

Oracle Cloud Supply Planning *Production Scheduling Solution Brief*

Are you making the best use of your production resources? Every minute spent producing the wrong products not only increases costs and waste; it also keeps you from delivering what your customers actually need.

The production scheduling features of Oracle Cloud Supply Planning put you in control of your operations, with minute-by-minute planning and execution of manufacturing tasks. Dynamic visualization and flexible rescheduling help you produce the right products at the right times.

IMPROVE FACTORY THROUGHPUT

The production scheduling features of Oracle Cloud Supply Planning maximizes factory throughput for the same capital investment. You can easily determine the most feasible schedule to execute on the shop floor to meet delivery expectations of your customers and, make changes on the fly when needed. Best of all, production scheduling works as part of a suite of Oracle Cloud Supply Chain Management applications, providing unparalleled ease of implementation, built-in integration, automatic updates, and lower total cost of ownership compared to on premise solutions.

ENABLE A PROACTIVE SHOP FLOOR

Traditional scheduling systems can't respond quickly to manufacturing shop floor events or changing customer order priorities during the day. They must first extract the information necessary for scheduling, such as item attributes, work order details, and resource status from underlying MES/ERP systems and then process it for finite scheduling. By the time they're able to release jobs back for execution, scheduling has been delayed, and valuable production cycles may have been missed.



Capabilities

- Simultaneously applies material, capacity and calendar constraints on machines, crews and tools
- Minimizes changeover time considering industry attributes
- Considers user-defined attribute sequences
- Manages production visually with interactive Gantt chart views
- Monitors late orders, changeover time and utilization in real time
- Integrates seamlessly with other Oracle Cloud Supply Chain Management applications to accelerate tactical planning, scheduling and execution

By contrast, Oracle Cloud Production Scheduling capabilities always capture the “live” snapshot of latest manufacturing information for production scheduling from Oracle Cloud Manufacturing, including the current resource availability and work orders. Its real-time integration allows you to generate schedules quickly and release them for execution on demand. Schedules are dynamic and can be fine-tuned manually, factoring in outages and breakdowns as they occur. Production scheduling enables a proactive shop floor through on-demand scheduling and execution at the speed of your business in the cloud.

Benefits

- Maximize production throughput
- Increase resource utilization
- Reduce manufacturing-related costs
- Improve personnel productivity
- Reduce expedites
- Improve delivery performance

Before Scheduling

Unsequenced manufacturing work orders



After Scheduling

Optimally sequenced orders for feasible execution



Figure 1. Enable a proactive shop floor

MAXIMIZE RESOURCE UTILIZATION

One key to profitable manufacturing is maximizing the utilization of your critical resources. If your production schedules aren’t feasible, shop floor personnel would spend time expediting around shortages and resolving resource constraints. This inevitably results in inconsistent lead times, unpredictable factory throughput and excess work-in-process inventory.

The production scheduling features of Oracle Cloud Supply Planning can improve both your shop floor productivity and delivery performance by creating finite schedules that simultaneously respect material, resource capacity and time constraints, such as shifts and holidays.

Schedule Using Attribute-Based Changeover Constraints

Attributes for scheduling relevant to your industry are flexibly supported. You can also define attribute-based changeover rules. Oracle Cloud Supply Planning’s production scheduling can automatically sequence production considering what quantity of products should be run together to decrease overall changeover time without jeopardizing demand or carrying excessive work in process inventory.

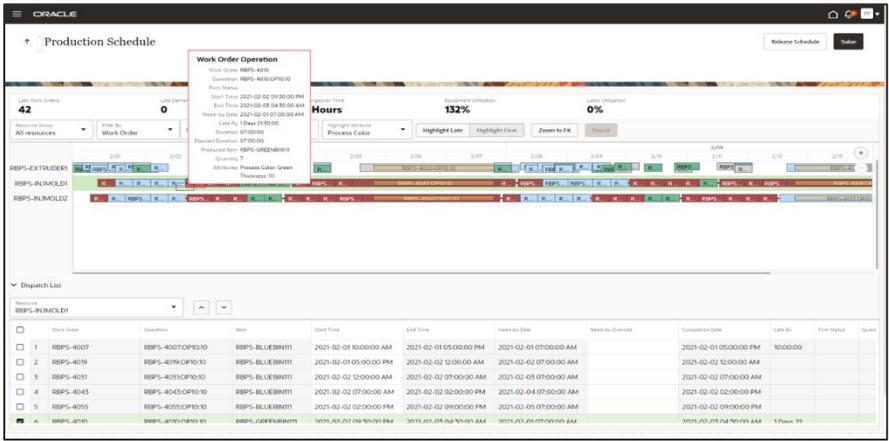


Figure 2. Attribute based changeovers ensure that resource capacity is utilized optimally

SHOP FLOOR VISIBILITY AND DECISION MAKING

Production scheduling with Oracle Cloud Supply Planning provides embedded metrics such as late demands, late work orders, total changeover time, equipment utilization and labor utilization to evaluate performance at a glance.

You can visualize the health of the schedule through a resource Gantt chart, along with upstream and downstream operations to quickly identify resource bottlenecks or excess capacity. Within the Gantt, you can conveniently pivot on attributes, products, late orders and other criteria to understand production issues, such as the amount of time lost to expensive changeovers. At a glance, you can see which work orders are late and why, which attribute sequences are good and which ones are less desirable, and how heavily resources are being used across the schedule horizon. You can also identify alternate resources that can offload production to ease bottlenecks.

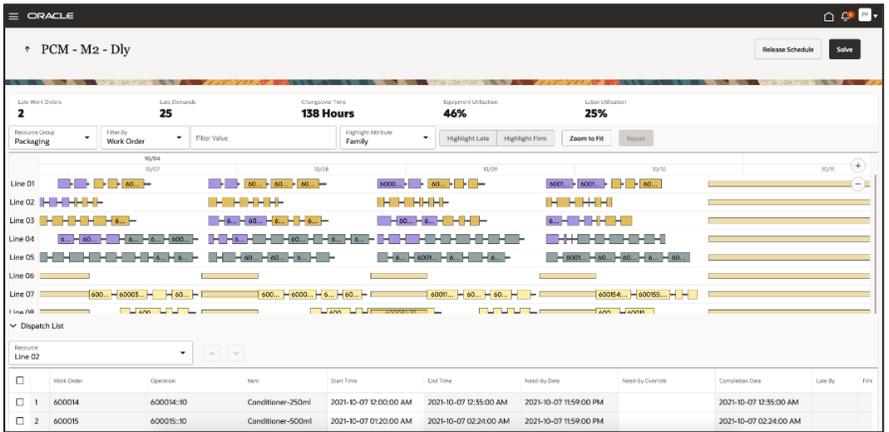


Figure 3. Fine-tune and adjust the production schedule inline to simulate for the best executable schedule based on current constraints and customer requirements

Interactive drag-and-drop rescheduling and fast inline schedule simulation help you quickly devise solutions and improve customer service by focusing on high priority late work orders.

The Dispatch List is the same representation of the schedule but listed in a table form. This provides another convenient way to re-sequence work order operations and fine tune the schedule as needed. After refining the schedule, you can approve it for release to the production floor for execution.

Simulate inline

- Impact of machine breakdowns and unplanned downtime
- Order delivery improvements by adding overtime or offloading to alternate resources
- Desired attribute sequences that would decrease changeover time
- Impact of moving a work order earlier or later, on the overall schedule quality
- Impact of constraining an unconstrained resource

USE REST SERVICES TO SET UP SCHEDULES

Interface Production Scheduling to existing data sources such as spreadsheets, databases or flat files with REST services. You may use REST services to:

- create, modify and get schedules quickly
- create, modify and delete scheduling setup information such as on changeover rules, attributes, user defined attribute sequences, KPI's and status of resources.

REST services based integration lets you spend more time on business problems by automating the often monotonous, repetitive tasks involved in getting master scheduling information from source systems.

PRODUCTION SCHEDULING: PART OF ORACLE CLOUD SUPPLY PLANNING

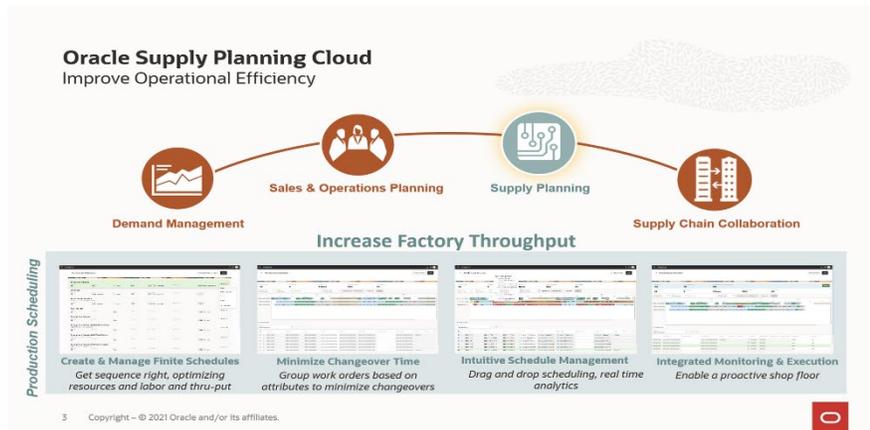


Figure 4. Schedule Your Factory with the Production Scheduling Service of Oracle Cloud Supply Planning

Production Scheduling is a capability of Oracle Cloud Supply Planning. Together with Cloud Manufacturing, these modules provide integrated, closed-loop tactical manufacturing planning, scheduling and execution.

Related Products

- *Oracle Cloud Supply Planning* plans material and capacity and responds to demand, availability, and resource issues as they occur.
- *Oracle Cloud Supply Chain Execution* handles manufacturing, maintenance, shipping/receiving, and inventory management operations.
- *Oracle Cloud Demand Management* predicts and models future shipments, orders, and other demand signals.
- *Oracle Cloud Sales & Operations Planning* aligns business plans and operations across the sales, marketing, finance and supply chain organizations.

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