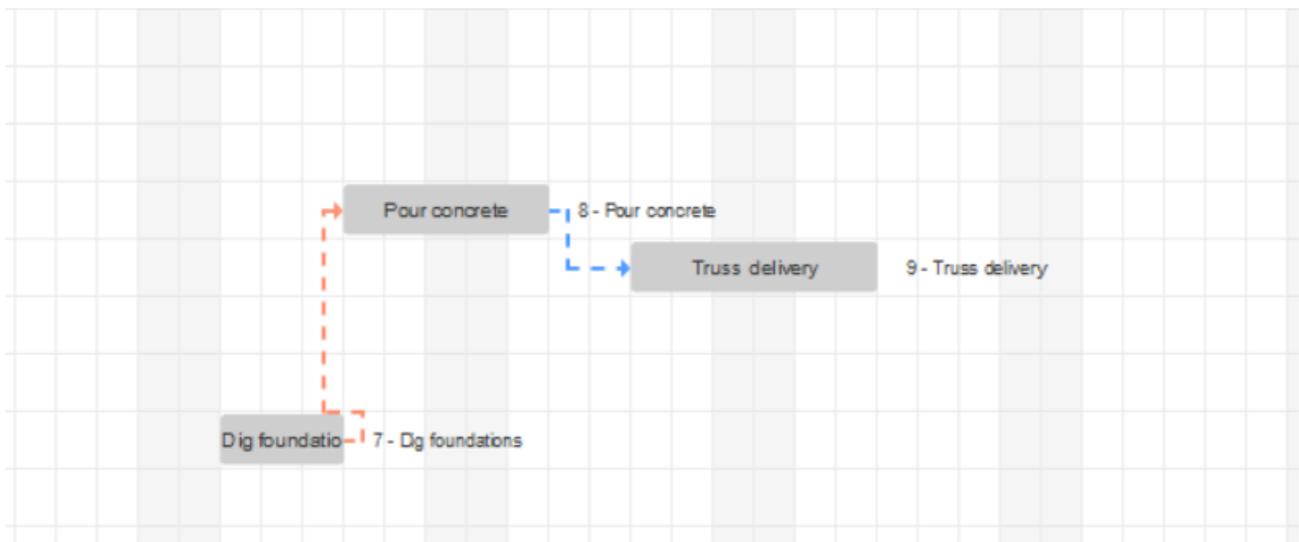
Artificial tasks without ASAP links and without Lag Time are displayed with a dotted line in Grey colour.

Artificial tasks without ASAP links and with Lag Time set are displayed with a dotted line in Violet colour.