Gain Greater Control Over
Resources and Costing

NetSuite WIP and Routings

Enabling NetSuite's WIP and Routings capabilities gives companies the ability to define a routing for the manufacturing process, the resources needed to complete the process, and the expected time and cost required. Routings also provide the basis for the infinite capacity scheduling engine that can help identify which resources are being over- or under-utilized. Finally, capturing the cost of materials consumed during the manufacturing process creates a complete picture of the process costs before it is finalized and committed to the GL.
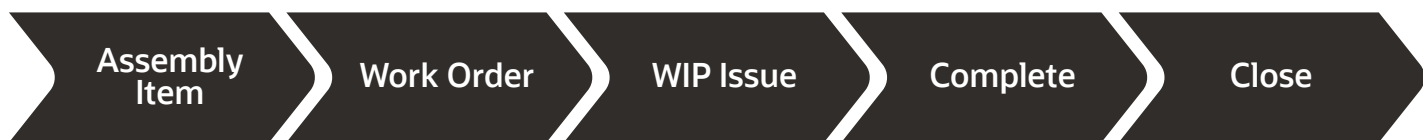
Key Functionality

- Work center management
- Accurate costing
- Infinite capacity scheduling
- Drag-and-Drop GANTT style scheduler
- Track Work In Process costs
- Review and analyze production plans based on actual production times

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Process Flow

Assembly Item → Work Order → WIP Issue → Complete → Close

Assembly Item

In NetSuite, an item that is manufactured and consumes other components as part of that process is called an Assembly Item and is easily defined through the New Items menu. Assembly Items can optionally be associated with lot numbers or serialized. Selecting one of these options will ensure that full traceability is strictly maintained for products that require it.

Location Settings

One of the unique features of NetSuite is that the system can be set up to manufacture the same product in different ways at each location. Work in process and routing can be assigned down to the individual location level. For example, it is possible to choose to perform a light assembly process and backflush the materials in one location, but define a routing and collect labor costs at another.

Manufacturing Cost Templates

The manufacturing cost template defines the direct and indirect costs associated with an operation's routing, along with the accounts that these costs should be posted to. Every time an operation is completed, NetSuite uses the associated cost template to provide baseline form for costing the product, while still maintaining flexibility.

Manufacturing Cost Template

Edit | Back | Actions ▾   ← → List Search

Primary Information

SUBSIDIARY
NetSuite Mfg.

MEMO

NAME
Assembly

☐ INACTIVE

Cost Details | Workflow

Costs ·

COST CATEGORY	ITEM	FIXED RATE	RUN RATE
LR: Direct Labor	LAB00025		25.00
LRO: Training	LRO00005		5.00
LRO: Assy Burden	LRO00020		20.00

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Work Center Management

Before defining the manufacturing process using routings, it's necessary to set up the work centers that the routing will use. Each work center can represent a machine, person, work cell or department that is involved in the manufacturing process. This list of work centers is an integral component of the real-time scheduling engine.

Production Routing

Once the work center and cost templates have been defined, the production routings can be set up to represent every step that a product goes through, the expected set up and run times, the associated work centers, and the cost templates that should be used. This also facilitates the real-time scheduling process, which can be defaulted to forward or backward and also over-ridden on a case by case basis.

Manufacturing Routing

Save | **Cancel** | Actions ▾

Primary Information

SUBSIDIARY *
NetSuite Mfg.

ITEM
CED1000

LOCATION *
01: San Francisco

NAME *
RAK00001-US

MEMO

☑ DEFAULT
☐ INACTIVE
☐ AUTO-CALCULATE LAG

Routing Steps   Component Per Operation   Workflow

OPERATION SEQUENCE *	OPERATION NAME *	MANUFACTURING WORK CENTER *	MACHINE RESOURCES	LABOR RESOURCES	MANUFACTURING COST TEMPLATE *	SETUP TIME (MIN) *	RUN RATE (MIN/UNIT) *	LAG TYPE	LAG AMOUNT
10	Stain	Finishing	1	1	Hand Assy	0	30		
20	Dry Time	Finishing	1	1	No Charge	0	60		
30	Assemble	Hand Assembly	1	1	Assembly	0	60		
40	Inspect	Inspection	1	1	Inspection	0	15		

✔ Add   **✖ Cancel**   **＋ Insert**   **🗑 Remove**

Work Order

In NetSuite, creating a Work Order is actually an optional step in the manufacturing process; however, if a business requires the ability to create a schedule and communicate to production what needs to be made, when it should be made and the components to use in the process, or if you sell a configurable product where there are features and options, then creating a work order is a critical part of the process and is the starting point of implementing a production control system.

Actual Production Dates are automatically calculated by default for related work order transactions. This enables you to track actual production dates to better assess your production plans, identify problems, optimize production runs and make data-driven decisions.

Work Order Traveler/Dispatch List

The Work Order Traveler is a document that is printed and handed over to production to communicate the production plan, routing steps and schedule. It can also be used to communicate back how much time each operation took and the amounts of raw material actually consumed compared to what was anticipated.

The Dispatch List, on the other hand, provides a detailed list of materials that are required for a work order.

Manufacturing Traveler

Work Order: WRK00000078

NetSuite Mfg.

Subsidiary:	NetSuite Mfg.	Date Created:	05/12/2016 08:50 AM
Location:	01: San Francisco	Date Printed:	08/15/2016 06:21 AM
Item:	CED1000	Page:	1

CED1000

Operation Sequence	Operation Name	Predecessor	Manufacturing Work Center	Input Quantity	Start Date	End Date	Setup Time	Run Time	Comments
10	Stain		Finishing	3	05/28/2016 12:00 AM	05/31/2016 12:00 AM	0	90	
20	Dry Time	Stain	Finishing	3	05/28/2016 12:00 AM	05/31/2016 12:00 AM	0	180	
30	Assemble	Dry Time	Hand Assembly	3	05/28/2016 12:00 AM	05/31/2016 12:00 AM	0	180	
40	Inspect	Assemble	Inspection	3	05/28/2016 12:00 AM	05/31/2016 12:00 AM	0	45	

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ITEM	OPERATION	DESCRIPTION	QUANTITY	UNITS	ON HAND	AVAILABLE	COMMITTED	BACK ORDERED	COMMIT	COMPONENT YIELD	BOM QUANTITY	CREATE WO	PLANNED COMPONENT ISSUE DATE	HISTORY
CMP00001	10	Composite Sheet, 3/8" thick, 4x8 sheets	1,000	SF	9,000	7,200	1,000	0	Available Qty	75.0%	750		9/1/2016 9:00 am	History
ASY00002		3 Drawer Tower Assembly	20	Ea	700	626			Available Qty	100.0%	20		9/1/2016 9:00 am	History
PLY00001	30	Plywood Sheet, 1/2" thick, 4x8 sheets	200	SF	14,900	4,003	200	0	Available Qty	80.0%	160		9/2/2016 4:00 pm	History
STA00001	30	Stain	10	Gal.	1,499	1,072	10	0	Available Qty	100.0%	10		9/2/2016 4:00 pm	History
ASY00001		Drawer Assy	60	Ea	900	521			Available Qty	100.0%	60		9/1/2016 9:00 am	History
PLY00001	30	Plywood Sheet, 1/2" thick, 4x8 sheets	350	SF	14,900	4,003	350	0	Available Qty	60.0%	210		9/2/2016 4:00 pm	History
ASY00006		Handle (new Design)	120	Ea	0	0			Available Qty	100.0%	120		9/1/2016 9:00 am	History

Inventory Commitment

Creating a Work Order activates NetSuite's ability to automatically commit inventory to production when the work order is created to provide an accurate, real-time view of inventory status.

Work Order Management

The WIP and Routings module also adds statuses to the Work Order itself, allowing for a more finite level of control over when and how work orders are released to production as well as clearer visibility on production status.

- Open Planned
- Firm Planned
- Released
- In-Process
- Complete
- Closed

Mass update screens are available to enable production controllers to keep on top of the statuses and make mass changes based on a wide range of criteria, including customer, item and due dates. These statuses can also be updated using the workflow engine for a more automated process.

WIP Issue

The WIP Issue transaction manually issues materials to the Work Order—and into WIP—as they are consumed. This is especially valuable for manufacturing products that take longer to complete and have several work orders open over month end.

Work Order Completion

The completion transaction serves several purposes:

- Recording labor against an operation
- Issuing materials
- Recording scrap
- Reporting completed products

NetSuite has a two-step closing process for work orders, with the completion being the first step. This is typically done by someone in production and indicates when a product is actually completed and available to be added to inventory.

Work Order Close

The second part of the process is the work order close. This allows cost accounting, production and finance teams to work together and preview the costs that have been applied to each Work Order before committing the costs to the GL.

CLOSE	PROCESS	DATE	ORDER #	STATUS	ITEM	PRODUCTION START DATE ▲	PRODUCTION END DATE	ORDER QUANTITY	BUILT	PRODUCTION VARIANCE	PRODUCTION VARIANCE (%)
☐	Close	4/30/2016	WRK00000076	Built	CED1000 CED1000	4/30/2016	5/31/2016	2	2	15.89	1.3437%
☐	Close	4/22/2016	WRK00000203	Built	CED1000 CED1000	5/3/2016	5/4/2016	2	1	-500.31	84.6176%
☐	Close	4/25/2016	WRK00000045	Built	SVR00002 HP Dual-Core Telephony Server	5/4/2016	5/4/2016	1	1	340	0.0%
☐	Close	4/30/2016	WRK00000079	Built	CED1000 CED1000	5/4/2016	5/4/2016	4	4	-2,035.62	86.072%
☐	Close	4/30/2016	WRK00000141	Built	CED1000 CED1000	5/4/2016	5/4/2016	4	4	31.77	1.3433%
☐	Close	5/26/2016	WRK00000277	Built	ASY00001 Screen Assy	5/26/2016	5/26/2016	144	144	-1,368.99	55.2041%
☐	Close	5/31/2016	WRK00000080	Built	CED1000 CED1000	5/31/2016	5/4/2016	3	3	-567.43	23.9926%

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