Scheduling Dependencies

11.2

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scheduling

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A production process of a certain industry may require that, besides producing the finished goods that are shipped to the customer, it is also necessary to produce the components that are used to assemble them (and possibly, other intermediate assemblies).

Since the availability of the components at the right step in their flow is a constraint for assembling dependent products, it is possible to take these dependencies into consideration in one of two ways:

1. If this relation is given through Material Dependencies, Scheduling will only Schedule the successor Schedule Scenario Job once the predecessor Schedule Scenario Job has finished. This is, the End Date of the Job associated with the Material Dependency's From Material and From Step must be before the Start Date of the Job associated with the Material Dependency's To Material and To Step. For more information, see Manage Material Dependencies.

2. In a Schedule Scenario of mode Planning Schedule, for any planned Production Order with the properties Include in Planning and Include in BOM Explosion marked as true, the system will perform BOM Explosion: looking at the BOMs associated with the Product, Virtual Materials will be created for the components specified in these BOM, and Virtual Material Dependencies will be created between them, so as to ensure that the finished good jobs aren't started before the component is ready.

> ℹ️ **Info**
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> For this last case, if there are unit changes between the units given for the finished good Product, BOM and component Products, it is important to have the unit conversion factors filled in the Product Unit Conversion Factors generic table; otherwise, a unit conversion factor of 1 is assumed.

> ℹ️ **Info**
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> For this last case (Planning Schedule), the functionality is recursive: once having established that there are component Products required for the finished good Product, it will look in the component Product's Flow for BOM Contexts with other components, and so on. This is done until there can be found no more BOM Contexts for the component Products.

For both these cases, the dependencies associated with each Schedule Scenario Job can be seen in the details bar, by expanding the Dependencies tab. Jobs which have dependencies are also marked with a dependency icon.
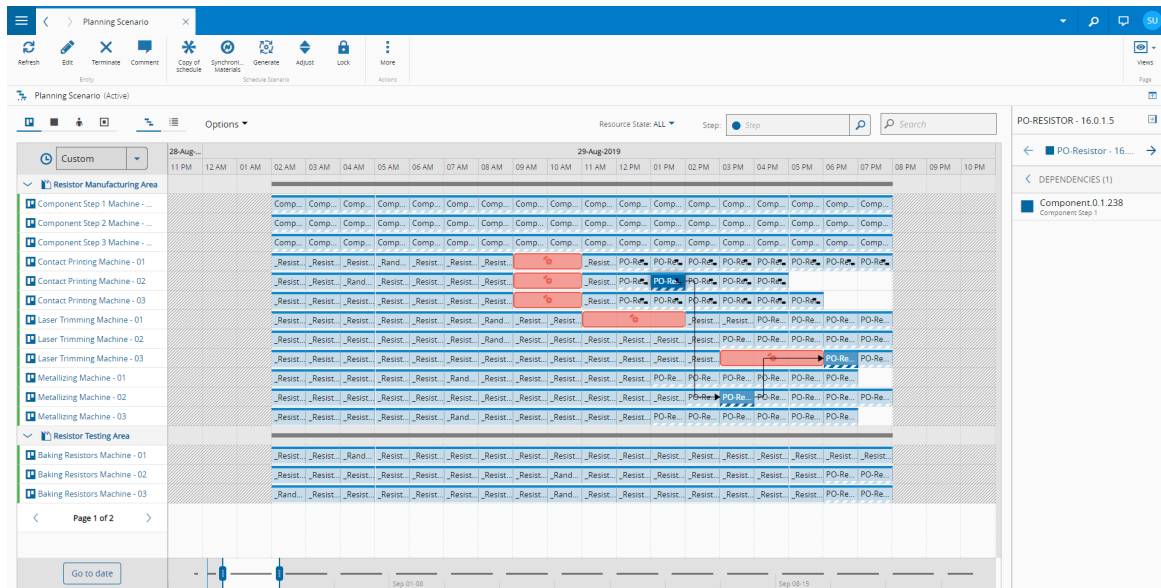
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