Critical manufacturing
an ASM PT company

Scheduling Optimization Criteria

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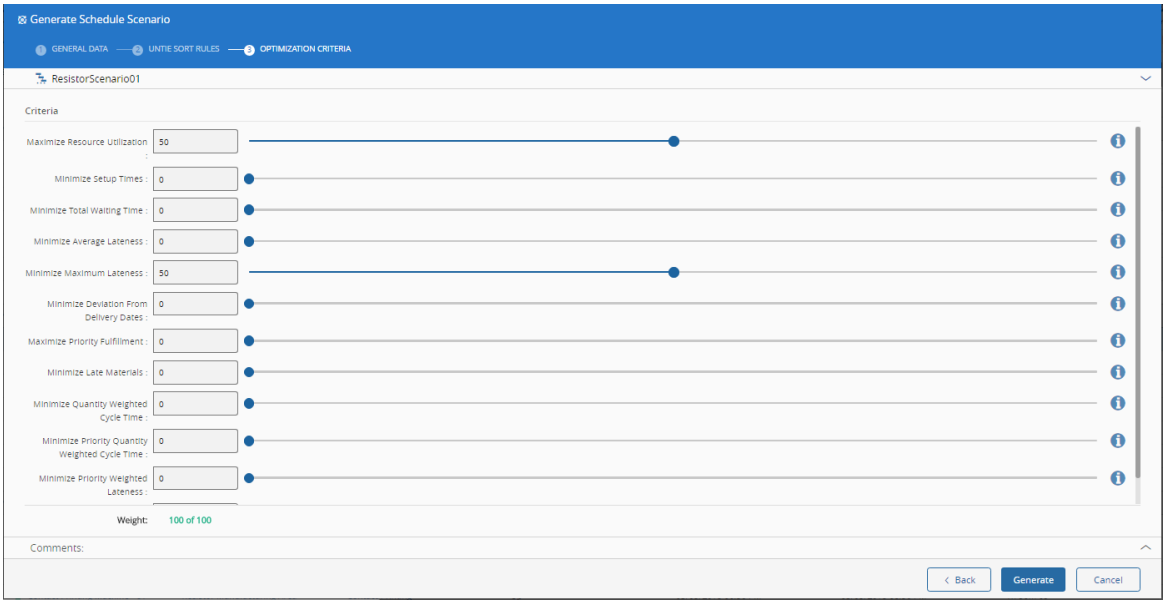
Scheduling Optimization Criteria

This section describes the different Optimization Criteria supported by the scheduling engine. Each one aims at fulfilling a certain objective, with this fulfillment being measured by an associated KPI. It is possible to combine more than one of these objectives, using the associated weights to give relative importance between criteria (either defined by default in the Create Schedule operation, or specified at the Schedule Scenario level, during the Generate Schedule Scenario). Keep in mind that the sum of all weights must equal 100%. It is advisable to limit the criteria mix to a maximum of two/three, to preserve the integrity of the results obtained.



The available Optimization Criteria are:

Optimization Criteria	Description	Associated KPI
Minimize Late Materials	Materials are sequenced using a heuristic with the goal of minimizing the number of delayed material based on their *Due Dates*. Forward scheduling is used from the planning start date.	Late Materials Percentage
Minimize Setup Times	Materials are sequenced in order to minimize the sum of the setup times. Sorting is performed according to the setup times that are relevant to the Materials to be scheduled, defined in Setup Matrixes. Forward scheduling is used from the planning start date.	Setup Time Percentage
Minimize Average Lateness	Materials are sequenced based on the earliest due date with the goal of minimizing the average delay for all Materials. Forward scheduling is used from the planning start date.	Average Lateness in Days
Maximize Resource Utilization	Materials are sequenced using a heuristic with the goal of maximizing the utilization of resource of all materials. Forward scheduling is used from the planning start date.	Process Time Percentage

Optimization Criteria	Description	Associated KPI
Minimize Maximum Lateness	Materials are sequenced using a heuristic with the goal of minimizing the maximum delay based on the Due Date of all Materials. Forward Scheduling is used from the planning start date.	Maximum Lateness in Days
Minimize Deviation From Delivery Dates	Materials are sequenced using a heuristic with the goal of minimizing the sum of deviations between the end of the last Step and the Due Date for each Material. Backward scheduling is used based on the Due Date of each Material.	Average Earliness in Days
Maximize Priority Fulfillment	Materials are sequenced with the goal of maximizing the fulfillment of Due Dates, taking into account the different Priorities. Forward scheduling is used from the planning start date.	AverageDelayDays
Minimize Total Waiting Time	Materials are sequenced with the goal of minimizing the sum of waiting times between consecutive steps for each Material. Forward scheduling is used from the planning start date.	Inactivity Time Percentage
Minimize Quantity Weighted Cycle Time	Materials are sequenced using a heuristic with the goal of minimizing the sum of the quantity weighted cycle time for each Material. Forward scheduling is used from the planning start date.	Quantity Weighted Average Cycle Time
Minimize Priority Quantity Weighted Cycle Time	Materials are sequenced using a heuristic with the goal of minimizing the sum of the priority weighted cycle time for each Material. Forward scheduling is used from the planning start date.	Priority Quantity Weighted Average Cycle Time
Minimize Priority Weighted Lateness	Materials are sequenced using a heuristic with the goal of minimizing the sum of the priority weighted delays of each Material against its Due Date. Forward scheduling is used from the planning start date.	Priority Weighted Average Delay Days
Minimize Total Cycle Time	Materials are sequenced using a heuristic with the goal of minimizing the total cycle time. Forward scheduling is used from the planning start date.	Average Cycle Time

Table: Scheduling optimization Criteria

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