Inventory Management
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Inventory Management

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- Inventory Management
- Advanced Inventory Management
- Inventory Reporting
- Warranty and Repairs Management
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Inventory Management Overview

When you use the Inventory feature in NetSuite, you can track and manage the items your company buys, sells and manufactures in the course of doing business. Your Inventory Management can be most accurate, easy and profitable when you properly set up inventory records to track data about each item.

Using NetSuite, your Inventory Workflow is integrated from purchase to stock to sale. Each transaction you enter updates inventory records and reports in real time to give you precise information about your inventory. For example, when you enter a sale or receipt transaction for items, the available quantities are updated on item records without having to re-enter information to adjust the amounts.

By setting up information on each item record, the correct information autofills on transactions you enter. Inventory records are used for the following, and more:

- **Track stock levels.**
  
  Keeping track of quantities of stock on hand enables you to know if orders can be fulfilled, know when to reorder more, and report on inventory quantities. If you use Advanced Inventory Management, accurate stock data helps you automate demand-based inventory replenishment.

- **Plan inventory based on supply and demand calculations using Demand Planning and Available to Promise.**

- **Set sale prices using Item Pricing.**
  
  Set a single price or set multiple prices, such as a retail price and a sale price. Set up quantity pricing or create Pricing Groups.

- **Set up costing and track purchasing costs.**
  
  Define the Costing Methods as average, LIFO or FIFO. Record the purchase price for each item so you can track expenditures and track inventory values.

- **Track income and asset values by Using Item Records.**
  
  Define general ledger accounts to use to log item asset values and revenues.

- **Track weights and shipping costs by Using Item Records.**
  
  Setting a default weight and shipping charge on item records enables those values to autofill on transactions when the item is selected.

- **Set up stock preferences.**
  
  Use Multiple Units of Measure to define the individual inventory units you use to purchase, stock and sell each item. Then, the proper units are used on individual transactions.

- **Set up billing and revenue management.**
  
  Use Advanced Billing to set the billing schedule to be used for each item to automatically determine the proper billing intervals and amounts. Use Revenue Recognition to define deferred revenue and revenue recognition templates to correctly manage staggered income values. For more information, see the help topic Using Revenue Recognition.

- **Track vendor and manufacturer data by Using Item Records.**
  
  Identify one or more vendors and define item pricing and schedules. Identify the manufacturer and define data for international shipping forms.
Bar Coding and Item Labels

Input and track information in NetSuite by generating Bar Codes and Item Labels for each item and transaction. For example, you can:

- Print labels to affix to the items that show the item price, and bar codes for item number and serial number.
- Scan bar code labeled items to add them to a sales transaction or receive them on a purchase transaction.
- Scan transaction bar codes to bulk receive, fulfill, pick, pack, ship, bill or approve orders.

NetSuite automatically generates bar codes for items in UPC or Code 128 format based on the Item Name/Number, or Stock Keeping Unit (SKU), on the item record.

Inventory Management

NetSuite Inventory Management enables you to track and manage your stock as a finely-tuned process at each step of your Inventory Workflow.

To begin, determine which Features for Inventory and Locations, such as Inventory, Locations, and Multi-Location Inventory, are best suited your company. When you use the Locations feature, you have many options for Locations and Inventory Management to track locations on records, transactions and line-items. Then, you can sort lists and reports based on the associated location.

Set Inventory Management Preferences that determine how records and transactions function for inventory.

Use Inventory Management Forms to facilitate day-to-day inventory activities, such as inventory adjustment, bin management, stock distribution and transfers, ordering and reallocating items, building assemblies and using work orders.
To head off inventory problems, be sure you learn about Handling Backorders and Understanding and Avoiding Underwater Inventory.

**Inventory Reports**

Use NetSuite reports to access data about your inventory. The real-time information in these reports can be used to assess whether stock levels and profit margins are where you want them to be.

Examine stock levels using the Current Inventory Snapshot Report. The Inventory Activity Detail Report details item activity per transaction.

Examine merchandise turn rates using the Inventory Turnover Report. This can help you determine how frequently you should order stock.

The Physical Inventory Worksheet helps you do a physical stock count to be sure the physical stock matches the quantities showing in your account records.

Examine inventory values and profitability with the Inventory Profitability Report, Inventory Valuation Report, and Inventory Revenue Report.

Find out which items are ready to be fulfilled on the Items Pending Fulfillment Report and which items are not yet available to fill orders with the Inventory Back Order Report.
Inventory Management

Managing your inventory is one of the most important tasks of running your business. With effective inventory management, you can streamline your stock levels to reduce costs and maximize revenue and profits.

Good inventory management begins with having accurate, accessible information about your inventory. Quality information is crucial to answering inventory questions that arise on a daily basis, such as:

- How many items do I have and where?
- How many items have I committed to sell?
- Should I order more items or materials now?

Your answers to these questions direct your inventory management decisions. Using reports and inventory analysis, you can answer these questions accurately and respond with better decisions.

Because the inventory workflow is integrated in your account from procurement to sales, each transaction updates inventory records and reports immediately to give you precise, real-time information about your inventory. You can always access current stock information.

For example, when an employee sells or receives items, the quantities available are updated on item records when you enter the sale or receipt transaction. You do not have to re-enter information to adjust your inventory records.

Using inventory features, you can monitor real-time information about your inventory costs, quantities, and asset values. With this information, you can make informed decisions about buying and selling your inventory.

Making informed decisions has beneficial results, such as:

- reduced order-to-delivery cycle time
- increased revenue and profits
- improved productivity
- highest quality customer service

Using NetSuite to optimize your inventory workflow benefits your company and your customers.

Your customers benefit from a reduced order-to-delivery cycle time and highest quality customer service. In turn, this results in increased repeat orders placed with your company.

Your company also benefits from increased revenue, profits, and productivity when you track and analyze your inventory processes. Your success with inventory management translates into success for your company overall.

For more information about how to set up, buy, sell and manage your inventory, click on the following links:

- Inventory Management Setup
- Inventory Records
- Inventory Status
- Basic Inventory Management
- Locations and Inventory Management
- Warehouse Processing
To optimize your inventory workflow, you first need to understand it. The next section describes the typical inventory workflow and discusses how you can benefit from analyzing it.

**Inventory Workflow**

For many, the goal of inventory management is to get your product to your customer in the shortest amount of time and at the lowest cost, maintaining quality and customer service. One means to achieve this goal is continual examination of inventory workflow processes and acting on your analysis.

The diagram below illustrates the processes of the inventory workflow cycle:
Inventory Workflow Processes

The processes in the inventory workflow are: Purchasing, Receiving, Manufacturing, Selling, Fulfilling, and Replenishing. This workflow is a cycle of procuring and then selling your items.

To analyze workflow processes, you must first understand the function of each process. Key points to consider about each process are discussed below:

**Purchasing**

Create purchase orders based on your replenishment needs to acquire items and materials to stock and sell. It is important to track purchase orders to know what items to expect, when to expect them and who to expect them from.

Tracking purchases also helps you make replenishment decisions, such as what, when, and how much to order. You can view the quantity on order on item records and on reports.

You can also give your vendors access to your account to view purchase orders you place with them.

For more information, see the help topic Purchasing.

**Receiving**

When vendors ship products you have ordered, enter an item receipt to indicate that you added them to your inventory and account for them as an asset to your company. Because your account integrates item receipts with inventory records, each receipt updates inventory to show accurate stock levels and valuations.

For more information, see the help topic Receiving Orders.

**Manufacturing**

After items and materials have been received into inventory, you may need to gather components of kits and groups or run a production to complete assemblies before you sell them.

You can also identify items and transactions with bar codes that enable you to process them more quickly and efficiently.

For more information, see Manufacturing.

**Sales**

When you enter a sales order, the item is committed from your inventory available and reserved for that customer. Because sales are integrated with inventory records, the effects of each sale automatically update inventory records.

An item sale increases the quantity committed and decreases the quantity available. If you sell an item that you do not have in stock, selling the item also increases the quantity backordered.

For more information, see Selling Inventory.

**Fulfillment**

Fulfillment physically takes items out of inventory and ships them to the customer.
Because fulfillment transactions are integrated with inventory records, the effect of each fulfillment on your stock is automatically updated. Fulfilling items decreases the quantity on-hand and inventory asset value.

For more information, see Fulfilling Inventory.

Replenishment

Having a clear understanding of your replenishment needs is an important function of streamlining your inventory. To replenish inventory, you examine your inventory needs and identify the products and ideal quantities to order.

You can determine replenishment needs by using item records and reports, or NetSuite can assess stock levels and reorder information on item records, then suggest the items and quantities to order.

For more information on replenishment, review the following:
- Assessing Stock Levels
- Advanced Inventory Management
- Handling Backorders
- Inventory Level Assessments with Reports

Inventory Workflow Assessment

To assess your inventory workflow, you need to access information about each process. Your account's integrated records and reporting makes it straightforward to get information about your inventory items and transactions.

Item records maintain real-time information about your inventory items, including stock on hand, quantities needed and the value of your inventory.

You can track inventory by examining item records, or use reports to determine how your stock levels are affecting your inventory workflow.

- For more information, see Inventory Records.
- For more information, see Inventory Reporting.

Inventory Management Setup

To set up inventory management, first you need to decide which inventory features you want to use and enable them. The features you enable determine what kinds of functionality are available in your account. For example, it is important to decide if you are going to use the Inventory feature, Inventory and Locations, or Multi-Location Inventory.

The topics Inventory Management Features and Features for Inventory and Locations can help you make such decisions.

Afterwards, you need to set up preferences that affect inventory management. The preferences you can choose depend on which feature you enable in your account.

The following topics can assist you with your inventory management setup:
- Items and Inventory Features
- Inventory Management Preferences
Inventory Management Features

Your account includes inventory features that enable you to tailor your inventory management to identify, process, and track details most important to your company.

This section discusses the inventory management features available and how they can benefit your company.

The features you use determine the flexibility you have in managing your inventory and the ability you have to report on your inventory functions. When you use more inventory features, NetSuite is able to track and report on more detailed information.

To track and manage your inventory, you can use only the Inventory feature or you can use the Inventory feature in addition to other features. Using these features together enables you to track information in greater detail to manage your inventory.

After you are familiar with inventory features available in your account, read the help topic Items and Inventory Features for information on enabling inventory features.

Below are descriptions of available inventory-related features:

**Inventory**

Track the quantity, value, and commitment of items you purchase and sell. Item records specify information on each item's cost, sales price, stock level and more. NetSuite automatically creates accounts to track your cost of goods sold and inventory assets.

**Locations**

If your company has multiple offices or warehouses, you can identify a location on transactions to purchase or sell items. Then, you can filter reports with data sorted by location or search for transactions by location.

For more information, read Features for Inventory and Locations and Managing Inventory with Location Records.

**Multi-Location Inventory**

Multi-location Inventory is a tool to track and manage your inventory in distinct locations. Associate each item and transaction with a location to track purchases, sales, and stock levels for each item in each location, as well as transferring inventory between locations.

For more information, read Multi-Location Inventory.
Multiple Units of Measure

Define various units used to stock, purchase, and sell inventory items. You can assign a unit to measure each stage of processing inventory, such as a purchase unit, a stock unit and sale unit for each item.

If you have enabled the Statistical Accounts feature (Setup > Company > Enable Features > Accounting, under Advanced Features), you can assign a default unit of measure to each statistical account.

For more information, read the help topics Multiple Units of Measure and Using Statistical Accounts.

Serialized Items

Use serial numbers to track the purchase and sale of physical inventory items by assigning a serial number to individual items and assembly items.

For more information, read the help topic Serial Numbered Items.

Lot Tracking

Track a group of items by assigning a lot number to identify the group to track expiration dates, production dates or other information.

For more information, read the help topic Lot Numbered Items.

Item Options

Allow customers to choose from variations of an item, such as size and color. Your transactions show the item options, but you cannot track inventory of each option.

For more information, read the help topic Custom Transaction Item Options.

Matrix Items

Create a record structure for a family of items that are similar, with each variety tracked on an individual record. A parent item identifies the similar aspects of the items, and child records identify variations to the item, such as size and color. Because each variation has an individual item record, you can track the purchase, sale, and stock level of each kind.

For more information, read the help topic Matrix Items.

Purchase Orders

Track items you have ordered and track receipt of the items into inventory. Choose to let your vendors have access to view the purchase orders you place.

For more information, see the help topic Purchasing.

Drop Shipments and Special Orders

Drop ship items directly to your customers from your vendors. Automatically generate purchase orders for drop ship items on sales transactions. Drop-ship purchase orders show the preferred vendor for the item and the customer's shipping address.
You can use special orders to purchase and track items that may not follow regular inventory processing, such as just-in-time orders, customized items and items you prefer not to keep in stock.

For more information, see the help topics Drop Ship Items and Special Order Items.

**Multiple Vendors**

Manage the procurement of items that you buy from more than one vendor. You can identify information for several vendors on each item record, including each vendor name, item code, and purchase price. You can also identify which vendor is preferred, as well as import item records and item codes via CSV files.

For more information, see the help topic Creating Item Records.

**Advanced Receiving**

Give your receiving and accounting departments separate processes for receiving and billing purchase orders by using Advanced Receiving. Then, receive items into your inventory before you create bills for them.

For more information, see the help topic Receiving Purchase Orders Using Advanced Receiving.

**Landed Cost**

Use the Landed Cost feature to track expenses related to the purchase of goods such as shipping, duty fees, taxes, and insurance. Then, you can more accurately determine the profitability of items.

For more information, see the help topic Landed Cost.

**Return Authorizations**

Create authorizations to record items being returned to you from customers. Tracking returns helps you to manage how and when returns are approved and received back into inventory.

For more information, see the help topic Customer Return Management.

**Bar Coding and Item Labels**

Generate a bar code to identify each item and transaction you process. You can print bar code labels for each item and print bar codes on each transaction. Then, you can scan the bar codes on items and transactions to process them quickly and accurately.

For more information, see the help topic Bar Codes and Item Labels.

**Assembly Items**

Build, stock, and sell an assembly item created from individual components that are inventory and non-inventory items. Then, track your stock and sales of finished assemblies and assembly components separately.

For more information, see Assembly Items.
Advanced Shipping

Use Advanced Shipping to have separate transactions to fulfill sales orders and bill sales orders. Then you can bill all items on an order even if all the items have not yet been shipped.

For more information, see the help topic Advanced Shipping.

Bin Management

You can use the Bin Management feature to identify the places you store inventory items within your warehouse and track on-hand quantities. This helps warehouse employees know exactly where to go to find items they need when picking and fulfilling orders. You can also use bins to specify exactly where items need to be put away in stock when you receive them.

**Note:** Only the on-hand quantity is tracked per bin. Quantities available, committed, backordered, and ordered are not tracked per bin. Also, item costing is not calculated per bin.

For more information, read Bin Management.

Advanced Inventory Management

Check this box to anticipate demand for items and adjust suggested item ordering. Purchases of new stock are based on previous purchases and sales of items.

For more information, read Advanced Inventory Management.

Inventory Status

The Inventory Status feature enables you to assign statuses to inventory to drive internal processes. You can also choose to make items unavailable to be allocated to orders based on their associated inventory status.

**Note:** After you have created an inventory status and items associated with it are used on pending or completed transactions, you cannot turn this feature off.

For more information, read Inventory Status.

The next section describes how some features can be used together to track inventory when you have more than one location. Understanding how these features work together will help you determine which features best suit your company.

Features for Inventory and Locations

If you have several locations, choosing to track each location can have a big impact on your inventory management. This section explains three options you have to track inventory in your account, and how locations can affect them.

Three options to track inventory are by using:

- Using Inventory Only
- Using Inventory and Locations
- Using Multi-Location Inventory
Note: You should enable the Multi-Location Inventory feature when you enable the Locations feature, even if you plan to track only one location.

The chart below explains functions you are able to use depending on which features you use to track inventory.

### Inventory Tracking Options

<table>
<thead>
<tr>
<th>Function Included</th>
<th>Inventory Only</th>
<th>Inventory and Locations</th>
<th>Multi-Location Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create Item records</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Use inventory level warnings</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Adjust inventory levels</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Track inventory costing</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Create Location records</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Track transactions by location</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Identify a location on a transaction</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Create sales reports filtered by location</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Track stock of items by location</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Identify a location on each item record</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Fulfill orders from a distinct location</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Receive inventory to several locations</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Transfer items between locations</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Create inventory reports filtered by location</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Track inventory using bins on a per-location basis</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
</tbody>
</table>

### Using Inventory Only

The most basic setup to track inventory is to use only the Inventory feature. With the Inventory feature, you use item records to track stock of items, parts or finished goods, as well as associated costs. This setup is ideal if you have only one location where you receive, stock, and sell your items.

### Using Inventory and Locations

You can use the Locations feature in addition to Inventory if your company has multiple offices or warehouses. First, you create a Location record to identify each of your locations. Then, you can associate
purchase and sale transactions by distinct location. This enables you to filter reports with data sorted by location or to search for transactions by location.

**Note:** Using Inventory and Locations does not allow you to identify each item with a location. To track your inventory across locations or set a preferred location, you need to use the Multi-Location Inventory feature.

### Using Multi-Location Inventory

If you stock, sell, and fulfill items in more than one location, you can use the Multi-Location Inventory feature to manage the inventory for your distinct locations.

After you create item records and location records, the Multi-Location Inventory feature enables you to associate each item and transaction with a location. Then, you can track purchasing costs, sales income, stock levels and valuation for each item in each location, as well as transferring inventory between locations.

You can also view reports filtered by location for inventory status, revenue, valuation, and activity and by fulfillment status.

### About Advanced Inventory Management

You can use the Advanced Inventory Management feature to automate demand-based inventory replenishment, but it does not affect tracking inventory by locations. For more information, read **Advanced Inventory Management**.

To determine whether this feature is appropriate for your company, read **Multi-Location Inventory** before you enable it.

You cannot turn the feature off after you enable it and distribute items. If you need to turn the feature off, contact Customer Support.

### Inventory Management Preferences

You can set optional preferences to help you manage your inventory. These preferences determine how your inventory valuation, replenishment, identification, and more are handled.

To set inventory preferences, go to Setup > Accounting > Preferences > Accounting Preferences.

For more information on these preferences, read the help topic **Accounting Preferences**.

For details about the Inventory Management Preferences page, read **Setting Up Advanced Inventory Management**.

### Inventory Level Warnings

You can generate popup inventory level warnings that let you know when stock is low based on your inventory settings.

When you enable the Inventory Level Warnings preference, a warning appears when you add an item to a transaction whose quantity is at or below its reorder point. The warning prompts you to decide if you should add the item to the transaction.

For example, if you enter a sales order for 10 widgets, but the quantity in stock is 5 widgets, a pop up warning alerts you there are not enough items in stock to fulfill the order.
If you have set a Reorder Point for your items, you are also warned when you sell inventory items with quantities at or below their reorder points.

Inventory level warnings display an item’s quantity available, reorder point and the quantity on order. If you are using multi-location inventory, the warning also displays information for the location you are selling from.

**To generate inventory level warnings:**

1. Go to Home > Settings > Set Preferences.
2. On the Transactions subtab, check the Inventory Level Warnings box.
   
   **Note:** You must also set a minimum quantity on each item record in the Reorder Point field. See Assessing Stock Levels.

   For more information, read the help topic Creating Item Records.
3. Click Save.

### Inventory Records

To track your inventory efficiently, set up your account to record details about your inventory, transactions, and locations.

#### Managing Inventory with Item Records

To manage your inventory, keep records that identify specifics about your items and materials, such as description, cost, quantity, options, and location.

Item records are designed to be flexible and identify the information you need about each of your inventory items. You can set up records to track items individually or as groups, kits or assemblies. Item records can also track serial and lot numbers of your inventory.

Each item record identifies information specific to each item, such as costs, sales prices, preferred stock levels and units on hand. Your account uses the information entered on each item record to track all aspects of your inventory.

The descriptions of items below can help you choose the types that best suit your inventory and your company.

### Item Record Types

#### Inventory Item

This is a record for something you stock and sell. Track the amount and value you have on hand, as well as the marginal profit you make.

For more information, read the help topic Inventory Items.

#### Item Group

This is a record to identify several member items that are sold together as one unit. The price of the group is dependent on its components’ prices.
For more information, read the help topic Item Groups.

Kit/Package

This is a record to identify several member items that are sold together as one unit. The price of the kit is not dependent on its components' prices and can be assigned several price levels.

For more information, read the help topic Kit/Package Items.

Assembly/Bill of Materials

This is a record for an item you build with raw materials and track the inventory of the assemblies and raw materials separately. Track the amount and value you have on hand, as well as the marginal profit you make.

Using this type of item record requires the Assembly Items feature.

For more information, read Assembly Items.

Serialized Inventory Item

This is a record to track physical inventory items by assigning a serial number to each item individually.

Using this type item record requires the Serialized Inventory feature.

For more information, read the help topic Serial Numbered Items.

Serialized Assembly

This is a record to track physical inventory items by assigning a serial number to each assembly individually.

Using this type of item record requires the Serialized Inventory and Assembly Items features.

For more information, read the help topic Serial Numbered Items.

Lot Numbered Inventory Item

This is a record to track a group of inventory items by assigning a lot number to identify the group.

For example, you can identify an item lot by its expiration date.

Using this type of item record requires the Lot Tracking feature.

For more information, read the help topic Lot Numbered Items.

Lot Numbered Assembly Item

This is a record to track a group of inventory items by assigning a lot number to a group of assembly items.

Using this type of item record requires the Lot Tracking and Assembly Items features.

Other Item Record Types

Other item record types generally not associated with maintaining inventory include description, discount, download, gift certificate, markup, non-inventory, other-charge, payment, service, and subtotal items. You can find more information about these item types by reading Item Types.
Creating Item Records

After you set up item records, you can track the quantity and value of your items, as well as streamline the reordering process. The more accurately you can enter information on item records, the more accurately you can track and report on inventory functions in your account.

To create item records, go to Lists > Accounting > Items > New. For detailed information on creating item records, read the help topic Creating Item Records.

You can also create a new item record from an existing record by clicking Make Copy on the record. For more information, read the help topic Shortcuts for Creating Item Records.

To work with item records you create, go to Lists > Accounting > Items. When you click an item name, the item record opens.

Important: The fields that show on item records depend on which features you have enabled.

Note: In NetSuite accounts that are not enabled for OneWorld, you can enter initial quantities on hand in each location when you create an item record. However, in a NetSuite OneWorld account, you cannot enter initial quantities on hand when you create an item record. You must first create the item record, and then afterwards, you must enter an inventory adjustment to specify the initial quantities in each location.

Restricting Items

You can limit the visibility of items for employees and partners using restrictions by classifications such as class, department, location or subsidiary.

For example, you could associate an item with a location and then customize a role to restrict access to that location. Then, any employee using the custom role would not have access to the item.

To restrict items in this way, you would complete the following steps.

To restrict item visibility:

1. **Associate a classification the item record** – Open the item record to associate a classification (class, department, location, or subsidiary) on the item record.
2. **Customize a role** – Customize a role to restrict access to the classification in step 1.
3. **Assign the role** – Assign the restricted custom role from step 2 to employees you want to be restricted from the items associated with the classification in step 1.

For more information, read the help topic Restricting Items.

Customizing Inventory Records

When you create item records for your inventory, you have the flexibility of customization to offer customers choices. You can identify several options available for an item, and you can choose to track each of these options.

You can use the Transaction Item Options feature and Matrix Items feature to identify variations of inventory items. For example, you may want customers to be able to choose from several colors you stock of an item.
The examples below refer to color options, but you can use these features to distinguish many options such as color, size, flavor, and more.

**Transaction Item Options**

You can use the Transaction Item Options feature to let customers select an item variation, such as color or size, when buying an item.

For example, you can identify a color on a purchase and the option is identified on transactions as you process the order. Then, the sales order shows what color was sold and the picking ticket tells the warehouse manager which color to pull to fulfill the order.

**Note:** Because a transaction item option is tracked as an option, not as an individual item record, you cannot track the purchase, cost, sale or stock level of each color. If you need to track this information about each variation, you should use the Matrix Items feature.

For more information, read the help topic Custom Transaction Item Options.

**Matrix Items**

The Matrix Items feature creates a record structure for a family of items that are similar, with variances tracked on individual records. You can create many item records from one parent record.

For example, you could create a parent item called Cell Phone VOX1010 that has subitems of different colors available.

The parent record identifies item information that is common to all records in the matrix, such as preferred vendor and sales price. On the parent record, you select size variations to create child records to identify and track each color as an individual item.

Then, when customers choose which color they want, they are choosing between different items instead of choosing from options on one item.

Because Matrix Item records track inventory individually, the purchase, cost, sale or stock level of each size is tracked in your account. For example, you can know when you are low on stock of Cell Phone VOX1010-Blue, but still have plenty of Cell Phone VOX1010-Silver. You can also track whether sales of a Cell Phone VOX1010-Black dramatically increases over time.

Updating a group of matrix items is straightforward because changing the parent record automatically changes the entire matrix of related records.

For example, if a cost increase forces you to raise the price of a group of items, you can make the change on the parent item only, instead of having to change each item record.

For more information, read the help topic Matrix Items.

**Managing Inventory with Location Records**

You can use location records to differentiate between the corporate headquarters office and sales offices, or between warehouses in several states. You can also create a hierarchy of locations to track information by locations within groups of locations.

For example, you can create a parent location called East Coast, then create sublocations for it called New York and Georgia. You could even create sublocations for the Georgia location called Atlanta Warehouse and Atlanta Sales Office.
**Note:** You should not use Locations to identify areas within your warehouse, such as a bin, shelf or dock. Doing so causes difficulties with fulfillments, LIFO and FIFO costing, and reporting. You should use a bins feature for this purpose. For more information, read Bin Management.

After you create location records, you can identify sales and purchases with a location. Then, you can search transactions associated with a location. For example, you can search for sales orders created during the month of January at all Georgia locations.

For details about setting up location records, read the help topic Creating Locations.

**Important:** To associate items with a location, you need to use the Multi-Location Inventory feature. Then, you can create searches and reports on items by location. For example, you could run the Current Inventory Snapshot report and filter it to show only inventory in the Atlanta Warehouse.

### Converting Non-Inventory Items to Inventory Items

Items originally set up as a non-inventory type can be converted to inventory items to allow tracking of the item stock.

For example, an item that you sell but do not stock may become more popular over time. Eventually, it may be to your advantage to keep the item in stock. Rather than creating a new inventory item record and losing previous data on the item, you can convert the existing non-inventory item record into an inventory item.

Converting a non-inventory item to inventory keeps all records in one place: the transaction history of the item prior to conversion to an inventory item, as well as all inventory data after the conversion.

Additionally, if you use the Advanced Inventory Management feature and capabilities such as auto-calculated reorder point and preferred stock level are enabled for a converted item, then order calculations do consider past sales when the item was not an inventory item.

**Note:** You must have Full permission for Items to see the Convert button and be able to convert items.

**To convert a non-inventory item to inventory:**

1. Go to Lists > Accounting > Items.
2. Click View next to a Non-inventory or Other Charge item.

3. On the item record, click Convert to Inventory.
   
   If the Serialized Inventory or Lot Tracking features are enabled, you also can click the button arrow to choose Convert to Serialized Inventory or Convert to Lot Numbered Inventory.
   
   After you click Convert, the page transforms to an Inventory Item form.

4. Select the Cost of Goods Sold account for the inventory item.
   
   When you convert a non-inventory item to an inventory item, the new inventory item must use a Cost of Goods Sold (COGS) account that is different than the expense account selected. This is because non-inventory items use an expense account only to associate the cost of buying the item. The account is not used for inventory costing calculations, the way inventory items use them.
   
   Because the expense account selected will now be used in inventory costing calculations, the expense account for the inventory item cannot be identical to the COGS account.
   
   This is effective when you convert any Non-Inventory For Resale items or Non-Inventory For Purchase item.

5. Click Save.

   **Important:** After you click Save, the conversion is complete and cannot be undone. You cannot convert inventory items to non-inventory items.

**Transactions and Converted Items**

After an item record is converted, the state of the item is tracked on a per-transaction basis. Some transactions created before the conversion may remain open and still need to use the item as a non-inventory item.

Transactions created prior to the conversion that used the item as a non-inventory item will continue use it as a non-inventory item. This includes cases like sales orders which may be only partially processed.

In the transaction history of the item, past instances continue to be treated as non-inventory. Line items on these transactions include “Non-inventory” in the item name to distinguish them.

   **Note:** If you edit a transaction to remove and then re-add the item, the item is then treated as an inventory item.

All transactions created after the conversion that include the item treat the item the same as any regular inventory item.

View the transaction history for an item on the History subtab of the item record.

**Inventory Status**

The Inventory Status feature enables you to associate attributes to items to drive internal processes. For example, you can create an Inspection status for items that are pending quality control inspection.

You can also choose to make inventory associated with each status available or unavailable to be allocated to orders. For example, you can create an unavailable status of Damaged to associate with items that should not be sold.
Inventory Status on Pages, Records, Searches, and Transactions

When you enter items on the following pages, records, and transactions, a Status field appears.

- Assembly Build
- Assembly Unbuild
- Bin Transfer
- Cash Refund
- Cash Sale
- Credit Memo
- Invoice
- Item Fulfillment
- Item Receipt
- Inventory Adjustment
- Inventory Detail (availability and behavior depends on its parent transaction)
- Inventory Status Change
- Inventory Transfer
- Vendor Bill
- Vendor Credit
- Work Order Completion
- Work Order Completion With Backflush
- Write Checks

**Note:** The Status field might appear on the transaction's associated Inventory Detail subrecord. For more information on the Inventory Detail subrecord, see [Inventory Detail Subrecord](#).

Available and on-hand inventory balances on the following records and searches are shown by inventory status.

- Inventory Balance Search
- Inventory Detail Search
- Inventory Item
- Lot Numbered Item
- Serialized Item

For more information on how inventory status affects available inventory balances, see [Tracking Inventory Balances By Status](#).

**Setting Up Inventory Status**

**To set up inventory status:**

1. Enable the feature.
   
   For more information, see [Enabling Inventory Status](#).
2. Create inventory statuses.  
   For more information, see Creating Inventory Status Records.

After you complete these steps, you can use inventory statuses with items on transactions.

**Enabling Inventory Status**

**To enable inventory status:**

1. Go to Setup > Company > Enable Features.
2. Click the Items & Inventory subtab.
3. Check the **Inventory Status** box.
   
   To enable the Inventory Status feature, you must first enable the Advanced Bin/Numbered Inventory Management and Multi-Location Inventory features. If you have not already done so, check the Advanced Bin/Numbered Inventory Management and Multi-Location Inventory boxes.
4. Click **Save**.

**Creating Inventory Status Records**

Create one inventory status record for each status you want to be able to assign to items within your location.

Statuses can be in one of three states: default, active, or inactive.

When you enable the Inventory Status feature, a Good status is available by default. This status is associated with all existing and incoming items at all locations until a transaction changes an item’s status. All inventory associated with this status is available to be allocated to orders. You can rename this status and add a description. You cannot delete this status.

When you create inventory statuses, you can set them to be active or inactive. You cannot delete inventory statuses that you create, unless the status you want to delete is not associated with any items on completed or pending transactions. If any non-default inventory statuses exist, you cannot disable the Inventory Status feature.

In the list of inventory statuses at Lists > Supply Chain > Inventory Status, the State column identifies whether a status is default, inactive, or active. A label with one of these three words also appears next to the status name on the inventory status record.

To search for inventory statuses, go to Reports > New Search > Inventory Status.

To search for inventory statuses, go to Reports > New Search > Inventory Status.
To create an inventory status record:

1. Go to Lists > Supply Chain > Inventory Status > New.
2. In the Name field, enter a name for this status.
   The name you enter here is the name that shows in inventory status lists on records and transactions.
3. To make on-hand inventory associated with this status available for NetSuite to commit to orders, check the Make Inventory Available for Commitment box.
   If you prefer that on-hand inventory associated with this status is excluded from the available count, clear this box.
   After a status is associated with items on completed or pending transactions, you cannot check or clear this box.

   ! Important: This setting does not apply to items on drop shipments and special order purchases. Items with an unavailable status can be allocated to sales orders marked as drop shipments or special orders. You can also receive unavailable items on the associated purchase order created from a drop shipment or special order sales order. For more information on drop shipments and special orders, see the help topic Drop Shipment and Special Order Purchases.

4. To make on-hand inventory associated with this status available for Supply Allocation to allocate to orders, check the Make Inventory Available for Allocation box.
   If you prefer that on-hand inventory associated with this status is excluded from being allocated to orders using Supply Allocation, clear this box.
   After a status is associated with items on completed or pending transactions, you cannot check or clear this box.

   📘 Note: This field shows only when the Supply Allocation feature is enabled in your account. For details, read Supply Allocation.

   ! Important: This setting does not apply to items on drop shipments and special order purchases. Items with an unavailable status can be allocated to sales orders marked as drop shipments or special orders. You can also receive unavailable items on the associated purchase order created from a drop shipment or special order sales order. For more information on drop shipments and special orders, see the help topic Drop Shipment and Special Order Purchases.

5. Optionally enter a Description for this status.
6. Check the Inactive box to not show this status in search lists on records and forms.
7. Click Save.
For more information, see Inventory Allocation Based on Status.

Changing the Inventory Status Associated With Items

Use the inventory status change transaction to change the status that is associated with items. This non-posting transaction enables you to move any quantity of one or more items from one status to another, without impacting your general ledger.

For example, consider you have 25 saleable bottles of water that have been damaged. You create an inventory status change record to change the status of the 25 bottles from Good to Damaged. If the inventory status record for the Damaged status has the Make Inventory Available box cleared, the bottles now associated with the Damaged status are not available to be allocated to orders.

To change the inventory status associated with items:

1. Go to Transactions > Inventory > Inventory Status Change.
2. If required, in the Inventory Status Change # field, enter a reference number to identify this inventory status change.
   If you use the auto-generated numbering feature, a number is generated automatically when you save the change transaction.
   The Transaction Number field displays the transaction number. The auto-generated numbering feature prevents assigning duplicate numbers to transactions in NetSuite. This ensures that the number cannot be edited and cannot be duplicated. Auto-generated numbering for transactions is enabled by default and cannot be disabled.
3. Verify or enter the Date of this transfer.
4. In the Location field, select a location to associate with this inventory status change transaction.
5. In the Previous Status field, select or verify the status currently associated with the items you want to change.
   For example, if you want to change an item's status from Good to Damaged, select Good.
6. In the Revised Status field, select or verify the new status you want to associate with the items you want to change.
   For example, if you want to change an item's status from Good to Damaged, select Damaged.

   **Important:** When you update an item quantity to an unavailable status, you should also take action in your stock room or warehouse to physically prevent the items from being picked.

7. Optionally enter a Memo for this inventory status change.
   When you search for transactions, you can search for specific words and phrases in the Memo field to find this status change transaction.
8. On the Items subtab, select the Item for which you want to change the inventory status.
9. Optionally, if you use the Multiple Units of Measure feature, select the unit of measure in the Units column.
   If you select a unit other than stock units, inventory item quantities are converted automatically and saved in stock units.
10. In the Quantity column, enter the number of units of the item for which you want to change the status.
11. If you are changing the status for a lot numbered item, a serialized item, or an item that uses bins, do the following:
   - Click the icon in the Inventory Detail column.
In the window that appears, if necessary, enter the lot or serial number in the Serial/Lot Number field.

If the item uses bins, verify or select the appropriate bin number in the Bin field.

In the Quantity field, enter the number of units of the item for which you want to change the status.

Click Add.

If you are changing the status for items from more than one item, repeat the previous four steps for each item.

Click OK.

12. Click Add.
13. Add more items, as necessary.
14. Click Save.

Inventory Allocation Based on Status

The Make Inventory Available box on inventory status records controls whether items with a specific status should be available to be allocated to orders. By default, this box is checked when you create a new inventory status record.

Clear this box if you want on-hand inventory associated with the status to be excluded from the available count. For example, if you do not want damaged inventory to be allocated to orders, on a Damaged status record, clear the Make Inventory Available box.

In addition to regular sales, purchases, returns, and transfers, inventory balances are also updated based on this setting. That is, when items move to the Damaged status, the available inventory balance is decremented by the quantity of damaged items. Similarly, when items move from an unavailable to available status, the available inventory balance is incremented by the appropriate quantity.

**Important:** This setting only prevents item quantities from being allocated to orders. When you update an item quantity to an unavailable status, you should also take action in your stock room or warehouse to physically prevent the items from being picked.

After a status is associated with items on completed or pending transactions, you cannot edit the Make Inventory Available box on the associated inventory status record.

For more information on how items can be allocated to orders, see Inventory Allocation Preferences.

**Note:** The Make Inventory Available setting does not apply to items on drop shipments and special order purchases. Items with an unavailable status can be allocated to sales orders marked as drop shipments or special orders.

You can also receive unavailable items on the associated purchase order created from a drop shipment or special order sales order. For more information on drop shipments and special orders, see the help topic Drop Shipment and Special Order Purchases.

Tracking Inventory Balances By Status

Available and on-hand inventory balances on some records and searches are shown by inventory status. For more information, read the following topics:

- Inventory Balance Search
- Inventory Detail Search
Inventory Status on Item Records

The item quantities shown for each status represent the following values:

- Quantity On Hand - quantity currently stocked, including quantity committed to orders
- Quantity Available - quantity currently stocked, less quantity committed to orders

**Warning:** NetSuite transactions may trigger changes in item's quantities (Quantity on Order, Quantity Committed, Quantity Available and Quantity Backordered). Maximal value of quantities that can be saved is 9,999,999,999.

Assembly items have Bill of Material, which defines what quantity of what components is required to produce/assemble one unit of the assembly. NetSuite supports quantity of assembly components in millions. In addition, an assembly can have multi-level Bill of Material. For example, during save of a new Work Order transaction with following parameters, the validation of maximal quantity will prevent the transaction from saving.

Work Order Quantity: 1,000,000 units

Work Order Assembly: Assembly A

When you try to save the work order, the maximum allowed committed quantity for Component A2 is exceeded. Therefore, NetSuite throws an error message because of the following:

1. Order quantity is 1,000,000
2. The logic that runs on backend when saving work order looks at Bill of Material of Assembly A. Because it requires 1,000 units of Assembly B1 to produce 1 unit of Assembly A, it calculates 1,000,000 x 1,000 = 1,000,000,000.
3. The logic then looks at Bill of Material for Assembly B1 which requires 1,000 units of Component A2. This means 1,000,000 x 1,000 x 1,000 = 1,000,000,000,000 while maximum allowed quantity that can be saved, and that is 9,999,999,999.

For more information on how item quantities are calculated, see [Assessing Stock Levels](#).

**Note:** When the Pick, Pack, and Ship feature is enabled, the following is true for lot-numbered items, serialized items, or items that use bins. When you pick an item, the available quantity is decremented and the on-hand quantity remains unchanged. When you ship the item and the item fulfillment is marked shipped, the on-hand quantity is decremented. The available quantity shown by status on records and searches is the unpicked quantity. If a lot or serial number is specified on the sales order, the available quantity is decremented prior to picking. If a lot or serial number is picked that differs from the one specified on the sales order, the available quantities are adjusted accordingly.

Inventory Status on Item Records

When the Inventory Status feature is enabled, an Inventory Statuses subtab appears on the Inventory Detail tab of item records.
The Inventory Detail subtab displays different search views and results, depending on the item record type:

<table>
<thead>
<tr>
<th>Item Record Type</th>
<th>Search View</th>
<th>Search Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lot numbered or serialized item that uses bins</td>
<td>Inventory Detail On Hand</td>
<td>■ bin number</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ serial or lot number</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ status</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ location</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ on-hand quantity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ available quantity</td>
</tr>
<tr>
<td>Lot numbered or serialized item that does not use bins</td>
<td>Inventory Number/Status On Hand</td>
<td>■ serial or lot number</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ status</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ location</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ on-hand quantity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ available quantity</td>
</tr>
<tr>
<td>Inventory item that uses bins</td>
<td>Bin/Status On Hand</td>
<td>■ bin number</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ status</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ location</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ on-hand quantity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ available quantity</td>
</tr>
</tbody>
</table>

**Inventory Balance Search**

Run an inventory balance search to view the following information about items:

- Bin Number
- Location
- Lot or Serial Number
- Quantity On Hand
- Quantity Available
- Inventory Status

For more information on how the available and on-hand quantities are calculated, see [Tracking Inventory Balances By Status](#).

**To run an inventory balance search:**

1. Go to Reports > New Search > Inventory Balance.
2. Set one or more of the available fields, depending on the items you want your report to include.
   - For an item to appear in your search results, it must match all of the defined criteria.
3. Click **Submit**.

**Inventory Detail Search**

Run an inventory detail search to view a list of inventory detail records associated with items matching your search criteria.
For more information on the inventory detail record, see Inventory Detail Subrecord.

To run an inventory detail search:

1. Go to Reports > New Search > Inventory Detail.
2. Set one or more of the available fields, depending on the items you want your report to include.
   For an item to appear in your search results, it must match all of the defined criteria.
   For information about saved searches, see the help topic Defining a Saved Search.
3. Click Submit.

Search Results

<table>
<thead>
<tr>
<th>Column</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Lot or serial number.</td>
</tr>
<tr>
<td>Bin Number</td>
<td>Bin associated with the item.</td>
</tr>
<tr>
<td>Status</td>
<td>Inventory status associated with the item.</td>
</tr>
<tr>
<td>Item Count</td>
<td>The quantity by which the associated transaction impacted your inventory. Displayed as a positive or negative value, depending on whether the associated transaction added to or deducted from your inventory. Negative values appear within parentheses.</td>
</tr>
<tr>
<td>Quantity</td>
<td>The quantity by which the associated transaction impacted your inventory. Displayed as absolute values, regardless of the positive or negative impact to your inventory.</td>
</tr>
</tbody>
</table>

Basic Inventory Management

- Inventory Management Forms
- Adjusting Inventory
- Assessing Stock Levels
- Handling Backorders
- Reallocating Items
- Understanding and Avoiding Underwater Inventory
- Reviewing Negative Inventory
- Warehouse Processing

Inventory Management Forms

There are several inventory transaction forms you can use to manage your stock. Understanding how each form functions helps you determine which form best suits your needs to track and process your inventory to achieve your inventory management goals.

**Warning:** When entering any inventory form, you should not delete or change inventory transactions dated prior to an inventory distribution as it can cause difficulties maintaining accurate inventory data.

To help you differentiate between inventory forms, a short description of each is listed below, grouped by common inventory processes. You can click the arrow to drop down a detailed description of the form or click a link to another help topic with extensive details on using the form.
Adjust Stock Levels

Read Adjusting Inventory before using either of these forms to understand their differences. The function of these two forms is very different even though the names are similar.

- Adjusting Inventory
- Adjust Inventory Worksheet

Move Stock

Bin Putaway Worksheet

Use the Bin Putaway Worksheet to print a list of bin numbers for items that need to be re-stocked in your warehouse or stock room.

Items are added to this list any time an item that uses bins has a greater total on-hand count than the combined on-hand count of its associated bins.

This form is available only if the Bin Management feature is enabled.

To use the worksheet, go to Transactions > Inventory > Bin Putaway Worksheet.

To learn more, see Bin Putaway Worksheet.

Bin Transfer

Record a bin transfer to move items between bins within a warehouse.

To record a bin transfer, go to Transactions > Inventory > Bin Transfer. On the bin transfer record, identify the item, the bin the item will come from, the bin the item will move into and the quantity to be moved.

**Note:** Bin transfers can move items only if they are already in one or more bins.

This form is available only if the Bin Management feature is enabled.

To learn more, see Bin Transfers.

Distribute Inventory

When you initially enable the Multi-Location Inventory feature, use the Distribute Inventory form to update information about where your items are stocked.

This form allocates inventory from its original, unassigned location to the various locations you have created and enables you to adjust stock amounts as needed.

**Important:** Changes entered on Distribute Inventory are permanent. Your stock counts entered as of the date specified will not change as of that point, even if you enter transactions with dates prior to the Worksheet date.

**Warning:** When entering any inventory form, you should not delete or change inventory transactions dated prior to an inventory distribution, as this can cause difficulties maintaining accurate inventory data.

To distribute inventory, go to Transactions > Inventory > Distribute Inventory.
To learn more, see Distributing Inventory.

**Transfer Inventory**

When managing inventory in multiple locations, you can use the Transfer Inventory form to remove stock from one location and add it to another.

Transferring inventory can be useful when you are low on stock in one location, yet have a surplus in another location.

To transfer inventory from one location to another, go to Transactions > Inventory > Transfer Inventory.

This form is available only if the Multi-Location Inventory feature is enabled.

An additional option for tracking inventory that is transferred over time is creating Transfer Orders. For details, read Inventory Transfer Orders.

To learn more, see Transferring Inventory topic.

**Transfer Orders**

You can enter inventory transfer orders to schedule and track the movement of inventory items. Transfer orders are different than regular inventory transfers because you can track each stage of the transfer process and know when items are in transit.

Transfer orders help you manage items that are moved from one location to another over a period. A transfer order is entered to schedule the movement of items and can go through an approval process. Approved transfers are then fulfilled out of the source location and you know when the items are in transit. Finally, the destination location receives the items and the items are counted in that location's inventory.

To use transfer orders, go to Transactions > Inventory > Enter Transfer Orders.

This form is available only if the Multi-Location Inventory feature is enabled.

To learn more, see Inventory Transfer Orders topic.

**Intercompany Transfer Orders**

In NetSuite OneWorld accounts, you can enter an Intercompany Transfer Order to move inventory between locations in two different subsidiaries within your company.

Enter an Intercompany Transfer Order to schedule items to be shipped out of one subsidiary location and received into the inventory at another subsidiary location. Intercompany transfer orders enable you to track items in transit between the two subsidiary locations.

Intercompany Transfer Orders help you manage items that are moved from one subsidiary location to another over a period. A transfer order is entered to schedule the movement of items and can go through an approval process. Approved transfers are then fulfilled out of the source location and you know when the items are in transit. Finally, the destination location receives the items and the items are counted in that location's inventory.

To use intercompany transfer orders, go to Transactions > Inventory > Enter Intercompany Transfer Orders.

This form is available only in NetSuite OneWorld accounts.

To learn more, see Intercompany Inventory Transfers - Non-Arm's Length topic.
Replenish Locations

If you need to transfer inventory between locations and would like guidance about your replenishment needs, the replenish locations worksheet helps you determine which locations have too few items and which have plenty. Then you create an inventory transfer to show the items moved where they are needed.

The replenish locations worksheet guides you by showing the quantity on hand in each location for each item, as well as the quantity on order, total needed, reorder point and preferred stock level.

When you save the worksheet, an inventory transfer is created and your inventory is updated for each location.

**Note:** The replenish locations worksheet creates only inventory transfers, it does not create transfer orders. For details about transfer orders, read Inventory Transfer Orders.

Go to Transactions > Inventory > Replenish Location. Here you can make stock assessments.

This form is available only if the Multi-Location Inventory feature is enabled.

To learn more, see Inventory Replenishment and Withdrawal.

Generate Stock

Enter Work Orders

Work orders track the quantities of assemblies that need to be built and the quantities of components, or member items, needed to do so.

Special Order work orders track assemblies for a particular sale and Production work orders track assemblies to increase stock. Both use the same work order form, but production work orders do not link to a sale transaction.

To enter work orders, go to Transactions > Inventory > Enter Work Orders.

This form is available only if the Assembly Work Orders feature is enabled.

To learn more, see the help topic Entering an Individual Work Order.

Mass Create Work Orders

Assembly work orders track the production of assembly items needed for stock or to fill orders. After an assembly item reaches its assigned build point, a work order is added in the Mass Create Work Orders queue.

Building the work order's suggested quantity will restore the item's preferred stock level.

To mass create work orders, go to Transactions > Inventory > Mass Create Work Orders.

This form is available only if the Assembly Work Orders feature is enabled.

To learn more, see the help topic Mass Creating Work Orders.

Build Work Orders

After a work order is entered, you must complete an assembly build that assembles the needed items to close the work order.

When you build the work order, the stock level for the item is updated with the additional quantity of the assembly item.
To build work orders, go to Transactions > Inventory > Build Work Orders.
This form is available only if the Assembly Work Orders feature is enabled.
To learn more, see the help topic Building Work Orders.

**Build Assemblies**

Each time you physically manufacture assemblies in a production run, you increase your stock of the assembled items. Record each production run and update stock levels by entering an assembly build.

For each assembly build you record:
- the assembly item stock level increases
- the member items' individual stock levels decrease

Entering an assembly build for each production run keeps your inventory levels updated.
To enter an assembly build, go to Transactions > Inventory > Build Assemblies.
This form is available only if the Assembly Items feature is enabled.

**Commit Stock**

**Reallocate Items**

When you receive inventory from your vendor, those items are committed to existing open orders. You can use the Reallocate Items transaction to manually reallocate these items to different open orders than the ones they are automatically allocated to.

You can reallocate items to orders as needed instead of using the item commitment allocated automatically.

For example, you receive a shipment of widgets from your vendor. These widgets are automatically allocated to existing open orders. On the same day, a customer calls you in need of widgets. You can enter an order for that customer and then reallocate the new shipment of widgets to fill the new order.

Go to Transactions > Inventory > Reallocate Items.
To learn more, see Reallocating Items topic.

**Commit Orders**

When you use Demand Planning and the Perform Item Commitment after Transaction Entry preference is enabled, NetSuite will automatically allocate items based on the set priority. The order with the highest priority will have items committed for fulfillment. Automatic calculation of quantities to be committed to prioritized orders can save you time and effort.

To learn more, see Commit Orders and Demand Planning and Inventory Allocation.

**Order Stock**

**Order Items**

The Order Items form provides a list of items with a stock level at or below the reorder point. The quantity to order is suggested based on your preferred stock level and quantity of open backorders.
You can create purchase orders in bulk for items you need to restock.

Bulk item ordering helps automate your replenishment process and keep your inventory at an optimum level. When you set a preferred stock level and reorder point on each item record, item stock levels are assessed and a reorder quantity is suggested.

Go to Transactions > Inventory > Order Items.

To learn more, see the help topic Bulk Ordering Items topic.

Adjusting Inventory

When you need to change your inventory records, two forms are available you can use to enter an adjustment: the Adjust Inventory form and the Adjust Inventory Worksheet. Although the names are similar, the function of these forms is very different.

For example, if you enter each form with a quantity of +10 widgets, a basic summary of the difference is this:

- The Adjust Inventory form is inclusive of the previous stock total.
  The Adjust Inventory form adds 10 to the previous inventory count.
- The Adjust Inventory Worksheet is exclusive of previous stock total.
  The Adjust Inventory Worksheet form resets the inventory count to 10 on the date of the worksheet, regardless of the previous count.

Depending on your requirements, you may be able to use the Single Inventory Worksheet Import to automate the creation of an inventory worksheet. For this import, you submit inventory adjustment data in a CSV file.

A detailed description of each help form below can help you further differentiate between the two forms.

**Warning:** You should not delete or change any inventory transactions dated prior to an inventory distribution, as this can cause difficulties maintaining accurate inventory data.

Adjust Inventory

You can use the Adjust Inventory page to change the quantity and value of an inventory item without entering a purchase order. For example, to account for clerical errors, changes in cost, thefts or miscounts, you can enter an inventory adjustment.

If you use the LIFO or FIFO costing methods, an inventory adjustment can be entered to change the quantity and value of an inventory item and preserve the costing history of the item.

**Note:** For custom transaction fields, any field marked for Inventory Adjustment is also available for the Inventory Transfer. You can customize the Adjust Inventory page to remove these fields.

**Important:** NetSuite bases the cost estimate for a standard cost item on the total amount, quantity. NetSuite uses this basis to ensure that quantity times rate equals amount.

To adjust inventory:

1. Go to Transactions > Inventory > Adjust Inventory.
Primary Information

1. Today’s date is automatically populated in the Date field. You can enter or select another date.
2. Choose the posting period for this adjustment to post.
3. In the Reference # field, you can enter a number to help keep track of your adjustments. This number appears on register and account detail reports.
4. In the Adjustment Account field, select an account for this adjustment. Usually, this is an expense account for inventory adjustment.
5. Optionally, enter a memo for this inventory adjustment. Memos appear only on account registers and on the account detail report.
6. The Estimated Total Value field shows the total value of the change in your inventory. When you submit the adjustment, the current cost is determined from your inventory database and your adjustment totals are updated.
7. If this inventory adjustment is a job-related cost, but wasn't specifically billed as a line-item, select the appropriate Customer or Job.
   For example, a caterer bills his or her customer a per person rate for a beer and wine bar, and then enters an inventory adjustment transaction to account for the actual number of bottles consumed.

Classification

1. Select a Department, Class or Adjustment Location as appropriate.

Adjustments

1. In the Item field, select the item you want to adjust inventory for. The description, quantity on hand, and current value of the item appear in the appropriate fields.
2. If you track locations, select a location. The description, quantity on hand, and current value of the item appear in the appropriate fields.
3. If you use the Multiple Units of Measure feature, select the unit of measurement for the quantity fields. The stock unit from the item record shows here by default.
4. In the Adjust Qty By field, enter the number of items to adjust the inventory by. You can use either a positive or negative number to represent the change in inventory. The updated quantity appears in the New Qty field.
5. In the Est. Unit Cost field, enter the cost of each item being added to the quantity on hand. If you entered a negative number in the Adjust Qty By field, you cannot enter anything in this field. The cost of the items being removed from the quantity on hand is calculated.
6. If the item you selected is a serialized or lot numbered item, enter the serial or lot numbers for the item. Separate each serial number with a space, comma, or by pressing the Enter key after each one. Lot numbers must be entered in this format: LOT#(Quantity).
   For example, to enter a quantity of 100 items as Lot number ABC1234, enter ABC1234(100) in the Lot Numbers field.
7. In the Bin Numbers field, the preferred bin number for this item shows by default. If this item will be placed in other bins associated with the item record:
   - If you use the Bin Management feature: Click the preferred bin and click the Bins icon. A small popup window opens where you can set the quantity to distribute in each bin.
You can also enter bin numbers separated by commas with on-hand quantities in parentheses. For example, you can enter A101(50), A102(43).

To track bin numbers, you must first create bin records at Lists > Accounting > Bins > New. Associate bin numbers with items on inventory and assembly item records.

Bins must be selected on the item record to show here.

- If you use the Advanced Bin / Numbered Inventory Management feature: Click the Inventory Detail icon. In the popup window, select the appropriate bins and quantities.

8. Values for the department and class associated on the item record are automatically populated.

   **Note:** If your Inventory Adjustment form is customized so that the Department or Class field does not show for items, or if the Allow Per-Line Classes preference is not enabled, items you adjust use the Department or Class selected in the form header.

9. In the Memo field, enter information to identify this item correction.

   For example, when you use the Search Transactions feature, you can search for specific words and phrases in the Memo field.

10. Click Add.

    Repeat these steps for each inventory item you want to adjust and click Save.

    The total value of your inventory adjustments is estimated. The estimated total of all your inventory adjustments appears in the Estimated Total Value field at the top of the page.

    After you have saved your adjustment, the current cost is determined, your adjustment totals are reported, and your inventory is updated.

    To view your inventory adjustments, go to Transactions > Inventory > Adjust Inventory > List.

### Choosing an Inventory Adjustment Account

You must choose an adjustment account whenever you need to change the quantity and value of an inventory item.

**To choose an adjustment account for the Inventory Adjustment page:**

1. Go to Transactions > Inventory > Adjust Inventory.
2. In the Adjustment Account field, specify the account to be charged for the adjustment. Usually, this will be an expense account for inventory adjustment.
3. Enter other information on the Inventory Adjustment page as appropriate.
4. Click Save.

### Adjust Inventory Worksheet

The Adjust Inventory Worksheet form is used to enter changes to the quantity or value of inventory items other than lot numbered items, serial numbered items, or inactive items.

You can use the worksheet to enter adjustments for up to 1,000 line items at one time, but be aware that the exclusive nature of the adjustment described in the following paragraphs applies to all items you adjust on the worksheet.

The Adjust Inventory Worksheet form is more than a means to enter an adjustment for multiple items at one time. The way NetSuite uses information on the Adjust Inventory Worksheet form is different than the way NetSuite uses information entered on the Adjust Inventory form.
Important: When processing transactions, you must submit one page at a time. If you do not submit each page individually, information is not saved and can be lost when you switch between pages. To process multiple pages of information, always submit each page individually.

Exclusive of Previous Stock Totals

It is very important to be aware that adjustment amounts entered on the Adjust Inventory Worksheet form do not change as of the worksheet transaction date. Even if you enter other transactions dated prior to the worksheet date (such as purchases or sales), the stock count is adjusted to remain at the level indicated by the worksheet on the worksheet date.

- For example, you have taken a physical count of your inventory on January 1st, 2008. You want to enter that count and not have that count change in the future due to transactions entered that are dated prior to the inventory count. When you enter an inventory worksheet adjustment, the count remains the same as of the date of the worksheet.
- For another example, you can enter an adjust inventory worksheet dated 10-25-08 and show 10 of your item Deluxe Widget in Location One. You then create an invoice dated 10-24-08 which sells two Deluxe Widgets from Location One. The quantity of the Deluxe Widgets at Location One on 10-25-08 remains at 10 as determined by the inventory worksheet.

Additional examples are available below, where it says “Click here for more details on the Adjust Inventory Worksheet.”

Costing History is Averaged

It is very important to be aware that when using the Adjust Inventory Worksheet, if you use LIFO or FIFO costing, the cost of any item you adjust is averaged, LIFO or FIFO is ignored, and your costing history will be lost. To preserve LIFO or FIFO, use Adjust Inventory for any inventory adjustments. If you use the average costing method, you can make any changes you want on this worksheet.

Calculating On Hand Quantities

Inventory transactions with the same date are calculated in a particular order to find the On Hand quantity of an item. This means that an inventory worksheet transaction posts at the start of the transaction date, and any additional inventory transactions on that date affect its figures.

The default order transactions are used to calculate this quantity is:

1. Adjust Inventory Worksheet, Distributions
   Worksheets can also be set to post as the last transaction of the day. For details, read about the Order in Day field below.
2. Adjust Inventory transaction
3. Receive Purchase Order
4. Bill Payment
5. Bill Credit
6. Item Fulfillment
7. Invoice, Cash Sale
8. Credit Memo, Return Authorization Item Receipts

For example, you enter an invoice dated 1-1-08 selling a quantity of 1 of your item Deluxe Widget. Later, you enter an inventory worksheet dated 1-1-08 with Deluxe Widget showing a quantity of 5 on hand. The On Hand count on 1-1-08 is 4 Deluxe Widgets.
In another example, you enter an inventory worksheet dated 3-13-2008 with Deluxe Widget showing a quantity on hand of 15, valued at $75. Then, you run an inventory report dated 3-13-2008 with Deluxe Widget showing a quantity on hand of 15, valued at $75.

- If you then enter a cash sale for 5 widgets dated 3-12-08 and run an inventory report, you see 15 Widgets on hand, valued at $75 as of 3-13-08.
- If you then enter a cash sale for 5 widgets dated 3-13-08 and run an inventory report, you see 10 Widgets on hand, valued at $50 as of 3-13-08.

**Changing Inventory Adjustment Worksheets**

When you open an existing inventory adjustment to make changes, only items included in the original adjustment appear in the list. The list shows all items from the original adjustment and cannot be filtered to exclude any of these original items.

Showing all items from the previously saved worksheet ensures that no lines are filtered out and deleted upon saving changes.

**To use the adjust inventory worksheet:**

1. Go to Transactions > Inventory > Adjust Inventory Worksheet.
2. In the **Date** field, today's date autofills, but you can choose another date.
3. If you use accounting periods, in the **Posting Period** field, choose the period for this adjustment to post.
4. In the **Ref. No.** field, you can enter a reference number to track adjustments. This number appears on register and account detail reports.

**Note:** If you use auto-generated numbering, a reference number can be manually entered if you allow the override of auto-generated numbers for an inventory adjustment. Otherwise, the reference number is generated and cannot be changed after the transaction is saved.

For details, read the help topic [Set Auto-Generated Numbers](#).
5. In the **Adjustment Account** field, select an account for this adjustment. Usually, this is an expense account for inventory adjustments.
6. The **Estimated Total Value** field shows the total value of the change in your inventory. When you submit the adjustment worksheet, the current cost is determined from your inventory database and your adjustment totals are updated.
   - **Estimated Total Value** = \( \text{sum(new Value)} - \text{sum(Value As Of Date Above)} \)
   
   The Estimated Total Value represents the changed valuation of the worksheet transaction, not the new value for the items. So if you have an item with an on hand value of $25, and you adjust it using the worksheet to have a new value of $100, after the worksheet is saved, the estimated total value of the worksheet is $75, not $100.
7. Select a department or class, if you track them.
8. If you track locations, choose the location where you need to make inventory adjustments. When you select a location, the quantities of items in that location show in the list at the bottom of the page.
9. In the **Memo** field, you can enter an optional message. You can search for this transaction later using the text entered here.
10. In the **Order in Day** field, choose when you want this worksheet to post.
   - Choose **First in Day** to post the worksheet at the beginning of the day and **not** include additional inventory transactions entered during that day for this worksheet.
Choose **Last in Day** to post the worksheet at the end of the day and **do** include all inventory transactions entered during that day for this worksheet.

11. In the **Inactive** field, choose one of the following:
   - **Select No** to exclude inactive items from the list.
   - **Select Yes** to show only inactive items in the list.
   - **Select All** to show both active and inactive items in the list.

   Serialized items and lot numbered items do not show in this list whether they are active or not.

12. In the list at the bottom of the page, find an item you want to adjust.

13. In the **New Qty** field, enter a new total quantity for the item if one applies.

   If you use LIFO or FIFO costing, the cost of any item you adjust is averaged, LIFO or FIFO is ignored, and your costing history is lost.

14. In the **New Value** field, you can change the auto calculated new total value for the item.

   If you use LIFO or FIFO costing, the cost of any item you adjust is averaged, LIFO or FIFO is ignored, and your costing history is lost.

15. Repeat steps 12 through 14 for any other inventory items you want to adjust.

16. **Click Save.**

After you save the worksheet, your inventory is updated.

Adjusting the quantity of an assembly item changes the quantity of the assembly only. It does not change the quantity of individual member items.

To view your inventory adjustment worksheets, go to **Transactions > Inventory > Adjust Inventory Worksheet > List.**

**Note:** Depending on your requirements, you may be able to use the **Single Inventory Worksheet Import** to automate the creation of an inventory worksheet. For this import, you submit inventory adjustment data in a CSV file.

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**Assessing Stock Levels**

You can access inventory data to see real-time information, including how much you have, how much you need and the value of your stock on hand. Then, determine how your stock levels are affecting your inventory workflow.

For example, if stock of an item is too low, then your order-to-delivery cycle time increases, and this can negatively affect customer service. If stock of an item is too high, then your overhead is increased by having money tied up in items sitting on shelves.

When you view item data, quantities are defined as follows:

<table>
<thead>
<tr>
<th>Quantity/Level</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity Available</td>
<td>Quantity On Hand less Quantity Committed</td>
</tr>
<tr>
<td></td>
<td>Note: Quantity Available is never tracked as a negative quantity. An item is</td>
</tr>
<tr>
<td></td>
<td>either non-available (quantity 0) or available (a positive quantity). This</td>
</tr>
<tr>
<td></td>
<td>means you cannot commit items in an underwater state.</td>
</tr>
<tr>
<td>Quantity On Hand</td>
<td>Quantity currently stocked, including Quantity Committed</td>
</tr>
<tr>
<td>Quantity Committed</td>
<td>Quantity promised to customers on approved sales orders that are not yet</td>
</tr>
<tr>
<td></td>
<td>fulfilled</td>
</tr>
</tbody>
</table>
### Basic Inventory Management

<table>
<thead>
<tr>
<th>Quantity/Level</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity On Order</td>
<td>Quantity on approved purchase orders pending receipt from the vendor</td>
</tr>
<tr>
<td>Quantity To Order</td>
<td>Preferred Stock Level less Quantity Available</td>
</tr>
<tr>
<td>Quantity Backordered</td>
<td>Quantity committed to sales for which there is no stock to fill the order</td>
</tr>
<tr>
<td>Reorder Point</td>
<td>Quantity level at which you need to place an order to replenish stock, or build more of this item.</td>
</tr>
<tr>
<td>Preferred Stock Level</td>
<td>This is the optimum quantity to maintain in stock of an item. The ideal quantity is the amount you need to fulfill orders in a timely manner without either running out or overstocking. This quantity is used to determine your replenishment needs on the Order Items page. It is the quantity you want to have in stock after an order is placed. The preferred stock level you set is used to calculate the quantity of items to be ordered on the Order Items page.</td>
</tr>
<tr>
<td>Safety Stock</td>
<td>This is a measure of the amount of stock you want to keep on hand to account for variations in demand so that you do not run out. It is a buffer amount of an item you prefer to keep in stock at all times so that you do not run out.</td>
</tr>
</tbody>
</table>

Questions you may ask during this process are:

- Do I have items at or below their preferred stock level or reorder point?
- How many backorders do I have?
- Do I need materials to assemble items?
- What quantity should I order?
- What is the lead time to receive items?
- Has demand increased or decreased for an item?

Your answers to these questions determine how you order your items and materials. In general practice, many companies order inventory with the goal of keeping inventory at an optimum level rather than keeping many extra items on hand.

It is ideal to keep enough goods to service customers by fulfilling orders in a timely manner without having extra stock on hand because this reduces funds tied up in idle stock.

To assess stock information and determine your replenishment needs, you need to identify information about your items and materials, such as stock available and customer demand. Then, you can determine the quantities of items you need.

When you view item stock status either on item records or on the item list, you can use these quantities to determine inventory replenishment needs. For example, you could determine that:

- An item with a quantity available that is far below the preferred stock level and a quantity on order of zero may need to be ordered.
- An item with a large quantity available and large quantity on order may need to be ordered less often.
- An item with a low preferred stock level and a high quantity backordered may need to be ordered more frequently or in higher quantities.
- An item with any quantity backordered and a quantity on order of zero may need to be ordered.
- An item that is backordered in one location, but has high quantities in another location may need to be redistributed.

There are several ways to access item information in your account:

- To View an Item List, go to Lists > Accounting > Items.
Basic Inventory Management

- View an Individual Item Record
- View Inventory Reports
- Utilize Stock Replenishment

**View an Individual Item Record**

1. Go to Lists > Accounting > Items.
2. Click View next to the item.

**View Inventory Reports**

You can also view inventory reports to access item information. For details, read the following topics:

- Inventory Reporting
- Inventory Level Assessments with Reports
- Reporting on Demand Planning

**Utilize Stock Replenishment**

NetSuite can also automatically assess item replenishment needs and make suggestions for purchases. After you have entered stock information an item record, NetSuite can suggest when to reorder the item and how many to purchase. This can be done using the following features:

- Advanced Inventory Management
- Demand Planning

By making assessments of item stock levels combined with sales information in reports, you can determine the optimum stock levels for your items and streamline your inventory.

If you use the Multi-Location Inventory feature, you can also consider Inventory Replenishment and Withdrawal to take surplus items out of one location and move them into another location with too few.

**Reallocating Items**

NetSuite sometimes automatically allocates items from inventory to commit them to fill orders. Inventory can be automatically committed in the following cases:

- As each sales order is created or approved, your account automatically allocates inventory from the item’s quantity available.
- Inventory is automatically committed to fill backorders when goods are received from your vendors.
- The inventory generated from assembly work orders is automatically allocated.

You can use the Reallocation Items page to redistribute your inventory items between open orders.

For example, you currently have 100 widgets on hand with no outstanding orders. Then, you create and approve sales order # 2001 for 70 widgets. 70 widgets are now committed to that order. Your available quantity is now 30 (on hand quantity of 100 - quantity committed on orders of 70).

When sales order #2020 is placed for 50 widgets, items are committed from your available quantity (30), and the remainder needed for the order (20) are placed on backorder. So 30 widgets will be committed to order #2020, and 20 widgets are placed on backorder.

However, order #2020 is from an important customer, and you want to use items already committed to order #2001 to fulfill order #2020 instead. You can reallocate the items from one order to fill another.
To reallocate items:

1. Go to Transactions > Inventory > Reallocate Items.
2. On the Reallocate Items page, select the item you want to reallocate in the Item field.
3. Select a location if you use the Locations feature.

A list of open orders for the item appears.

The current Quantity On Hand, Quantity Committed, and Quantity Required to fulfill all orders is displayed at the top of the page.

The orders pending fulfillment for this item are listed, showing the Order Number, Date, Customer, Quantity Ordered, Quantity Remaining to be fulfilled, and the current Quantity Committed.

4. Clear the box in the Commit column to release items from commitment to the order.
Any changes update the Uncommitted quantity that displays above the Auto Commit button.
5. To commit items to an order, check the box in the Commit column.
6. In the Quantity Committed field, accept, increase or reduce the number of items committed to each order.

The total Quantity Committed of all orders cannot exceed the Quantity On Hand.
7. To automatically commit any available items to sales orders, click the Auto Commit button.
Items are committed to sales orders based on order of entry. For example, the oldest sales order has items committed first.
8. The Quantity Required field displays the quantity needed for the item you select in the Item field. This amount is calculated as Quantity Committed + Backorders.
9. If the Pick, Pack and Ship feature is enabled in your account, the Quantity Picked field displays the committed quantity that has already been picked and packed for the item you selected in the Item field. If the Multiple Location Inventory feature is also enabled, this quantity is displayed per location.
10. If you use the Multiple Units of Measure feature, the Units field displays the applicable unit.
11. Click Submit.

The items are now committed to the appropriate orders, and item records reflects these changes.

**Note:** When items are reallocated, lines on orders can change from having the Complete Quantity committed to having the Available Quantity committed.

When you reallocate items and commit less to a line that is in the Complete Quantity status, that line changes to the Available Qty status even if the line is fully committed by the automatic reallocation process.

**Demand Planning and Allocation**

If you use the Demand Planning feature, you can automate some item commitment processes. For details, read Demand Planning and Inventory Allocation

**Handling Backorders**

If an item is entered on a sales transaction, but the item is not in stock, your account tracks the item as a backorder. Integrated item receipts and fulfillments in your account make handling backorders straightforward and efficient.
When purchase orders are received for items that have open backorders, the items are automatically committed to the backorders. Then, the order appears in the fulfillment queue.

For example, Bob enters sales order #1001 for 5 of item #XY123. The quantity on hand of item #XY123 is zero, so your account tracks the 5 items as backorders.

Bob enters a purchase order for 50 of item #XY123. When the 50 items are received from the vendor, your account automatically commits 5 of them to order #1001 and adds the order to the fulfillment queue. The next time Bob opens the fulfillment list, order #1001 appears on the list and is ready to be fulfilled.

When your account automatically commits items to backorders or open orders, you may want to change these commitments to fill other open orders. You can use the Reallocate Items transaction for this purpose.

If you use the Demand Planning feature, you can automate backorder item allocation. Read Demand Planning and Inventory Allocation.

To track items that are backordered, you can go to the Reports tab and click either:

- **Sales Back Order Report** – shows items that are backordered grouped by transaction. For each transaction, the report shows the transaction number and date, item name, customer name, quantity ordered, quantity fulfilled, quantity back ordered, quantity on hand and quantity on order.
- **Inventory Back Order Report** – shows items that are backordered grouped by item. The report lists the backorder transaction number, customer name, quantity ordered, quantity fulfilled, and the quantity backordered for each transaction.

**Understanding and Avoiding Underwater Inventory**

Selling an item when the data shows that you do not have the item in stock is known as an “underwater” sale. Inventory is in an underwater state when the on-hand quantity of the item is below zero. You should avoid entering an item on a sale transaction if the on hand count of the item is zero or a negative amount.

Problems can arise if you enter sale transactions over a period when an item is underwater because NetSuite has difficulty calculating the cost of the item on those sale transactions. These cost calculations from underwater sales can lead to skewed results for reports and inventory data.

During the time that the on hand count is below zero, on sales transactions that include the item, costing information at the time of the sale is shifted to another date. The estimated cost is calculated based on the last known cost when the item was in stock.

At a later date when more of the item is received into stock, the true cost can be calculated and an adjustment can be posted to correct for transaction lines entered when the item was underwater. However, because the adjustment posts with the item receipt, the correction does not post with the original estimated cost.

For example, consider the following scenario where inventory is sold underwater:

- On March 30, an invoice is entered that sells 100 widgets and brings the on hand count of widgets to -100 widgets.
- Based on historical costing, the cost of the widgets is estimated at $10 each. Therefore, the cost of goods sold for the 100 widgets = ($10 x 100) = $1000.
- On April 2, a purchase is entered for 100 widgets at a cost of $12 each. The actual cost of the widgets is ($12 x 100) = $1200. An adjustment of $200 is entered to correct the purchase price of the widgets.

After you have entered a purchase that brings an underwater item count back above zero, the costing adjustments that are entered do balance totals across affected periods. However, when viewing reports
by period, if a corresponding sale and purchase post in different periods, you may still see the results of costs shifted from one period to another.

If you consider the balance for March and April together, then the total is balanced because the sale in March and the purchase in April that includes the adjustment are both considered.

However, if you consider only sales in the month of March, the total is off by $200 because the adjustment that posted with the item receipt does not show in the totals. Likewise, if you consider only purchases for the month of April, the total is off by $200 because the adjustment is included in the total without the sale.

If you do not enter purchases to bring the item count back above zero, the costing estimates remain in the system. For example, a costing estimate can be $0.00 if there is no purchase history and can cause larger adjustments after you enter a purchase to bring the item count back above zero.

![Important:](image)

For example, if an item is underwater only three days before you enter a purchase that brings it back above zero, reports and data will be less skewed than if an item is underwater for three months.

**Why should I care about selling underwater inventory?**

- **Data is less accurate** – When you have underwater items in your inventory, your inventory data is less accurate. Inaccurate inventory data can affect other aspects of your integrated NetSuite account and can potentially skew data in your chart of accounts, reports, and other areas.

- **Transactions are more confusing** – Purchases that include costing estimates are often confusing for users who are not familiar with the costing workflow for underwater sales. Trying to sort out transactions associated with underwater sales can be time consuming and counterproductive.

- **Records are less fit for audits** – Because transactions that include underwater items also include estimates and adjustments, they are less likely to be well received by auditors.

**How can I tell if I am selling underwater inventory?**

- The sale transaction shows a negative on-hand count of the item.
- You receive a warning that the item is not in stock.

It is best to focus concern on the point in your workflow at which items leave your inventory. For example, your workflow can include entering sales orders and then fulfilling them. Because items do not leave stock when you enter the sales order, your focus is not on that transaction. However, when you enter the fulfillment, items do leave stock and you need to be cautious that the fulfillment does not include underwater items.

**How can I avoid selling underwater inventory?**

You can avoid being in an underwater state with inventory items by following these tips:

- Insist on prompt entry of item receipts.
- Require item receipts to be entered with the date of receipt instead of the entry date if the receipt is not entered the same day it is received.
- Always use sales orders to sell inventory.
- Always fulfill orders from sales orders.
* Set the **Fulfill Based on Commitment** preference to *Limit to Committed*.  
  For more information on this preference, see the *Order Management Accounting Preferences*.

* Avoid entering standalone cash sales and invoices. Standalone transactions have no commitments or checks and balances to prevent you from selling out or going underwater.

* Use the Inventory Level Warnings preference. This preference gives you instant feedback on each transaction as to whether or not you have items in stock.  
  For more information on this preference, read *Inventory Level Warnings*.

* Perform a physical inventory count on a regular basis to assess whether your inventory data is consistent with the physical count of your stock.  
  If the physical count is higher or lower than the quantity on hand based on the item record, the count needs to be reconciled to match actual inventory levels.

* Use the Review Negative Inventory page to identify inventory items that are underwater. To learn more, see *Reviewing Negative Inventory*.

**Reviewing Negative Inventory**

You can identify any negative inventory values that can be corrected by adjusting them to be positive. This process does not create a physical count. A physical count should already be completed before you begin this task.

**Note:** Because an item’s inventory level should be zero or positive prior to distribution, you should run this report before distributing inventory. Read more about inventory distribution in *Distributing Inventory*.

**To review negative inventory:**

1. Go to Transactions > Inventory > Review Negative Inventory.

2. On the Review Negative Inventory page, in the **As of Date** field, enter the date you want to review inventory through. For example, if you enter June 1, 2010, then the list will show inventory that has a negative count as of June 1st of 2010.

3. The list of inventory items that shows identifies any items that have negative inventory.  
   If you use the Multi-Location Inventory feature, you can filter the list by location in the **Location** field.

4. Use the list to adjust the amounts for those items so they are no longer negative. For each negative-quantity item on the list, you can enter an inventory adjustment to correct them. For details about entering an inventory adjustment, read *Adjusting Inventory*.

Reviewing negative inventory items is a required task for the period closing checklist. For more details, read the help topic *Inventory Tasks on the Period Close Checklist*.

To learn more, see *Understanding and Avoiding Underwater Inventory*.

**Warehouse Processing**

When you receive items and materials from your vendors, they may need processing in your warehouse to get them ready to ship to customers. Three warehouse processes that can help manage your inventory are identification, manufacturing, and organization.
The identification process uses the Bar Codes and Labels feature to identify and track items. Bar codes also identify transactions and enable you to process them more quickly.

In the manufacturing process, items are assembled or packaged for sale as kits or groups.

Organization is achieved in a warehouse using the Bin Management feature or Advanced Bin / Numbered Inventory Management feature. You can track bins and associated bins with items to exactly where an item is stored within a warehouse.

Identification with Bar Coding

Using bar codes and labels streamlines your inventory workflow because scanning bar codes to process items and transactions saves time by not having to manually enter item and transaction numbers. Scanning bar codes also reduces the chance for errors such as pulling the wrong item to fulfill an order or entering the wrong transaction number.

Other uses for bar codes include the following:

- Print labels to affix to the items that show the item price, and bar codes for item number and serial number.
- Scan bar code labeled items to add them to a sales transaction or receive them on a purchase transaction.
- Scan transaction bar codes to bulk receive, fulfill, pick, pack, ship, bill or approve orders.

To learn more, see the help topic Using Item Records.

Manufacturing

Some items you receive into inventory may need to be processed or packaged before being sent to customers. NetSuite can help track your inventory throughout the manufacturing process.

Item records used in the manufacturing process include Groups, Kit/Packages and Assemblies. Functions of these item types are discussed in the sections below. Also, for more details about the differences between these items, read the help topic Groups, Assemblies, and Kit/Packages.

- **Groups**
  
  An item group is a unit composed of items from your inventory.
  
  A group is sold as one unit, but has several member components. A group is dependent on its components’ prices.
  
  To learn more, see the help topic Item Groups.

- **Kit/Packages**
  
  A kit/package is a unit composed of items from your inventory.
A kit is sold as one unit, but has several member components. Kit components can be inventory items, assemblies, kits, and service items. One difference between kits and groups is that the price of a kit is not dependent on its components' prices and can be assigned several price levels. To learn more, see the help topic Kit/Package Items.

- **Assemblies**
  An assembly item is an inventory item made of several components, but identified as a single item. Assemblies are manufactured by combining raw materials you stock. To learn more, see the help topic Assembly Items.

### Organization with Bin Management

When you enable the Bin Management or Advanced Bin / Numbered Inventory Management feature, you can use bins to track items in stock and better manage your warehouse processing.

Use bins to identify the places you store inventory items within your warehouse and track on-hand quantities. This helps warehouse employees know exactly where to go to find items they need when picking and fulfilling orders. You can also use bins to specify where items need to be put away in stock when you receive them.

A bin number can be associated with one or more items, as an item can be associated with one or more bins. Bin numbers are included on receiving and fulfilling transactions to keep track of the on-hand quantity for each bin.

To learn more, see Bin Management.

### Locations and Inventory Management

When you use the Locations feature, there are many ways to identify locations as part of your inventory management procedures.

Click a link below for more information:

- Locations Overview
- Setting a Location on an Item Record
- Setting a Location on a Transaction
- Setting a Location for Individual Line Items
- Line-item Locations with Header Locations
- Features for Inventory and Locations

You can also click Help and read the Locations topic for more information.

### Setting a Location on an Item Record

When you identify a preferred location on each item record, your account remembers the location you prefer when the item is selected on transactions.

**To associate an inventory item with a location:**

1. Go to Lists > Accounting > Items.
2. Click **Edit** next to the name of the item.
3. On the Inventory Item page, click the **Inventory** subtab.
4. Specify the **Preferred Location** for pulling the item from inventory.
5. Click **Save**.

After you identify a preferred location on each item record, the preferred location of the item defaults on sales transactions that show locations on a line-item basis. For information on line-item locations for transactions, read *Setting a Location for Individual Line Items*.

### Setting a Location on a Transaction

You can associate locations on transactions in these ways:

- **Associate one location for the entire transaction.**
  Read *Identifying Locations in the Transaction Header*.
- **Associate one location for each transaction line-item.**
  Read *Setting a Location for Individual Line Items*.
- **Associate a location in the header and on transaction lines.**
  Read *Line-item Locations with Header Locations*.

### Identifying Locations in the Transaction Header

You can choose to identify a location in the header of a transaction. This sets all transaction lines to the location identified in the transaction header.

For example, you can select a location in the header of a sales order to record where the sale is made. Or, you could select a location in the header of a purchase order to identify where you expect to receive those items.

When you identify your transactions by location, you can accurately manage your inventory based on the location from which items are ordered, received, and sold.

**To identify a location on a transaction:**

1. Click the **Transaction** tab.
2. Click the name of the transaction you want to create.
3. In the Classifications section, in the Locations field, select the appropriate location. For more information on how to create a location, read the help topic Creating Locations.

4. Complete the transaction as required.

5. Click Save.

When you identify locations on transactions, you can run reports with information filtered by location. For more information on reporting by locations, read Inventory Reporting.

**Setting a Location for Individual Line Items**

When you use the Locations or Multi-Location Inventory feature, you can set a preference to show a location for individual line items on transactions.

**Note:** To show line-item locations on a transaction, you need to customize the form. For more information, see Customizing a Form for Line-item Locations.

If you do not use line-item locations:

- The location you choose in the transaction body applies to all line items on the transaction.
- An adjustment account chosen in the transaction body is also associated with the location chosen in the body.

If you do use line-item locations:

- A different location can be associated with each line-item.
- An adjustment account chosen in the transaction body is not associated with a location.

Line-item locations function differently when used with each feature.

**Line-item Locations with the Locations Feature**

When you use the Allow Line-item Locations preference with the Locations feature, your account tracks each line-item by location on transactions.

For example, Wolfe Electronics wants to track the sales amounts of each line split by locations. Wolfe associates a location with each transaction line-item. Then, Wolfe can track the sales per location of the business over any period.

Using this method does not determine a location for receipt or fulfillment of items, however. To track inventory across locations, you need to use the Multi-Location Inventory feature.

**Line-item Locations with the Multi-Location Inventory Feature**

The Allow Per-line Locations preference is automatically enabled when you enable the Multi-Location Inventory feature. After the preference is enabled, the Allow Per-line Locations box is removed from the Accounting Preferences page.

The Allow Per-Line Locations preference enables you to associate a different location for each line-item on transactions.

For example, if you sell two items on a sales order, you can associate one item with the Atlanta Location and the second item with the New York location. Then, the items shows on fulfillments and reports associated with their respective locations.
To enable locations per line-item:

1. Go to Setup > Accounting > Accounting Preferences.
2. Click the General subtab.
3. In the Allow Per-Line Locations box:
   - Check the box to associate a location with individual line-items on a transaction.
     When this preference is on, you can choose a different location for each line-item on transactions.
     Location appears as a column field and is applied individually to each transaction line. Then, an adjustment account chosen in the body of a transaction is not associated with a location.
   - Clear the box to select a location in the body of a transaction.
     When this preference is off, the location chosen in the body applies to all line-items on the transaction.
     Then, an adjustment account chosen in the body of a transaction is associated with the location chosen in the body.
4. Click Save.

Line-item Locations with Header Locations

If you use per-line locations, you can customize transaction forms to identify a location at both the header and line level at the same time.

For example, if you have enabled both the Locations feature and the Allow Per-Line Locations preference, then a Location field shows on each transaction line AND in the form header. You can choose the location East Coast on one line and choose West Coast on another line. Then, you can choose the location United States in the transaction header.

This can be useful if you use identify legal entities or geographical segment by location and wish to report separate balance sheets and income statements by those segment. From the previous example, a sales order can post line items to the correct locations (East and West Coast), and the header location allows a correct income statement to be run for United States transaction totals.

When you use a form customized to show a location at both the header and line level, if either the line or header field is not filled, then both fields are cleared unless they are mandatory. If you have also enabled a preference to make locations mandatory, then the selection is mandatory at both the header and line level.

For more information on how to customize a form to identify a classification at both the header and line level, read Customizing a Form for Line-item Locations.
Customizing a Form for Line-item Locations

When you activate the Locations feature, you can set a preference to allow line-item locations. This preference is automatically enabled when you activate the Multi-Location inventory feature. For more information on this preference, read Inventory Management Preferences.

After you allow line-item locations, you can select a location for each line on a transaction.

⚠️ Important: You must customize a transaction form to show locations on each line.

After you identify a preferred location on each item record, the preferred location of the item defaults on transactions that show line-item locations.

To customize a form for line-item locations:

1. Click the Setup tab.
2. On the Setup page, under the Customization heading, click Transaction Forms.
3. Click Customize next to the kind of form you want to customize.
4. In the Name field, enter a name for your custom transaction form.
5. In the Layout field, select a layout for your form.
6. Check the Form is Preferred box to make this form your preferred form.
7. Click the Sublist Fields subtab and check the Location box.
   This shows a Locations field when you view the form on-screen.
8. Click the Printing Fields subtab.
9. Click the Columns subtab and check the Location box.
   This shows a location field for line-items on transactions you print or email.
10. Click Save.

Now, the transaction you customized can identify a location for each line-item. The preferred location for an item defaults in the location field, but you can choose another location if needed.

Bin Management

You can use bin management to identify places in your warehouse where you store inventory items. Bins help you track on-hand quantities within a warehouse. Tracking items by bins can help organize receiving items and simplify picking items to fulfill orders.

For example, if you use bins, when you receive a purchase order, the order can tell you which bin to put the items away in. Then, your stock level of that item in that bin is tracked.

When you enter the item on a sale, you can specify the bin to pull the item from based on available quantities. This helps warehouse employees know exactly where to go to find the quantity of items they need when picking and fulfilling an order. They also know exactly what items need to be put away, or stocked, and where, after they are received from vendors.

There are two NetSuite features for bin management:

- Bin Management – A basic means of tracking inventory in bins. This feature requires that you associate bins with items before you can use bins on transactions. This feature does not allow using bins with serialized and lot numbered items or on a per-location basis.

  Read Basic Bin Management.
Advanced Bin / Numbered Inventory Management – An enhanced version of tracking bins, including for serial numbered and lot numbered items and on a per-location basis. Using this feature, you are not required to pre-associate bins with items to use bins on transactions. Also, you are allowed to associate bins with serialized and lot numbered items or use bins on a per-location basis.

Read Advanced Bin / Numbered Inventory Management.

The information in the sections below apply whether you use the basic Bin Management feature or use the Advanced Bin / Numbered Inventory Management feature.

Note: Some sections below mention various preferences available to be used with bins. To learn more, see Setting Bin Preferences.

Putting Away Items in Bins

To put away an item immediately, you can edit the quantities placed in each bin. If you have enabled the Use Preferred Bin on Item Receipts preference, all items are placed in the preferred bin for that location by default.

To put away an item later, set the quantity for the preferred bin to zero. The item is included with the preferred bin number on the putaway sheet.

Read more in the topic Bin Putaway Worksheet.

Receiving with Bins

When a purchase order or customer return is received, bin numbers are included on the following transactions:

- Cash Refunds
- Credit Card purchases
- Checks
- Vendor Bills
- Inventory Adjustments
- Inventory Transfers

Bins on Sales

When a sales order is placed by a customer, the bin numbers are included on the following transactions:

- Picking tickets
- Item fulfillments
- Invoices

After an item is added to one or more bins, you can transfer items between bins, if needed. For more information, read Bin Transfers.

Important: If you use the Basic Bin Management feature along with the Multi-Location Inventory feature, you must either use bins in all locations or in no locations.

This means, when using bins with Basic Bin Management, all locations must have at least one bin. If you use the Advanced Bin / Numbered Inventory Management feature with the Multi-Location Inventory feature, you can use bins on a per-location basis. Any location that uses bins must have at least one bin.
Bins on Picking Tickets

Your employees can print the picking tickets to automatically find the bins for the items needed to fill the order. Bins are included on a picking ticket using the following logic:

- If the preferred bin has sufficient quantity to pick item, only the preferred bin is printed on the picking ticket.
- If multiple bins are required to find the quantity needed for an item on the order, each bin is listed on the picking ticket with the preferred bin listed first.
- If the preferred bin has a quantity of 0 and no other single bin has sufficient quantity to pick all items on the order, bins are listed in order of descending quantity.
- Only bins with quantity greater than or equal to the quantity ordered are printed on the picking ticket.
- A Bin Number column is only included on a picking ticket if the ticket includes items with associated bin numbers.

If the employee picking the order pulls a different quantity from a bin than is listed on the picking ticket, he or she can edit the quantity taken from each bin on the item fulfillment page.

Data Per Bin

Using either bins feature, item costing is not calculated per bin. Only on-hand quantity is tracked per bin. Available, committed, backordered, and ordered quantities are also not tracked per bin.

Specifying Bins on Transactions

Bins are required on all cash sales, invoices, and negative inventory adjustments with bin items. This is required regardless of whether the Require Bins on All Transactions Except Item Receipts preference is enabled.

For example, if you are going to enter a cash sale with a bin item that specifies a location, the item is required to have at least one bin in that location. Also, when you enter an inventory adjustment, any line that deducts a quantity of an item that uses bins will require a bin.

This also means that when you edit a previously existing sale transaction that has a bin item but no bin specified, bins must then be specified on the transaction.

If you do not specify a bin, you see the notice: “The number of bins entered (0) is not equal to the item quantity (x)”.

Note: Unless the Require Bins on All Transactions Except Item Receipts preference is enabled, NetSuite does not require bins on positive adjustments or purchases because you can use a Bin Putaway Worksheet later.

Bins and Assembly Items

If you use the Assembly Items feature, you must designate a bin for any component item in a build which uses bins. If a parent assembly item uses bins, you must designate a bin for that item to unbuild it.

Unless the Require Bins on All Transactions Except Item Receipts preference is enabled, you are not required to designate a bin for a member item in an unbuild or for an assembly item in a build.

Basic Bin Management

Use the Bin Management feature to track inventory items in warehouse locations, or bins.
For example, you can set up bin records that identify specific places within your warehouse, such as Bin A and Bin B. Then, on an item record, you can associate the item with Bin A and Bin B. Next, when you add the item to a transaction, you can specify a bin to use. You can specify Bin A on an item receipt when you receive the item from the vendor. You can specify Bin B on a sales order when you sell the item.

In this way, your warehouse staff knows exactly where to go in the warehouse to retrieve an item needed for an order, or to stock the item when it is received.

When you use the Bin Management feature, to use bins with items on transactions, you must first associate one or more bins with each item. For more details on bin preferences and setup, read Setting Up Item Records for Bins.

**Note:** The basic Bin Management feature does not allow you to use bins with serial or lot numbered items or on a per-location basis.

You can read more about the basic Bin Management feature in the topic Bin Management. This topic covers particulars that apply to both the basic Bin Management feature and the Advanced Bin / Numbered Inventory Management feature.

Bin Management is the basic bin tracking feature. You can also read about the Advanced Bin / Numbered Inventory Management feature.

### Advanced Bin / Numbered Inventory Management

**Important:** The functions discussed in this topic require the Advanced Bin / Numbered Inventory Management feature to be enabled.

The Advanced Bin / Numbered Inventory Management feature is an enhanced version of tracking inventory in bins, including for serial numbered and lot numbered items or on a per-location basis.

When you use Advanced Bin / Numbered Inventory Management, the functions described below are available to you that are not available by using the more basic Bin Management feature.

#### No Pre-association Requirement

Use bins on transactions without being required to pre-associate bins to items. This enables you to put away items using the Bin Putaway Worksheet even if bins are not associated with those items.

- Using basic Bin Management, you must first associate a bin with the item on the item record to select the bin for that item on transactions.
- Using Advanced Bin / Numbered Inventory Management, any bin can be used for any item, whether or not it is identified on the item’s record.

You are not required to, but you can choose to associate bins with any item on the item record. Then, those bins show in the Associated bins list on transactions.

You can also set a preferred bin for an item.

#### Use Bins for Serialized and Lot Numbered Items

When you also enable the Lot Tracking or Serialized Inventory features, you can assign bins to serial numbered items and lot numbered items. To set one these bins as your preferred bin, see the help topic Lot, Serial, and Bin Numbering.
If you use basic Bin Management, you cannot associate serial or lot items with bins.

**Use Bins on a Per-Location Basis**

When you also enable the Multi-Location Inventory feature, you can choose to use bins at only specific locations. For example, you can set warehouse and store locations to use bins to track inventory and choose not to use the Advanced Bin Management functionality at your head office location.

If you use basic Bin Management, you cannot use bins on a per-location basis.

For more information, see *Bin Management by Location*.

**Subtabs Available**

The following subtabs are available on item records when the Advanced Bin / Numbered Inventory Management feature is enabled.

- **Inventory Numbers** – Shows the inventory numbers on hand
- **Bin Numbers** – Shows the quantity on hand for each bin
- **Inventory Detail** – On item records for items set to use bins, an inventory detail subtab shows the quantity on-hand by bins. The inventory detail subtab shows all serial numbers that have a bin number association.

![Note:](image)

*Note:* To see the inventory numbers on hand, select Inventory Numbers on Hand in the View field. Items that are not put away are not included in the on-hand count at the bin level.

**Inventory Detail Subrecord**

A popup selector is available for choosing a bin for an item. Click the Inventory Detail button on records and transactions to filter the bins list, choose a bin, and enter a quantity.

The Inventory Detail icon shows in one of two ways:

- **Arrow** - The arrow icon indicates that the inventory detail is available for the item and needs to be configured. It appears only in Edit mode for a transaction.
- **Check mark** - The check mark icon indicates that you have already configured the inventory detail for this item. It appears in View mode for transactions, as well as in Edit mode after you have configured the inventory detail.

After clicking the Inventory Detail icon, enter the following in the popup window:

- If the item is numbered, in the Serial/Lot Number list, select the appropriate number.
- In the Bin list, select the bin you want the items put into. The Bin column displays the preferred bin by default. The list of available bins to select updates based on the transaction’s associated location.

The popup window includes filters to limit bin choices available for selection within a large set of bins. These filters include the following:

- All bins
- Preferred bin
- Associated bin

If the associated transaction adds to your on-hand inventory, the following filters also appear:
- Bins with quantity
- Previously used Bins

In the Inventory Detail popup window on bin transfers, you can also specify the originating bin and receiving bin.

**Inventory Details for Inventory Status**

When you use the Inventory Status feature, a Status field appears in the Inventory Detail popup window to enable you to verify or select the status for the items on the associated transaction.

**Inventory Details for Serial and Lot Numbered Items**

When you use serial or lot numbered items, additional buttons are provided in the Inventory Detail popup window.

When you click the Inventory Detail icon, you see these options to enter multiple numbers at the same time:

- **Express Entry** – You can click the Express Entry button to use a text box to cut and paste numbers to increase and decrease inventory. When you click OK, the inventory detail populates in the list.
- **Autogenerate Numbers** – For inventory increase transactions (item receipts and assembly builds for assembly completions) you can use the Autogenerate Numbers button to generate a list of serial or lot numbers.
  
  Choose settings in the following fields to define the numbering used:
  - **Prefix** – the prefix of the serial or lot numbers
  - **Minimal Digits** – the least amount of digits to be used
  - **Starting Number** – the first serial or lot number in the sequence
  - **Quantity** – the quantity to enter for each inventory number

The Inventory Detail icon is available on the following transactions when the feature is enabled:

- Assembly Build
- Credit Card Charge
- Credit Card Refund
- Cash Refund
- Cash Sale
- Check
- Credit Memo
- Invoice
- Inventory Adjustment
- Inventory Distribution
- Inventory Transfer
- Inventory Worksheet
- Item Receipt
- Item Fulfillment
- Assembly Unbuild
- Vendor Bill
- Vendor Credit
Permissions for the inventory detail subrecord are inherited from its parent transaction. For example, to edit the inventory detail from a sales order, you must have permission to edit the sales order. For more information, see the help topic Standard Roles Permissions Table.

You must enable and set up the Bin Management feature to use Advanced Bin / Numbered Inventory Management with your inventory. When enabling the Bin Management feature note the following:

- You cannot associate serial numbers or lot items with bins.
- If it is enabled together with Serialized Inventory or Lot Tracking features, you cannot associate serial or lot numbers to bins.
- When you enable the Advanced Bin/Inventory Management feature, you can associate serial or lot numbers to bins.

For additional details, read Setting Up Bin Management.

For information on using SuiteScript with this feature, see the help topic Using SuiteScript with Advanced Bin / Numbered Inventory Management.

For information on using SOAP web services code with this feature, see the help topic Updating SOAP Web Services Code When Advanced Bin / Numbered Inventory Management is Enabled.

### Bin Management Upgrade

**Warning:** If you also use both the Lot Tracking and Serialized Inventory features, it is very important to perform a bin management upgrade immediately after you enable the Advanced Bin / Numbered Inventory Management feature.

Any item that is lot or serial numbered and used bins is not placed in a bin. These items must be manually reassigned to a designated bin using a bin putaway worksheet. To learn more, see Bin Putaway Worksheet.

### Setting Up Bin Management

**Important:** The functions discussed in this topic may require the Advanced Bin / Numbered Inventory Management feature to be enabled.

**To set up bin management:**

1. Choose one of the following:
   - Enabling Basic Bin Management
Enabling Basic Bin Management

Complete these steps to enable bin management:

**To enable bin management:**

1. Go to Setup > Company > Setup Tasks > Enable Features.
2. Click the **Items & Inventory** subtab.
3. Check the **Bin Management** box.

**Note:** Using Bin Management requires you to enable the Inventory feature. If you have not already done so, check the Inventory box.

If you use Bin Management with the Multi-Location Inventory feature, you must use bins in all locations.

Enabling Advanced Bin / Numbered Inventory Management

The functions discussed in this topic require the Advanced Bin / Numbered Inventory Management feature to be enabled.

You must enable the feature to use Advanced Bin / Numbered Inventory Management with your inventory.

If you use either Lot Tracking or Serialized Inventory, you cannot disable the Advanced Bin / Numbered Inventory Management feature after you have entered a transaction for a serial or lot item which uses bins.

**Warning:** If you use SuiteScript in conjunction with the basic Bin Management feature, these scripts will no longer function after you enable the Advanced Bin / Numbered Inventory Management feature.

To learn more, see the help topic Using SuiteScript with Advanced Bin / Numbered Inventory Management.

You should update related SOAP web services code when you enable this feature. To learn more, see the help topic Updating SOAP Web Services Code When Advanced Bin / Numbered Inventory Management is Enabled.

**To enable the Advanced Bin / Numbered Inventory Management feature:**

1. Go to Setup > Company > Enable Features.
2. Click the **Items & Inventory** subtab.
3. Verify that the box next to **Inventory** is checked. The Advanced Bin / Numbered Inventory Management feature requires you to enable the **Inventory** feature.

4. Check the **Advanced Bin / Numbered Inventory Management** box.

5. To enable Advanced Bin / Numbered Inventory Management, you must enable the Inventory feature in addition to one or more of the following features: Bin Management, Lot Tracking, or Serialized Inventory.

   Check the box next to one or more of the following features:
   - **Bin Management**
   - **Lot Tracking**
   - **Serialized Inventory**

6. Click **Save**.

### Bin Management Upgrade

**Warning:** If you also use both the Lot Tracking and Serialized Inventory features, it is very important to perform a bin management upgrade immediately after you enable the Advanced Bin / Numbered Inventory Management feature.

Any item that is lot or serial numbered and used bins is not placed in a bin. These items must be manually reassigned to a designated bin using a bin putaway worksheet. For details read Bin Putaway Worksheet.

### Bin Management by Location

When you use the Multi-Location Inventory and Advanced Bin / Numbered Inventory Management features, you can enable bin management by location by setting only specific locations to use bins.

For example, you can set your warehouse and store locations to use bins to track inventory and choose not to use the Advanced Bin Management functionality at your head office location.

### Enabling Bin Management by Location

Identify which locations should use the Advanced Bin Management feature by checking the **Use Bins** box on the location record. For more information on setting locations to use bins, read the help topic Creating Locations.

When you use bin management by location, the list of available bins to select on transactions and forms updates based on the associated location.

**Note:** When you check the **Use Bins** box on a location record for the first time, any existing item or new item with pending transactions is not placed in a bin.

These items must be manually reassigned to a designated bin using a bin putaway worksheet. For more information, see Bin Putaway Worksheet. After all pending items are placed in bins using the bin putaway worksheet and no pending inventory transactions exist for the location, you are prompted to enter bin information on all subsequent transactions.

### Bin Management for Kit/Package Items

Kit/package components appear on fulfillment records based on your bin management settings:
For locations that use bins, fulfillment records display only kit components that use bins. You can enter inventory details to fulfill these components.

For locations that do not use bins, fulfillment records do not display any kit components.

For information about kit/package items, see the help topic Kit/Package Items or Updating Kits with Bins.

Setting Bin Preferences

To set bin preferences:

1. Go to Setup > Accounting > Preferences > Accounting Preferences.
2. Click the Items/Transactions subtab.
3. Choose one of the following for the Use Preferred Bin on Item Receipts preference:
   - When you enable this preference, the Bin field on item receipts defaults to the preferred bin instead of leaving the field blank.
   - Disable this preference if you prefer the Bin field to remain blank by default.
4. Choose one of the following for the Require Bins on All Transactions Except Item Receipts preference:
   - When you enable this preference, any transaction entered that changes inventory levels and includes an item that uses bins will require you to select a bin for the item to save the transaction. If there is no bin field on a transaction, such as sales orders and purchase orders, bins are not required.
   - Disable this preference to allow transactions to be created that include items with no bin selected.

   Note: Even with this preference disabled, NetSuite always requires bins on transactions where an item quantity is reduced, such as on cash sales, item fulfillments, or negative inventory adjustments.

Bins are not required on transactions where an item quantity is increased, such as purchases and positive inventory adjustments.

For example, if you are going to enter a cash sale with a bin item that specifies a location, the item is required to have at least one bin in that location. Also, when you enter an inventory adjustment, any line that deducts a quantity of an item that uses bins will require a bin.

5. Click Save.

Creating Bin Records

You can use bin records to define bin locations within a warehouse or stock room. Bin record numbers are associated with items and included on receiving and fulfilling transactions to keep track of the on-hand quantity for each bin.

There is no limit on the number of bin records you can enter.

Item costing is not calculated per bin, and only on-hand quantity is tracked per bin. Available, committed, backordered, and ordered quantities are not tracked per bin.
Note: If you use the Basic Bin Management feature with the Multi-Location Inventory feature, you must use bins in all locations. If you use the Advanced Bin / Numbered Inventory Management feature with the Multi-Location Inventory feature, you can use bins on a per-location basis.

To create bin records:

1. Go to Lists > Accounting > Bins > New.
2. In the Bin Number field, enter a number or code to designate a bin location in your warehouse or stock room.
   For example, you can name rows and shelves in your warehouse by letter and bins by number. The first bin in the first shelf on the first row would be AA01.
3. If you use the Multiple Locations feature, select the location for this bin to designate the warehouse or stock room where the bin is located.
   The location cannot be changed after you save the bin record.
4. In the Memo field, you can include further notes on the bin’s location within the warehouse or notes on what should be stored in the bin.
5. Check the Inactive box to inactivate this bin record.
6. Click Save.

After you have created bin records, you can set up item records for use with bins. Read Setting Up Item Records for Bins.

Setting Up Item Records for Bins

On each inventory item record that you want to track using bins, you need to set up the item record for use with bins. These are the two components of setting up items for bins:

- **Select to Use Bins** – Identify each item record as an item that uses bins. This is required whether you use either basic Bin Management or Advanced Bin / Numbered Inventory Management.
- **Associate Bins with Items** – On each item record, select the bins to be used for the item.
  - This association step is required when you use basic Bin Management.
  - This association step is optional when you use Advanced Bin / Numbered Inventory Management.

**Select to Use Bins**

Both the basic Bin Management feature and the Advanced Bin / Numbered Inventory Management feature require you to note on each item record that you want to use bins for the item.

**To set an item to use bins:**

1. Go to Lists > Accounting > Items.
2. Click Edit next to the name of the item.
3. On the item record, click the Purchasing/Inventory subtab.
4. Check the Use Bins box.
5. Click Save.
Associate Bins with Items

After you have set up bin records, you can associate these bins with inventory item records. To associate a bin with an item, from the list of bin records, select and add each bin where you store the item.

When a bin is associated with an item, it shows in bin lists for that item on transactions.

When you use the Advanced Bin / Numbered Inventory Management feature, it is optional to associate bins with items to use bins on transactions.

**Note:** When you use the basic Bin Management feature, you are required to associate bins with an item before you can use bins on transactions for that item.

For example, you use basic Bin Management and you have checked the Use Bins box on item #AB001, but you have not yet associated any bins. When you add item #AB001 to a transaction, no bins show in the bins list for the item.

Later, you edit the item record for item #AB001 and associate Bin #20, #21, and #22. Afterwards on transactions, when you add item #AB001, you can select Bin #20, #21, or #22 from the list of bins for the item.

**To associate bins with an item:**

1. Go to Lists > Accounting > Items.
2. Click **Edit** next to the name of the item.
3. On the item record, click the **Purchasing/Inventory** subtab.
4. On the **Bin Numbers** subtab, in the **Bin Number** field, select a bin to associate with this item.
   **Note:** If you use the Multi-Location Inventory and Advanced Bin/Numbered Inventory features, you must first select a location in the Location field. The list of available bins to select in the Bin Number field is populated based on the selected location.
5. If this bin is the preferred bin, check the box in the **Preferred (Per Location)** column. The preferred bin is the default for the item on all receiving and fulfilling transactions, as well as the putaway worksheet.
   You can set only one preferred bin per location.
6. Click **Add**.
7. Repeat steps 4 through 6 for each bin to associate with this item.
   You can associate multiple bins with each item and associate multiple items with each bin.
8. Click **Save**.

If you use the Advanced Bin / Numbered Inventory Management feature, the bins you chose show when you select Associated Bins in the bin selector on transactions.

When a bin item is included on a transaction, preferred bins are used as follows:

- If the quantity in the preferred bin is enough to cover the transaction, then the preferred bin is used.
- If the quantity in the preferred bin is not enough to cover the transaction and there is enough to cover the transaction in only one bin, then that bin is used.

Otherwise, you must configure the Inventory Detail record to process the transaction.

This applies only to non-serial numbered and non-lot numbered items which use bins.
Bin Management

Bin Putaway Worksheet

Use the Bin Putaway Worksheet to print a list of bin numbers for items that need to be re-stocked in your warehouse or stock room.

Items are added to this list any time an item that uses bins has a greater total on-hand count than the combined on-hand count of its associated bins.

The printed putaway list includes the date, items to be put away, quantity, and preferred bin number for each item, and a blank area to make notes if items are placed in a bin other than the preferred bin.

How the worksheet looks and functions depends on whether you use basic Bin Management or use Advanced Bin / Numbered Inventory Management. Click a link below for more details:

- Basic Bin Putaway Worksheet
- Advanced Bin Putaway Worksheet

Basic Bin Putaway Worksheet

If you use the basic Bin Management feature, you can use the Bin Putaway Worksheet as described below.

After items are received, they need to be put away in bins. The putaway worksheet is used to designate the exact bin or area in the warehouse where the item will be stocked.

More details on this worksheet are described in the topics Bin Putaway Worksheet and Advanced Bin Putaway Worksheet.

To print a putaway list:

1. Go to Transaction > Inventory > Bin Putaway Worksheet.
2. The Date field defaults to today's date. You can edit this date to put away items from previous days.
3. If you use the Multi-Location Inventory feature, select your location.
4. In the Memo field, you can enter notes for this putaway sheet.
5. Click Print Putaway List.

To edit the putaway worksheet:

1. Go to Transaction > Inventory > Bin Putaway Worksheet.
2. The Date field defaults to today's date. You can edit this date to put away items from previous days.
3. If you use the Multi-Location Inventory feature, select your location.
4. In the Memo field, you can enter notes for this day's putaway sheet.
5. The Quantity column shows the total on-hand amount for each item at the location selected. Click this field to edit the total quantity.
6. The Units column displays the unit of measurement used to determine the on-hand quantity. Click this field to select a different unit of measurement.
7. The Bins column displays the bins associated with each item.
8. The Bin Numbers column displays the preferred bin by default.
   - If the total quantity is placed in the preferred bin, no edits are needed.
   - If some items were or will be placed in some of the other bins listed in the Bins column, click the Bins icon. Edit the quantity for each bin, and click Done.
You can also enter bin numbers separated by commas with on-hand quantities in parentheses. For example, you can enter A101(50), A102(43).

9. Click Save.

Advanced Bin Putaway Worksheet

**Important:** The functions discussed in this topic require the Advanced Bin / Numbered Inventory Management feature to be enabled.

If you use the Advanced Bin / Numbered Inventory Management feature, you can use the Bin Putaway Worksheet as described below.

After items are received, they need to be put away in bins. The putaway worksheet is used to designate the exact bin or area in the warehouse where the item will be stocked.

More details on this worksheet are described in the topics Bin Putaway Worksheet and Basic Bin Putaway Worksheet.

**To print a putaway list:**

1. Go to Transaction > Inventory > Bin Putaway Worksheet.
2. The Date field defaults to today's date. You can edit this date to put away items from previous days.
3. If you use the Multi-Location Inventory feature, select your location.
4. In the Memo field, you can enter notes for this putaway sheet.
5. Click Print Putaway List.

**To edit the putaway worksheet:**

1. Go to Transaction > Inventory > Bin Putaway Worksheet.
2. The Date field defaults to today's date. You can edit this date to put away items from previous days.
3. If you use the Multi-Location Inventory feature, select your location.
4. In the Memo field, you can enter notes for this day's put away sheet.
5. The Quantity column shows the total on-hand amount for each item at the location selected. Click this field to edit the total quantity.
6. The Units column displays the unit of measurement used to determine the on-hand quantity. Click this field to select a different unit of measurement.
7. Click the icon in the Inventory Detail column next to an item to edit bin quantities.
8. In the Inventory Detail popup window, specify the bins and quantities to be put away as follows:
   1. If the item is numbered, in the Serial/Lot Number list, select the appropriate number.
   2. In the Bin list, select the bin you want the items put into.
   
   The Bin column displays the preferred bin by default.
   
   3. In the Quantity field, enter the quantity of items to be put in this bin.
   
   4. Click Add.
   
   5. Repeat steps a - d to put away more of this item in other bins.
   
   6. Click OK.
9. Repeat steps 7 and 8 for any additional items you want to make changes to.
Bin Management

10. Click Save.

Bin Transfers

⚠️ **Important:** The functions discussed in this topic may require the Advanced Bin / Numbered Inventory Management feature to be enabled.

You can record a bin transfer to move items between bins within a warehouse.

For example, at your East Coast location, you stock item #AB123 in two bins: bin #3003 and #4004. There are currently 100 of the item in each bin. You can enter a bin transfer to record the transfer of 50 items out of bin #3003 and into bin #4004.

Recording a bin transfer does not post to your chart of accounts and has no financial impact. The transfer only updates the quantity on hand in each bin for the items transferred.

On the bin transfer record, identify the item, the bin the item will come from, the bin the item will move into and the quantity to be moved.

**Note:** Bin transfers can move items only if they are already in one or more bins.

If you use the Multiple Units of Measure feature, you can view and edit the Units field on bin transfer records. If you select a unit other than stock units, inventory item quantities are converted automatically and saved in stock units.

The steps to record a bin transfer vary depending on which bins feature you use. For more information, see one of the following procedures:

- **To record a bin transfer using basic bin management:**
- **To record a bin transfer using advanced bin/numbered inventory management:**

**To record a bin transfer using basic bin management:**

1. Go to Transactions > Inventory > Bin Transfer.
2. Verify or select the date.
3. If you use the Multi-Location Inventory feature, select a location.

**Note:** You can use this form only to transfer items between bins in the same location.

To transfer items between locations, you must enter an inventory transfer and set the bin at the new location. Read Transferring Inventory.

4. Optionally enter a memo for this transfer. Then, you can search for the text entered here to find this transfer.
5. In the Item field, enter or select the item to transfer.
   - If one is set, the item's preferred bin appears.
6. Optionally, if you use the Multiple Units of Measure feature, select the unit of measure.
7. In the From Bins field, either enter or select one or more bins the item will be taken out of. This can be done using one of the below:
   - **Enter Text** – Enter a bin and quantity to transfer.
     For example, to move a quantity of five out of Bin #101, enter 101 (5).
- **Use the Bin Selector** – Click the Open icon to show a list of bins and enter a quantity to take out of each bin. For items that are associated with bins, only associated bins show in the list. The quantity on hand shows for each bin.
  
  Click **Done** to close the bin selector and add the amounts indicated to the transfer.

8. In the **To Bins** field, either enter or select one or more bins the item will be moved into. This can be done using one of the below:
  
  - **Enter Text** – Enter a bin and quantity to transfer.
    
    For example, to move a quantity of five into Bin #102, enter `102 (5)`.
  
  - **Use the Bin Selector** – Click the Open icon to show a list of bins and enter a quantity to put into each bin. For items that are associated with bins, only associated bins show in the list.
    
    The total quantity of items must match the amount in the **Quantity** field.
    
    Click **Done** to close the bin selector and add the amounts indicated to the transfer.

9. The **Quantity** field sources the amount in the **From Bins** field and displays the quantity of the item being transferred.

10. Click **Add**.

11. Repeat steps 6 to 9 for each item you want to transfer between bins.

12. Click **Save**.

**To record a bin transfer using advanced bin/numbered inventory management:**

1. Go to Transactions > Inventory > Bin Transfer.
2. Verify or select the date.
3. If you use the Multi-Location Inventory feature, select a location.

   **Note:** You can use this form only to transfer items between bins in the same location.

To transfer items between locations, you must enter an inventory transfer and set the bin at the new location. Read Transferring Inventory.

4. Optionally enter a memo for this transfer. Then, you can search for the text entered here to find this transfer.

5. In the **Item** field, enter or select the item to transfer.
   
   If a preferred bin is set for the item, it appears.

6. Optionally, if you use the Multiple Units of Measure feature, select the unit of measure.

7. Enter the quantity of the item being transferred.

8. Click the **Inventory Detail** button.

9. Complete these steps in the Inventory Detail popup window.
   
   1. If the item is serial or lot numbered, select the number to transfer.
   2. In the **Bin** field, select a bin the item will be taken out of.
   3. In the **To Bins** field, select a bin the item will be moved into.
   4. Click **Add**.
   5. Repeat the previous four steps for each transfer between bins for this item.
   6. Click **OK**.

10. On the Bin Transfer line, click **Add**.

11. Repeat steps 5 - 9 for each item you want to transfer.
Selling and Fulfilling Inventory

When a customer commits to buying an item, you record it as a sales transaction. When you physically take the item out of inventory and ship it to the customer, you record it as a fulfillment.

Selling and fulfilling items from your inventory affects your stock levels, accounting records and item commitment. This section examines how your inventory is affected by the sales and fulfillments processes of the inventory workflow.

Sales functions to be examined include commitment and general ledger effects. Fulfillment functions to be examined include using the Pick, Pack, and Ship feature, handling backorders, reallocating items and closing line-items manually.

To learn more, see the following links:
- Selling Inventory
- Fulfilling Inventory

Selling Inventory

Record inventory sales by adding an item to a sales transaction. Sales transactions that affect inventory include sales orders, invoices, and cash sales.

When you add an item on a sale, the inventory record for the item is automatically checked to see if the item is available. By default, available items are committed from your inventory and reserved for that customer. Because sales are integrated with inventory records, inventory records are automatically updated with each sale.

Selling an item affects information tracked on the item record. If the item can be filled from the quantity available:
- the item is committed to the sale
- the quantity committed increases
- the quantity available decreases
- the cost of goods sold increases

If the item cannot be filled from the quantity available, then the quantity backordered increases.

Inventory items are committed from inventory as each approved sale is recorded.

Inventory Sales and Item Commitment

Item commitment is the method used to track what is promised to be delivered to your customers. When you enter a sales order, your account tracks how much of each item you are selling.

Your account uses item commitment to calculate how much has been sold, how much should be ordered and which sales orders to fulfill first when more stock is received.

Depending on stock level and item type, items can be committed either when they are sold or received. The flowchart below explains how items are committed:
When a sales order for a regular item is approved, the number of the item committed increases by the quantity on the sale. Regular items are items that are not drop shipped or special ordered.

For example, you currently have 100 widgets on hand with no outstanding orders. Then, you create and approve sales order #101 for 70 widgets. 70 widgets are now committed to order #101. Your available quantity of widgets is now 30 (on hand quantity of 100 - quantity committed on orders of 70).

### Item Commitment for Drop Ship and Special Orders

Item commitment for drop-ship and special order items works differently than commitment for regular items. When you set an item to drop ship or special order on a sales order, it is not committed and does not immediately affect your item commitment count.

For more information, read the help topics Drop Ship Items and Special Order Items.

### Availability, Ship Complete and Item Commitment

By default, items are committed to an order as the items are available. On the Items subtab of an order, you can also choose to commit items only when an entire order or line item can be completely fulfilled or manually defer commitment. In the Commit column, select one of the following:

- **Available Qty** - Items for this line item are committed as available. Available items are shipped, and items that are not available are placed on backorder.
- **Complete Qty** - This line item only ships when all items are committed.
- **Do Not Commit** - Items are not committed to this line item until this setting is changed.

You can also set transaction line items to ship only when completely available. For customers who prefer to have orders shipped only when they can be completely fulfilled, check the Ship Complete box on the Financial subtab of the customer records.

For example, your customer Bob buys widgets and widget covers from you. Bob cannot use the widgets without the covers, and he prefers that you send them to him all together. You mark Bob's customer record as Ship Complete.

When Bob orders 20 widgets and 20 widget covers, you have 20 widgets in stock, but only 15 covers. Because Bob's order is marked Ship Complete, it does not appear in the fulfillment queue to send a partial fulfillment. After all 20 widgets AND all 20 widget covers are available together, Bob's order appears in the fulfillment queue.

You can also set an individual order to ship only when all items are available, even if the customer record is not marked. To ship an order only when all items are available, check the Ship Complete box on the Shipping subtab of the transaction.

When fulfilling orders in bulk, you can filter the list of orders to show only orders that can be completely fulfilled by selecting **Respect Ship Complete** in the Filter By field.

### Inventory Sales and General Ledger Accounts

Not only is the commitment of items to customers tracked in your account, but inventory values are also tracked in your general ledger. When you sell items, the total value of the inventory sold is deducted from your Inventory Asset account. The total cost of the inventory sold is added to your Cost of Goods Sold (COGS) account.

You can use reports to monitor the value of your inventory assets on hand and determine if you are keeping too much cash tied up in stock on hand. For more information, read *Inventory Value Assessments with Reports*.

### Enhanced Item Allocation

If you use the Demand Planning feature, read *Demand Planning and Inventory Allocation* for more information about automating item commitment.

### Fulfillment

After you have recorded a sale, you need to get the product to your customer. Enter a fulfillment each time you physically take an item out of inventory and ship it to the customer. For more information, read *Fulfilling Inventory*.

### Fulfilling Inventory

An item fulfillment is a transaction that specifies that you shipped some or all items on an order to the customer.

How each fulfillment is processed depends on whether you use the Advanced Shipping feature.

- If you **do not** use the Advanced Shipping feature, the fulfillment and invoicing processes are combined. When you fulfill an item, you create a customer invoice for it simultaneously, based on the fulfillment.
If you do use the Advanced Shipping feature, you have separate processes to fill orders and bill customers. Then, you can track your shipments separately from creating invoices.

**Note:** Order fulfillments should always be entered against sales orders to track the status of items and orders.

For more information on enabling the Advanced Shipping feature, read the help topic Items and Inventory Features.

### Fulfilling Items Without Advanced Shipping

After you ship items to the customer, process the order by fulfilling the items and creating an invoice for them.

When an order is fulfilled without Advanced Shipping:

- An Item Fulfillment record is created.
- Inventory records are updated with new quantities.
- The total value of the inventory fulfilled is deducted from your Inventory Asset account.
- A customer Invoice is created.

If you do not use the Advanced Shipping feature, you can bill a customer for only the items you ship because sales orders are fulfilled and billed in the same transaction. You can partially fulfill a sales order and any items fulfilled are also be billed.

### Fulfilling Items Using Advanced Shipping

Advanced shipping gives your shipping and accounting departments separate processes for fulfilling and billing sales orders. Your shipping department fulfills part or all of a sales order when it is ready to ship. Then, your accounting department creates an invoice or cash sale for the shipped items and rendered services.

With advanced shipping, you can track partial shipments and invoice customers for partial or entire orders.

When an order is fulfilled with Advanced Shipping:

- An Item Fulfillment record is created.
- Inventory records are updated with new quantities.
- The total value of the inventory fulfilled is deducted from your Inventory Asset account.

### Using Advanced Billing with Advanced Shipping

When you use the Advanced Billing feature and the Advanced Shipping feature together, the means of processing orders is based on whether items on orders can be fulfilled or received.

Some item types have a permanent status that enables or disables them to be fulfilled or received. Other item types allow you to set the status for always fulfilling and receiving them, or never doing so. Item statuses can be set as follows:

- **Always Fulfillable/Receivable**: Assembly, Kit, Inventory, and Non-inventory items.
- **Never Fulfillable/Receivable**: Group, Description, Discount, Markup, Payment, and Download items.
- **Allows Changes to Fulfillable/Receivable Status**: Gift Certificate, Other Charge and Service items.
Fulfillment Reporting

To access information on items and orders that need to be fulfilled, you can go to the Reports tab and view these reports:

- **Items Pending Fulfillment** – This report shows all open transaction lines for items on sales orders, grouped by item. For each item, the report shows the quantity ordered, quantity fulfilled and quantity committed.

- **Sales Orders Pending Fulfillment** – This report shows all open transaction lines for items committed and ready to be fulfilled on sales orders, grouped by sales order.

Closing Lines on Fulfillments

If an order includes items that are not yet fulfilled and you do not plan to fulfill them, you should close those transaction lines. For more information, read the help topic Closing Line Items That Will Not Be Fulfilled.
Advanced Inventory Management

You can use the Advanced Inventory Management feature to automate demand-based inventory replenishment.

After you select the Reorder Point replenishment method and enter inventory management settings on item records, your account can anticipate future demand for the item and adjust suggested item ordering. Based on previous purchases and sales of items, your account calculates appropriate reorder points and preferred stock levels for items.

**Note:** Items that use the Reorder Point replenishment method for Advanced Inventory Management calculate demand differently than items that use Demand Planning. Demand Planning uses demand plans and supply plans to configure replenishment for items set to use the Time Phased replenishment method. For details about using Demand Planning, read Demand Planning.

**To enable Advanced Inventory Management:**

1. Go to Setup > Company > Enable Features.
2. On the **Items & Inventory** subtab, check the **Advanced Inventory Management** box.
3. Click **Save**.

NetSuite automatically enables the following features:
- Bar Coding and Item Labels
- Lot Tracking
- Matrix Items
- Pick, Pack, and Ship
- Serialized Inventory
- Multiple Units of Measure

When you use Advanced Inventory, the following are accessible but not automatically enabled:

- Advanced Bin / Numbered Inventory Management
- Advanced Inventory Management
- Bin Management
- Landed Cost

When you use the Advanced Inventory Management feature, you can use item records to track Lead Time, Safety Stock and Seasonal Demand for inventory.

Item records also show the Quantity Available for each item. These figures are used to continually assess stock needs and modify replenishment orders.

These automated calculations enable you to maintain an ideal stock level and minimize excess inventory. However, you can override or disable the calculations to handle unusual circumstances. Or, you can disable advanced inventory management functions for an individual item and revert the lead time, preferred stock level and reorder point back to the last manually entered value.

When you first enable the Advanced Inventory Management feature, data is auto-calculated the first night after it is enabled regardless of the day of the week set for regular weekly recalculations.
You can set the inventory settings listed below at Setup > Accounting > Inventory Management Preferences.

- Default Lead Time
- Default Safety Stock
- Default Preferred Stock Level
- Order Analysis Interval
- Seasonal Analysis Interval
- Expected Demand Change
- Transactions to Consider
- Day of Week To Perform Calculation
- Demand Time Fence
- Planning Time Fence

For more information on these settings, read Setting Up Advanced Inventory Management and Entering Purchasing/Inventory Information on Items.

**Best Practice: Using Auto-Calculation**

When you use first enable Advanced Inventory Management, NetSuite recommends as a best practice that when you are setting up inventory records, do not immediately enter settings to auto-calculate stock levels and demand for ordering items. This is because when you begin to use auto-calculation, if there is not enough sales history, the data may be inaccurate.

The auto-calculation uses the full interval only if there are sales for the item before the beginning of the interval. If there are no sales before the beginning of the interval, the auto-calculation is attempted using half of the interval. If there is not enough data to make calculations using the half-interval, then the reorder point and preferred stock level remain unchanged. Then, manual metrics can be entered, or the auto-calculations occur at a later date when there is enough sales data.

You should not enter a set value for the inventory level initially and later turn on the auto-calculation function by running a mass update on your item records. For more information on mass updates, read the help topic Mass Changes or Updates.

**Advanced Inventory Management FAQ**

The suggestions in this topic apply specifically to users with known and fixed demand for inventory replenishment using an inventory Order-Up-To policy.

**When will the current inventory level reach zero?**

Inventory will reach zero based on the demand of the product. NetSuite calculates the demand of the product from sales orders and opportunities. NetSuite uses Order Analysis Interval or Seasonal Analysis Interval based on the selection on the Inventory Management Preference page. Your setting for the Estimated Demand Change can be used to adjust the demand from the calculated expected demand.
When should I order the item? At what inventory level should I start to place an order for a vendor? What is the reorder point?

If you know the lead time from vendor and the demand (slope), the reorder point is based on \(\frac{\text{demand}}{\text{time}} \times \text{lead time}\). By using the Autocalculate box, the lead time can be autocalculated based on the past three purchases. Lead time can also be overridden.
How do I account for demand uncertainties?

Use a safety stock level to account for unexpected demand variations. The safety stock level should be manually evaluated based on the service level requirements for the item.

**Safety Stock Level in Units**
If the safety stock level is entered in units, NetSuite adds the safety stock level in units in addition to the reorder point. The reorder point is dependent on the lead time from the vendor and demand per day. It is calculated as follows:

- Reorder point = (lead time * demand / time) + safety stock

**Safety Stock Level in Days**

If the safety stock level is entered in days, the quantity of the safety stock is equal to (safety stock level in days * demand).

NetSuite calculates the reorder point by incorporating the safety stock into lead time as the total lead time.

- Reorder point = demand / time * (lead time from vendor + safety stock level in days)
The approximate expected inventory levels using safety stock:
How much should I order?

The amount of inventory to be ordered can be based on the difference between the preferred stock level and the reorder point. The preferred stock level can be set manually or NetSuite can autocalculate the preferred stock level based on the number of days of inventory you want to keep. For example, you may want to always keep 5 days worth of inventory on hand.

The autocalculation is based on this formula: \((\text{demand/days}) \times (\text{amount in the Days field next to the Preferred Stock Level field})\).

This diagram shows the expected inventory level with the safety stock and preferred stock level incorporated.
EXAMPLES

Example 1

- Item SK700-HP-A
- Lead time is 12 Days
- Reorder point is 1 because demand is low (one order in the past 3 months)
- Preferred Stock Level is set manually at 2.
Example 2

- When demand is zero and the preferred stock level is autocalculated, the preferred stock level is zero.
- There is not enough historical demand to determine the demand per day. The slope is zero.
Example 3

- If the preferred stock level (in days) is less than the lead time, the preferred stock level = reorder point.
- In this case, the preferred stock level (in days) must be greater than the lead time for vendor.

Setting Up Advanced Inventory Management

On the Inventory Management Preferences page, set up the defaults and intervals that your account uses to make inventory management calculations.

**Note:** These preference settings apply to the Advanced Inventory Management feature and the Demand Planning feature.

**To set up inventory management:**

1. Go to Setup > Accounting > Inventory Management Preferences.
2. Enter information for each field described below as necessary.
3. Click Save.

**Note:** If you use Advanced Inventory Management and enable auto-calculated inventory management for an item, you can turn it off and settings return to the last manually entered value.

**Inventory Management Settings**

- **Default Lead Time** – Enter the default number for item lead times in days.
Lead time is the average number of days between ordering an item from a vendor and receiving it. This number of days lead time is used when auto-calculating the reorder point of an item if no lead time is specified in the item record.

If you track multiple vendors per item, lead time calculations are aggregated across all vendors per item, not per-vendor per-item.

- **Default Safety Stock** – Enter the amount of buffer stock you prefer to maintain on hand for an item, measured in a number of days. This is a measure of the buffer amount of an item you want to stock in anticipation of demand variations so that you do not run out. The safety stock amount you enter here defaults as the safety stock measure on new item records.
  - When you use Demand Planning, the safety stock amount for an item is considered when making demand plan calculations.
  - When you use Advanced Inventory Management, this amount is used to auto-calculate the reorder point of an item.

When the safety stock is entered in days, the safety stock level is calculated as:

\[(\text{daily demand} \times \text{safety stock level in days})\]

For example, if daily demand for item #12345 is five per day and you want to always keep on hand the Preferred Stock Level quantity plus 3 days worth of buffer stock, you can enter 3 in the Days field next to Safety Stock Level. Then, replenishment orders are calculated to keep a minimum of three days worth of stock on hand as a buffer (three days * 5 items daily = 15 items.) Then, NetSuite recommends on the Order Items page that you order a quantity to keep a minimum of fifteen extra of item #12345 on hand.

This number of days safety stock is also used when auto-calculating the suggested reorder quantity of an item if no safety stock is specified in the item record.

- **Default Preferred Stock Level** – Enter the amount of item stock you prefer to maintain in inventory, measured in a number of days. It is the quantity you want to have in stock after an order is received and is the ideal quantity to maintain in stock of an item. The ideal quantity is the amount you need to fulfill orders in a timely manner without either running out or overstocking.

The amount you enter here determines the preferred stock level that defaults on new item records.

  - When you use Demand Planning, the preferred stock level field is greyed out on item records that use the Time Phased replenishment method.
  - When you use Advanced Inventory Management, the preferred stock level you set is used to calculate the quantity of items to be ordered on the Order Items page.

You must enter the default preferred stock level in days, not units. When the preferred stock level is entered in days, this is a measure of how many days worth of stock you want when the order is received. The preferred stock level is calculated as:

\[(\text{daily demand} \times \text{preferred stock level in days})\]

For example, if daily demand for item #12345 is five per day and you prefer to keep seven days worth on hand in stock, you can enter 7 in the Days field next to Default Preferred Stock Level. Then, replenishment orders are calculated to stock a minimum of seven days worth of an item. (5 widgets daily * 7 days = 35 widgets.) Then, NetSuite recommends on the Order Items page that you order a quantity to keep a minimum of 35 widgets in stock.

This number of days supply is used when auto-calculating the preferred stock level of an item if no preferred stock level is specified in the item record.

- **Order Analysis Interval** – Enter the number of past months sales you prefer to analyze to auto calculate historical demand.

When you use Demand Planning, the order analysis interval field is greyed out on item records that use the Time Phased replenishment method.
The order analysis interval is used when the seasonal demand for an item is not set. For example, if you enter 6, then the past 6 months of sales order history is evaluated.

**Note:** If auto-calculation is not functioning as expected, you may need to adjust your **Order Analysis Interval** setting.

For example, an inventory item has been sold only one time since 2007, and the last sale was on 12/1/07. If the **Order Analysis Interval** setting is 30 days, then it cannot be calculated because the order analysis interval looks back only one month and does not see the old sale. You would need to modify the analysis interval to include the date of the last sales order to calculate properly.

The historical analysis considers only transactions created after the Multi-Location Inventory feature has been enabled. If the **Order Analysis Interval** includes transactions dated prior to the date the Multi-Location Inventory feature was enabled, NetSuite cannot complete calculations.

- **Seasonal Analysis Interval** – Enter the number of months to analyze sales, for a period starting one year ago. This interval is used to auto calculate seasonal demand when the seasonal demand for an item is set.

  For example, enter 6 to evaluate the six month period starting one year ago.

  When you use Demand Planning, the seasonal analysis interval is applicable only to items not set to use the Time Phased replenishment method.

- **Estimated Demand Change** – Enter the default percentage of demand change to augment the calculated demand amount.

  For example, demand is projected at 100 units for this upcoming July based on sales last July. But you know that sales for this item have been trending upwards the last two months, and want calculations to mirror this trend. You can enter a percentage to bump up expected demand beyond the calculated amount. If you expect an increase in sales of this item in the future, you can enter a 10% expected demand change to be added on to previous sales totals.

  The amount you enter here is shows by default on new item records you enter.

  - For items that use Advanced Inventory Management to calculate demand, the amount in this field is used for calculating the suggested reorder quantity for items if no demand change percentage is specified in an item record.
  - When you use Demand Planning, this setting is used only when the forecast method for a plan is set to Seasonal Average.

  The expected demand change for the original item is used when a demand plan is created using an alternate source item.

- **Transactions to Consider** – Determine which transactions are used to calculate inventory demand:

  - **Click Orders** to include approved, non-cancelled sales orders and work orders to calculate demand for setting reorder points and preferred stock levels. Work Orders are also considered if the feature is enabled. Transfer orders are not used to calculate demand.
  
  - **Click Actual Sales** to use cash sales, invoices, and assembly builds to calculate demand for setting reorder points and preferred stock levels. Then, sales orders and work orders are not used to calculate demand. Only the cash sales and invoices that bill them and builds that create them are included in demand calculations. Assembly builds are also considered if the Assemblies feature is enabled.

  Inventory demand calculations consider only transactions that decrease an item's stock level. For example, an assembly build increases the stock level for the assembly item and decreases the stock level for the assembly item's components. In this case, the demand plan calculation considers the assembly build only for the assembly item's components and not for the assembly item.

  This preference setting applies to items that use Demand Planning, as well as items that use Advanced Inventory Management to calculate demand.
Note: If you use both sales orders and standalone cash sales/invoices, you should choose the Actual Sales option.

Day of Week To Perform Calculation – Select the day of the week you prefer to run inventory metrics calculations. You can choose to change this selection later if needed.

Note: This preference applies only to items that use Advanced Inventory Management to calculate demand.

To perform a one-time inventory metrics calculation, click from the Save button Submit and Calculate. This will be performed the night you select it and occurs in addition to the regular weekly calculation.

For example, you set Monday as the day of the week you want the auto-calculation to run, choose the Orders for the Transactions to Consider to calculate demand and set an Order Analysis Interval of 6 for the time frame of transactions included in the auto-calculation.

From these settings, NetSuite calculates an average unit sold per day for items that have been set for auto-calculation. This average unit sold per day number is multiplied by the days settings on the item record or in inventory management preferences to determine the quantity required. In other words, X days * Y average units sold per day = Z quantity required.

Note: When you use the Multi-Location Inventory feature, item demand is calculated per location.

You can also set item records to auto-calculate at Setup > Mass Updates > Mass Updates.

Time of Day to Perform Calculation – Select a time of day you prefer for inventory management calculations to run.

Demand Time Fence – Enter a number of days between zero and 365. The number you enter is used as the default demand time fence and shows in the Demand Time Fence field on item records you create. You can change this default number if necessary when you create each item record. This field defaults to zero.

Planning Time Fence – Enter a number of days between zero and 365. The number you enter is used as the default demand time fence and shows in the Planning Time Fence field on item records you create. You can change this default number if necessary when you create each item record. This field defaults to zero.

Note: If the item record does not identify a planning time fence, NetSuite uses the default planning time fence value identified in these inventory preference settings. For details on this preference, read Time Fence Preferences. If the Planning Time Fence field is left blank on both the item record and the Inventory Management Preferences page, then no planning time fence is used.

Auto-calculation and Insufficient Data

In some cases, for items that use Advanced Inventory Management to calculate demand, auto-calculated inventory metrics may not be accurate if the sample of data does not match the analysis interval. For example, this could occur in the following cases:

- Your account is new and you have no sales history data entered.
- You have new item records that have no sales history data.
- You enabled Multi-Location inventory and have no sales history data per location.
In such cases, the auto-calculation uses the full interval only if there are sales for the item before the beginning of the interval. If there are no sales before the beginning of the interval, the auto-calculation is attempted using half of the interval. If there is not enough data to make calculations using the half-interval, then the reorder point and preferred stock level remain unchanged. Then, manual metrics can be entered, or the auto-calculations occur at a later date when there is enough sales data.

**Lead Time and Safety Stock Per Location**

You can choose to set a lead time and safety stock level for each location on an item record. This helps you track your inventory more accurately by allowing the following:

- Account for lead times that vary between locations. For example, it takes the vendor 5 days to deliver to Location A, but 10 days to deliver to Location B.
- Turnover in Location A is low, so only 3 units are required for safety stock. Location B sells twice as many and the safety stock level is 6 units.

**Note:** To use this preference, enable Multi-Location Inventory and Advanced Inventory Management. It can also optionally be used with the Demand Planning feature.

The lead time is calculated based on receipt lines that show a location pulled from the purchase order.

If you use Advanced Inventory Management and auto-calculate lead times, the vendor lead time is calculated based on item receipts for each specific location. This lead time is calculated for the receipt location and is based on the time elapsed between the date of the purchase order and the date of the item receipt.

For example, you enter the following:

- A purchase order dated 1/1 for item #1234 in Location A.
- A receipt dated 2/1 to receive the purchase order in Location B.

The lead time for Location B is calculated as 31 days. The lead time for Location A is not calculated from these transactions.

To use the new preference, go to Setup > Accounting > Inventory Management Preferences. Check the Lead Time Per Location box and click Save.

**Note:** This preference is not available if you have enabled the preference to Centralize Purchasing in a Single Location.

After the preference is enabled, item reordering is triggered based on the lead time, safety stock, and reorder point you have set for each location. Then, NetSuite functions as follows:

- NetSuite autocalculates item reorder point and time phased replenishment for each location.
- To determine the lead time, for each location, NetSuite references the three most recent purchase order + receipt sets for purchase orders with a specified location.

**Important:** To properly use the Lead Time Per Location function, you must be sure to specify a location for each line item of a purchase order you enter. If a purchase order line does not identify a location, then the lead time is not populated.

For example, transactions with the following data are entered:

<table>
<thead>
<tr>
<th>PO</th>
<th>Location</th>
<th>PO Date</th>
<th>Receipt</th>
<th>Location</th>
<th>Receipt Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Location A</td>
<td>4/1/2011</td>
<td>111</td>
<td>Location A</td>
<td>5/1/2011</td>
</tr>
</tbody>
</table>
Based on the data above, items received on receipt #121 will not be used in lead time calculations for Location A because purchase order #2 does not identify a location.

Using Purchase Orders

When you use the Lead Time per Location preference with the Multi-Location Inventory and Demand Planning features, new purchase orders you create automatically populate the lead time based on the location lead time only when location is identified on each line item. The expected receipt date is calculated based on the lead time of the location on the purchase order.

When a purchase order does not specify a location for a line item, the lead time for the location set in the header of the purchase order is used. When a location is selected for both the transaction header and each line item, then the location on the item line is used for calculations rather than the header location.

Using Work Orders

When you use the Lead Time per Location preference with the Multi-Location Inventory and Demand Planning features, the start time and end time of new work orders you enter respect the lead time of the location specified on the work order.

The production start or production end date is calculated based on the work order lead time of the location specified on the work order.

Using Demand Planning

If you use Demand Planning with Lead Time per Location, you can enter a work order lead time per location. Then, on the Generate Supply Plan page, the lead time is based on the lead time of the location that requires the goods.

When the Lead Time per Location is enabled, the following occurs:

- A supply source purchase uses the location lead time.
- A supply source work order uses the location work order lead time.
- The location Safety Stock Level (Quantity) is used.
  Safety Stock Level (Days) is not supported for the Demand Planning feature.

Time-Phased Replenishment Items

If an item's replenishment method is time-phased, you can enter a work order lead time per location for an assembly item. However, you cannot enter a work order lead time per location for an assembly item with the reorder point replenishment method.

For example, a planned order of Deluxe Widgets is requested and these widgets use time-phased replenishment. The requirement date is 5/18. The order date is determined based on the lead time setting per location.

Using Check Item Availability and the Gross Requirement Inquiry

When you use the Lead Time per Location preference with the Multi-Location Inventory and Demand Planning features, NetSuite uses the setting in the Safety Stock field for the location to calculate lead times for both the Gross Requirements Inquiry and Check Item Availability data.
Demand Planning

You can use the Demand Planning feature to analyze your stock demand needs, determine replenishment requirements, and then create orders according to a supply plan that will add stock as needed. This information can be crucial for items with demand that varies and fluctuates throughout the year.

You can pinpoint when to reorder items, and in what quantities, allowing you to maintain optimal stock levels. Demand planning helps you to have the right amount of stock on hand to fill orders without having overstock sitting idle on warehouse shelves.

Demand Planning uses demand plan and supply plan records to track anticipated supply and demand.

**Note:** When you use the Demand Planning feature, you can also use the Available to Promise feature to calculate availability. Read Available to Promise.

Demand Plans

A demand plan records the expected future demand for an item based on previous or projected demand.

A demand plan can be created automatically using the Calculate Demand Plan page. This page initiates the process to assess previous demand for items and calculate the estimated upcoming demand.

You can forecast demand for items using one of the following methods:

- Determine a time frame for examining an item's historical sales data (or data of a different item) to analyze previous sales trends and forecast future sales with similar trends.
- Use current demand such as opportunities, quotes and existing sales orders to forecast future sales. This method is not based on a calculated forecast.

NetSuite uses this forecast data to project estimated demand across a designated time period in the future and suggests a plan for orders accordingly.

Supply Plans

Supply plans record the recommended schedule for purchasing or manufacturing additional supply of an item. The supply plan provides a list of recommended purchase orders and work orders to augment item supply in a timely manner based on lead times and expected demand.

Safety stock level settings are considered in supply calculations. Also, the supply plan incorporates lead times so you place orders in time to receive the items when the demand is increased. Purchase orders generated from supply plans use the preferred vendor from the item record.

For assembly item supply plans, all levels of a multi-tier assembly are considered and work orders are planned for all sub-components of the build, as well as purchasing of required raw materials.

A supply plan can be generated from a demand plan using the Calculate Supply Plan page.

Using demand plans and supply plans helps you maintain an optimal level of inventory for items that have fluctuating demand.

For example, you sell a Deluxe Seasonal Widget that has a 15-day lead time and demand for the widget varies from month to month. To be sure you order and stock the right amounts of the widget as you need them, you can use demand planning to do the following:

- Create a demand plan to analyze your historical sales data for the widget to project demand for the widget into the future. The demand plan will show demand across future periods, including high demand in April and August and low demand in October and May.
From the demand plan, create a supply plan. The supply plan shows when to create purchase orders to replenish the widget based on the expected demand data.

**Note:** You can process a maximum of 10,000 items at one time for Demand Planning functions.

The general workflow for demand planning is as follows:

1. **Set up the feature.**
   - This includes enabling the feature, setting preferences, and setting up item records. Only items with the Time Phased method selected in the Replenishment Method field on their record can be used on demand plans and supply plans.
   - For more details, read Setting Up Demand Planning.
   - After you enable the feature, the Demand Planning links show on the Transactions tab.

2. **Calculate demand for items.**
   - To calculate demand, at a minimum, you must identify a projection method, period type, historical period, and projection period. If you use Multiple-Location Inventory, you must also identify a location.
   - Projection methods you can use include Linear Regression, Moving Average, Seasonal Average, and Sales Forecast.
   - Read Calculating Item Demand or Manual Item Demand Plans.

3. **Review the demand plan.**
   - Review the projected demand as calculated and make any necessary changes.
   - Read Viewing and Editing a Demand Plan.

4. **Generate supply plans for items.**
   - This includes identifying a start date and end date to generate plans. If you use Multiple-Location Inventory, you must also identify a location.
   - A supply plan can be generated from a demand plan using the Calculate Supply Plan page. For details, read Generating Item Supply Plans or Manual Item Supply Plans.

5. **Review supply plans.**
   - Review the orders suggested for item replenishment and make any necessary changes.
   - Read Viewing and Editing a Supply Plan.

6. **Order items.**
   - The orders suggested by supply plans must be generated using the Order Items page or the Mass Create Work Orders page.
   - For details, read Creating Orders from Supply Plans and Mass Creating Work Orders.

To monitor your demand plans, supply plans, purchase orders, and work orders, you can use NetSuite reporting. For details, read Reporting on Demand Planning.

### Setting Up Demand Planning

To use demand planning to create demand plans and supply plans for items, complete the following steps:

1. **To enable features for demand planning:**
2. **Set Inventory Preferences**
3. **Set up Demand Planning on Item Records.**
To enable features for demand planning:

1. Go to Setup > Company > Enable Features.
2. On the Items & Inventory subtab, check the box next to Demand Planning.

   **Note:** Advanced Inventory Management must be enabled.

3. To use the demand planning feature for assembly items, the Work Order feature must be enabled. Check the Work Orders box.
4. Click Save.

To learn more, see the help topic Enabling Features.

Set Inventory Preferences

There are preferences you can set that affect how Demand Planning functions:

**Transactions to Consider**

On the Inventory Management Preferences page, you can choose a setting for the Transactions to Consider preference. This preference setting affects demand planning calculations by determining the transactions that are included in demand calculations.

- Choose the Orders setting to use approved, non-canceled sales orders to calculate demand. Work Orders are also considered if the feature is enabled.
- Choose the Actual Sales setting to use cash sales and invoices to calculate demand. Then, sales orders are not used to calculate demand. Only the cash sales and invoices that bill them are included in demand calculations. Assembly builds are also considered if the Assemblies feature is enabled.

Inventory demand calculations consider only transactions that decrease an item's stock level. For example, an assembly build increases the stock level for the assembly item and decreases the stock level for the assembly item's components. In this case, the demand plan calculation considers the assembly build only for the assembly item's components and not for the assembly item.

   **Note:** If you use both sales orders and standalone cash sales/invoices, choose the Actual Sales option.

To set this preference, go to Setup > Accounting > Inventory Management Preferences.

For detailed steps on setting this preference, see Inventory Management Preferences.

**Allow Purchase of Assembly Items**

Enable this preference to allow the option to create purchase orders instead of work orders when making supply recommendations for assemblies. You can also define purchase pricing on assembly item records.

This preference also enables you to add assembly items to purchase orders, vendor bills, checks, credit card transactions, and vendor credits.

To set inventory preferences, go to Setup > Accounting > Accounting Preferences.

**Demand Planning and Allocation**

If you use the Demand Planning feature, you might also consider using automated allocation. To learn more, see Demand Planning and Inventory Allocation.
Demand Planning and Routing

If you also use the Manufacturing Routing and Work Center feature, see the help topic Setting Routing Preferences.

Demand Planning on Item Records

To use Demand Planning for an item, the replenishment method must be set to Time Phased on the item's record. Only items with a Time Phased replenishment method can be used with demand plans and supply plans.

You can also set additional fields, as described below.

To use Demand Planning for assembly items, the Work Orders feature must be enabled. To learn more, see Setting Up Demand Planning.

To set up an item record for demand planning:

1. Go to Lists > Accounting > Items.
2. Click Edit next to the item record.
3. On the item record, in the Replenishment Method field, select Time Phased. When you choose this setting, orders are created based on item demand plans instead of the Advanced Inventory Management settings.
   
   When you choose this setting, other fields on the record that are used by Advanced Inventory Management to calculate demand are no longer available. These unavailable fields are: Seasonal Demand, Build Point, Reorder Point, Preferred Stock Level, Safety Stock Days.
   
   The Autocalculate settings are cleared and cannot be changed for Demand Per Day, Build Point, Reorder Point, Preferred Stock Level.

   **Note:** Reorder Point is the default selection in this field. You must select Time Phased for each item you want to use with Demand Planning.

4. In the Alternate Source Item field, choose another item if you want to examine the historical sales of an item other than the one on the current record. When this field is left blank, the source for historical data is the original item.

   For example, if you are setting up Item A for demand planning, but Item A does not have an extensive sales history, you can choose Item B as an alternate source for historical data. Then, when demand calculations need to be made for Item A, NetSuite uses Item B's history for the calculations.

   **Note:** You can select only an item that is of the same item type to be an alternate source. For example, if the original item is an inventory item, the alternate source item must also be an inventory item.

   The expected demand change for the original item is used when a demand plan is created using an alternate source item.

5. In the Lead Time field, enter the average number of days between ordering this item from the vendor and receiving it. For example, if the item usually takes ten days to arrive from the vendor, enter 10 in this field.

   Including an accurate lead time for an item is important for creating more accurate supply plans and item orders.

   If no value is entered, then the default value from the Set Up Inventory Management page is used.
6. Optionally enter a **Safety Stock** quantity. This is a measure of the amount of stock you want to keep on hand to account for variations in demand so that you do not run out. It is a buffer amount of an item you prefer to keep in stock at all times.

   For example, if you enter 5, then after demand projections are made, an additional 5 units are added to the quantity required on supply plans.

   If you use Multiple Units of Measure, safety stock is always planned in stock units.

7. In the **Expected Demand Change** field, enter a percentage to augment the forecasted amount.

   For example, demand is projected at 100 units for this upcoming July based on sales last July. But you know that sales for this item have been trending upwards the last two months, and you want calculations to mirror this trend. You can enter a percentage to increase the expected demand beyond the calculated amount.

   This setting is used only when the forecast method for a plan is set to **Seasonal Average**.

8. In the **Distribution Network** field, choose the appropriate network. The network you select determines the distribution categories available for you to choose. If the distribution network field is blank, then distribution category must also be blank.

   **Note:** The network and category you select must be associated with the subsidiary selected for the item in the Classifications section of the item record. For details about how networks are associated with subsidiaries, read *Creating a Distribution Network*.

   This field is available only when the Distribution Resource Planning feature is enabled.

9. In the **Distribution Category** field, choose the appropriate category. After a distribution category is defined on the item record, NetSuite can incorporate network transfers into demand planning for the item.

   **Note:** The network and category you select must be associated with the subsidiary selected for the item in the Classifications section of the item record. For details about how categories are associated with subsidiaries, read *Creating a Distribution Category*.

   This field is available only when the Distribution Resource Planning feature is enabled.

10. Choose one of the following options in the **Lot Sizing Method** field:

    - **Lot For Lot** – This selection means orders are suggested for procurement based on the exact projections for that day. The suggested order quantity may vary from day to day depending on demand calculations.

    - **Fixed Lot Size** – This selection means orders are suggested for procurement based on a fixed amount or a multiple of the fixed amount.

    - **Periods of Supply** – Select this option to generate aggregated purchase orders or work orders based on the overall demand requirements extended over a designated period, such as weekly or monthly.

      For example, rather than creating multiple purchase orders for each instance of demand, you can consolidate into one order created from the demand planning engine for all items required within the next 2 weeks. By sending a consolidated purchase order to a vendor, the vendor can ship all items at one time rather than in multiple shipments, potentially resulting in reduced shipping costs.

      Please note the following: Be aware of costs from vendor holding charges. You can consolidate orders for a period, but after being consolidated, the Bill of Materials (BOM) for that specific work order on that specific level will also be used for subsequent levels.

      If you use Multi-Location inventory, this field is on the **Locations** subtab.

      Complete the following steps based on the Lot Sizing Method you have selected.
a. If you selected **Fixed Lot Size** as the lot sizing method, then enter a quantity in the **Fixed Lot Size** field. This is the quantity that procurement of this item is always based on, regardless of demand projections.

b. If you selected **Periods of Supply** as the lot sizing method, then make a selection in the **Periods of Supply Type** field:
   - **Interval** – Order aggregation starts when a requirement is established and continues for a fixed period defined in the Interval field.
   - **Monthly** – Order aggregation starts at the beginning of each month. The requirement date is always the first day of each month.
   - **Weekly** – Order aggregation starts at the beginning of each week. The requirement date is always the first day of the week as defined under Company Settings.

   The default setting is Interval.

c. In the **Period of Supply Increment** field, enter a number from 1 to 90. The default setting is 1.

   The increment starts on the first day an order is required. From the first day, NetSuite aggregates all orders in the increment. Orders are placed on the first day of the period.

   The **Period of Supply Increment** field is enabled only when you select **Interval** in the **Periodic Lot Size Type** field.

For an Interval setting, NetSuite calculates orders as shown in this example:

- Lead Time is 2 Days
- Interval period is 3 days
- Day 5 demand is 20
- Day 6 demand is 50
- Day 2 on hand quantity is 10
- Day 3 on hand quantity is 50

Orders are grouped based on a 5 day period. Therefore, on day 2 when NetSuite looks ahead 5 days, the total demand is 70. On day 2, the on hand quantity is 10. NetSuite calculates that 60 are required as of day 2. The work order uses this requirement of 60 to determine the subsequent levels of work.
11. The **Supply Type** field shows the method by which more stock is procured, either **Purchase** or **Assembly**. On assembly items, if you have enabled the **Allow Purchase of Assembly Items** preference, you can choose whether to build additional supply or purchase it.

   For details about using this preference, read Setting Up Demand Planning.

12. The **Demand Source** field determines where demand data is sourced for an item.

   - **Forecast from Demand Plan** – Source only the item’s demand plan record.

   ![Note:](image)
   
   **Note:** When you choose this setting, a sales order with a related work order will generate a supply plan for the sales order and the Mass Create Work Orders page will suggest a supply for the sales order.

   - **Entered and Planned Orders** – Source open orders and use the expected ship date as the demand date. If the item is a member of an assembly, demand for the assembly is included in demand calculations for the item.

   - **Order and Forecast** – Calculates demand for an item by including both the forecast amount and the amount on orders that have been entered.

   Forecast demand for an item is calculated by combining the following:

   \[
   \text{Forecast demand} = (\text{Quantity forecast over time}) + (\text{quantity on sales orders and invoices entered})
   \]

   For example, Item #AB1001 is forecast to sell 100 units in January. Sales orders are already entered for 20 units. Using this method, demand is calculated as 120 units.

   The total forecast includes the forecast demand and the actual demand order quantities from transfer orders, work orders, and sales orders.

   - **Forecast Consumption** – Calculates demand for an item by subtracting from the forecast quantity any item quantities on orders entered. This removes duplication if an order is already included as part of a forecast.

   Demand for an item is calculated as follows:

   \[
   \text{Demand} = (\text{Quantity forecast over time}) - (\text{quantity on sales orders and invoices entered})
   \]

   For example, Item #AB1001 is forecast to sell 100 units in January. Sales orders are already entered for 20 units. Using this method, demand is calculated as 80 units.

   As shown in another example below, orders are forecasted for 20 units each on days 1, 5, and 9. Actual orders are entered for 5 units each on days 2, 7, 8, and 10.

   ![Chart](image)

   For planning purposes you may want to indicate that the order for 5 units on day 2 is part of the forecasted 20 units for day 1. You would account for this by decreasing the day 1 forecast quantity to 15 units.
The bottom row shows the adjusted aggregate totals.

### Consumption Window

When you use the **Forecast Consumption** demand source method, set the following on the **Location** subtab of the item record:

- **Forward Consumption** – Number of days after the order date to consider
- **Backward Consumption** – Number of days prior to the order date to consider

When backward and forward consumption days are entered for an item, these fields determine the window, or time period, that is considered for each sales order when a forecast amount may be consumed to calculate demand. If an order falls within the consumption window, that order quantity is calculated as being consumed and the forecast is adjusted to account for the order consumption.

*Note:* NetSuite always considers backward consumption first.

- The forecast closest to the order in the backward window is consumed first.
- The forecast closest to the order in the forward window is considered if there are remaining quantities to be consumed.

*Note:* Only sales order and invoice quantities can consume forecast quantities. Demand from transfer orders and work orders does not consume forecast quantities.

For additional details, read [Forecast Consumption Examples](#).

13. **Demand Time Fence** – This field defaults to the number entered in the **Default Demand Time Fence** field. Verify the default or enter a number between zero and 365 to determine the demand time fence for this item.

14. **Planning Time Fence** – This field defaults to the number entered in the **Default Planning Time Fence** field. Verify the default or enter a number between zero and 365 to determine the planning time fence for this item.

15. **Reschedule In Days** – In the **Reschedule In Days** field, enter a number between one and 90 that is the maximum number of days that the order can be advanced from the current day. For example, if you enter 10 in this field, an order for this item can be moved up ten days earlier, but not eleven or more days. This field defaults to be blank.

*Note:* If this field is left blank, NetSuite does not make recommendations to reschedule orders for this item to a later date.

16. **Reschedule Out Days** – In the **Reschedule Out Days** field, enter a number between one and 180 that is the maximum number of days that the order can be delayed from the current day. For
example, if you enter 10 in this field, an order for this item can be moved to ten days later, but not eleven or more days. This field defaults to be blank.

Note: If this field is left blank, NetSuite does not make recommendations to reschedule orders for this item to a later date.

17. Click Save.

Now, this item can be used on demand plans and supply plans.

Mass Update

You can also use the Mass Update function to update item records for demand planning. Go to Lists > Mass Update > Mass Updates and click General. Under Items, click the type of item to update.

For example, on the Mass Update Fields subtab, you can update the selection in the Replenishment Method field on item records.

For more information on mass updates, read the help topic Mass Changes or Updates.

When updating inventory or assembly items using Mass Update, the mass update cannot be performed unless certain auto-calculate settings are disabled. For inventory items that use the Time Phased replenishment method, you must clear the Auto-Calculate box next to the Reorder Point and Preferred Stock Level fields.

For assembly items that use the Time Phased replenishment method, you must clear the Auto-Calculate box next to the Lead Time, Reorder Point, and Preferred Stock Level fields.

CSV Import

Account administrators and other users with Import CSV File permission can use the Import Assistant to import demand plans. For details, see the help topic Importing Demand Planning Data for Items. For general information about using CSV import for items, see the help topic Items Import.

Forecast Consumption Examples

The following detail examples of cases using the Forecast Consumption demand source method. For more details about this method, read Demand Planning on Item Records.

- Forecast Consumption Example 1 (Order Falls within Consumption Window)
- Forecast Consumption Example 2 (Order Consumes Forecast Amount)
- Forecast Consumption Example 3 (Order Consumes Multiple Forecast Amounts)

Forecast Consumption Example 1 (Order Falls within Consumption Window)

- Forward consumption is 1 day.
- Backward consumption is 2 days.
- Orders are forecast for 20 units on days 1 and 5.
- An actual order for 10 units is entered on day 3.

Because the order for 10 units on day 3 falls within the consumption window, 10 units are considered to be consumed. The forecast amount for day 1 is adjusted to be 10 units (20 units originally forecast less 10 units consumed = 10 units).

**Forecast Consumption Example 2 (Order Consumes Forecast Amount)**

- Forward consumption is 1 day.
- Backward consumption is 2 days.
- Orders are forecast for 20 units on days 1 and 5.
- An actual order for 30 units is entered on day 3.

Because the order for 30 units on day 3 falls within the consumption window, some units are considered to be consumed.

- Backwards consumption is 2 days, so the 20 units on day 1 do fall within the window. The forecast amount for day 1 is fully consumed and is adjusted to be zero units.
  (20 units originally forecast less 20 units consumed = 0 units)
- Forward consumption is one day, so the 20 units on day 5 do not fall within the window, and therefore none are consumed. The forecast for day 5 remains at 20 units.
Forecast Consumption Example 3 (Order Consumes Multiple Forecast Amounts)

- Forward consumption is 3 days.
- Backward consumption is 2 days.
- Orders are forecast for 20 units on days 1 and 5.
- An actual order for 30 units is entered on day 3.

Because the order for 30 units on day 3 falls within the consumption window, some units are considered to be consumed.

- Backwards consumption is two days, so the 20 units on day 1 do fall within the window. The forecast amount for day 1 is fully consumed and is adjusted to be zero units. (20 units originally forecast less 20 units consumed = 0 units)
- Forward consumption is three days, so the 20 units on day 5 do fall within the window. The forecast amount for day 5 is partially consumed and is adjusted to be 10 units. (20 units originally forecast less 10 units consumed = 10 units).
Calculating Item Demand

You can calculate item demand to forecast the expected demand across a future period. Calculate Item Demand Plan page initiates the process to assess previous demand for items and calculate the estimated upcoming demand.

For example, you can look at the demand for an item across the previous six months to forecast the expected demand for the next six months.

To calculate demand, you must choose a projection method, determine what data to use for analysis, and determine the length of the period to forecast for.

NetSuite uses this forecast data to project estimated demand across a designated time period in the future and then suggests a plan for orders accordingly.

After you submit the Calculate Item Demand Plan page, a demand plan is created for each selected item. Demand plans record the expected future demand for an item based on previous demand.

After demand plans are created, you can view and edit the demand plans and use them to create supply plans for items.

Important: NetSuite supports kits in Demand Planning calculations for the components. However, Demand Planning does not calculate demand for the kit itself. Demand Planning calculates demand for the kit components, and if the kit components are sold individually, that demand is also calculated.

To calculate item demand:

1. Go to Transactions > Demand Planning > Calculate Item Demand Plan.
2. If you use NetSuite OneWorld, select a subsidiary.
3. If you use the Multi-Location Inventory feature, select a location.
Then, the list of items that shows is filtered to show only items for the selected location that are
time-phased replenishment items.

4. You can forecast demand for items in one of two ways:

- Determine a time frame for examining an item’s historical sales data (or data of a different item)
to analyze previous sales trends and forecast future sales with similar trends.
- Use current demand such as opportunities, quotes and existing sales orders to forecast future
  sales. This method is not based on a calculated forecast.

Select one of the following projection methods:

- **Linear Regression** – Use previous demand to project future inventory based on the ordinary-least-square regression method.
- **Moving Average** – Use the moving average of historical demand to calculate the overall
  average stock level needed, and then project future stock levels using that overall average.

Based on the historical duration parameter, NetSuite calculates the moving average demand
in the past. The moving average is intended as a smoothing function to minimize demand
variations. This average is used for all periods in the projection.

For example:

- Today is 2/1/2011.
- Historical duration is set to 3 months.
- Projected duration is set to 2 months.

The following results:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical Demand Data</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Projected Demand Data</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

- **Seasonal Average** – Use previous demand to examine the seasonal trend of inventory flow,
  and then project a similar seasonal trend for future stock levels.

**Note:** Using this method, the projection interval must be set to Monthly intervals.

- **Sales Forecast** – When using NetSuite for your sales operations, this option uses forward
  looking sales forecast data to project inventory demand.

When you use the Sales Forecast method, transaction types sourced for projection
calculations are cash sale, invoice, estimate, opportunity, sales order, and item fulfillment,
with the following date and quantity considerations:

<table>
<thead>
<tr>
<th>Transaction Type</th>
<th>Date</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimate</td>
<td>Expected Ship Date</td>
<td>Estimate Quantity</td>
</tr>
<tr>
<td>Estimates without any associated sales orders, invoices, or cash sales</td>
<td>Note: Data is not referenced when an expected ship date is not populated.</td>
<td></td>
</tr>
<tr>
<td>Opportunity</td>
<td>Expected Ship Date</td>
<td>Opportunity Quantity</td>
</tr>
<tr>
<td>Opportunities without any associated sales orders, invoices, or cash sales</td>
<td>Note: Data is not referenced when an expected ship date is not populated.</td>
<td></td>
</tr>
</tbody>
</table>
### Demand Planning

#### Transaction Type

<table>
<thead>
<tr>
<th>Transaction Type</th>
<th>Date</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Order</td>
<td>Expected Ship Date</td>
<td>Quantity remaining that is not yet shipped</td>
</tr>
<tr>
<td>□ Only approved sales orders</td>
<td>Note: If an expected ship date is not listed, then the Transaction Date is used.</td>
<td></td>
</tr>
<tr>
<td>Item Fulfillment</td>
<td>Transaction Date</td>
<td>Quantity Shipped</td>
</tr>
<tr>
<td>□ Only for fulfillments associated with a sales order</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash Sale</td>
<td>Transaction Date</td>
<td>Cash Sale Quantity</td>
</tr>
<tr>
<td>□ Standalone cash sales</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Cash sales created from estimates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Cash sales created from sales orders when Advanced Shipping is disabled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Invoice</td>
<td>Transaction Date</td>
<td>Invoice Quantity</td>
</tr>
<tr>
<td>□ Standalone invoice or invoice from estimate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Invoice created from estimate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Invoice created from sales order when advanced shipping is off</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. In the Projection Interval field, make a selection to determine the period of time demand is calculated for. For example, select Weekly to project how much demand is expected per week, as opposed to per month.

   If you are using the Seasonal Average method, only a Monthly interval is supported.

6. After you select a projection interval, the first date of the period you want to forecast demand for is displayed in the Projection Start Date field.

7. In the Projection Duration field, define the number of periods to calculate projected future demand. For example, enter 6 to calculate demand over a six month period.

   **Note:** This number cannot be a decimal value. For example, if you enter 3 in this field and selected an interval of Months, then demand is forecast for a three month interval.

8. Historical Analysis Duration – Define the number of periods in the past to calculate demand projection
   - For Moving Average, enter the number of periods in the past to calculate the next moving average value.
   - For Linear Regression, enter the number of periods in the past to determine the linear regression projection.
   - This field is not required when using the Sales Pipeline projection method.
   - For Seasonal Average, enter the number of periods in the past to calculate the buckets in the future.

9. Select all items you want to calculate demand for.

10. The Alternate Source Item field enables you to choose a different item to use that item's historical data to calculate demand.

    For example, if you are setting up Item A for demand planning, but Item A does not have an extensive sales history, you can choose Item B as an alternate source for historical data. Then, when demand calculations need to be made for Item A, NetSuite uses Item B's history for the calculations.
You can select only an item that is of the same item type to be an alternate source. For example, if the original item is an inventory item, the alternate source item must also be an inventory item.

**Note:** The expected demand change for the original item is used when a demand plan is created using an alternate source item.

11. Click **Submit**.

After you submit the page, demand plans are created for all selected items. To view the plans, go to Transactions > Demand Planning > Item Demand Plans.

When calculating demand, NetSuite includes transactions dated prior to the start date for items that have a demand source setting of Entered and Planned Orders. These transactions are considered as existing demand orders on the start date of the planning calculation:

- A sales order that is not closed
- A sales order that is not fully shipped
- A sales order that has a date that is before the start date

Sales orders and purchase orders dated prior to the start date are expected to be received or shipped on the day when the supply calculation is done.

If an item has no transaction history in NetSuite, you can use an alternate item's history, enter your own forecast, or import the sales order history.

### Assemblies and Demand Calculations

If an assembly's components are all set to calculate the demand source from Entered and Planned Orders, you do not need to create demand plan. If you select the assembly to calculate supply, the necessary orders are created when that calculation occurs for the assembly and its components.

### CSV Import

Account administrators and other users with Import CSV File permission can use the Import Assistant to import demand plans. For details, see the help topic Importing Demand Planning Data for Items. For general information about using CSV import for items, see the help topic Items Import.

### SOAP Web Services

SOAP web services programs can be used to add, update, delete, search, and retrieve data for demand plans. The Item Demand Plan record is supported in the 2012.1 and later SOAP web services endpoints. See the help topic Item Demand Plan in the SOAP web services section of the Help.

### Monitoring the Demand Plan Status

After you have submitted the demand plan generation page, some plans may take time to be generated. You can check the status of plan generation to monitor progress.

**To monitor demand plan creation status:**

1. Go to Transactions > Demand Planning > Calculate Item Demand Plan > Status.
2. The Calculate Item Demand Plan Status page shows a list of page submissions.
   - For each line, the following shows:
     - **Date and time created**
3. You can filter the list of plans by entering a date range in the From and To fields.
4. After all demand plan calculations are completed, the status for the line shows as Complete.

Viewing and Editing a Demand Plan

After a demand plan is originally created, you can open the plan to view or edit the plan details. For example, you may wish to edit some of the calculated projection totals, or delete a plan.

To view or edit an existing item demand plan:

1. Go to Transactions > Demand Planning > Item Demand Plans.
2. Do one of the following:
   ■ Click View next to a plan to see the plan.
   ■ Click Edit next to a plan to make changes to the plan.

   **Note:** The only header fields that can be edited on the plan are the Custom Form, Unit of Measure, and Memo.

   These fields are for viewing only: Location, Item, Projection Method, Projection Interval, Projection Start Date, Projection Duration, and Historical Analysis Duration.
3. You can alter your view of the demand plan by changing the date range or the plan view, as described below:
   1. Year – Enter the year to view.
   2. Month – Select a month to view.
   3. Start Date – Enter the first date of the period you want to view.
   4. End Date – Enter the last date of the period you want to view.
   5. View – Choose to see the demand results in a Daily, Weekly or Monthly format.
4. The Calculated column shows the projected demand amount.
   ■ When you are viewing a plan, the calculated quantity is for reference only.
   ■ When you are editing a plan, the calculated quantity is shown and a new number can be entered in the Quantity field to change the demand quantity for each line. Enter an amount to revise the demand plan for that interval.
5. Last Plan Modified – This field displays the date of the most recent changes to the plan.
6. Last Projection Method – This field displays the most recent projection method used.
7. To save any changes entered on this plan, click Save.

To delete a plan:

1. In the Demand Plan list, beside the plan you want to delete, click Edit.
2. On the Demand Plan page under More Actions, click Delete.

Manual Item Demand Plans

You can choose to enter a demand plan manually instead of having NetSuite calculate a plan for you. This can be useful if you use calculations derived outside of NetSuite and want to enter a plan based on those external calculations.
To enter a manual item demand plan:

1. Go to Transactions > Demand Planning > Item Demand Plans > New.
2. In the Custom Form field, choose a form for this plan.
3. If you use NetSuite OneWorld, select a subsidiary.
4. If you use the Multi-Location Inventory feature, select a location.
   Then, the list of items that shows is filtered to show only items for the selected location that are
time-phased replenishment items and have no existing demand plan.
5. Select the item you are entering a demand plan for.
6. Select a Unit of Measure to create a demand plan based on the unit.
7. Optionally enter a memo for this plan. Later, you can search for this plan by the text entered here.
8. You can alter your view of the demand plan by changing the date range or the plan view, as
   described below:
   
   1. Year – Enter the year to view.
   2. Month – Select a month to view
   3. Start Date – Enter the first date of the period you want to view.
   4. End Date – Enter the last date of the period you want to view.
   5. View – Choose to see the demand results in a Daily, Weekly or Monthly format.
9. For each interval, enter an amount in the Quantity field to set the demand quantity.
10. Click Save.

After the demand plan is entered, you can use the plan to generate supply plans.

Generating Item Supply Plans

After you have created demand plans, you can create individual supply plan for specified items. The
supply plan details orders to be placed for items that are recommended based on the beginning
inventory level, safety stock level, lead time, and projected demand.

When you generate supply plans from your demand plans, NetSuite can create future work orders or
purchase orders to be able to replenish items in appropriate quantities as they are needed.

For more information on which orders are included in demand plan calculations, see Calculating Item
Demand.

To create supply plans:

1. Go to Transactions > Demand Planning > Generate Item Supply Plan.
2. If you use NetSuite OneWorld, select a subsidiary.
3. If you use the Multi-Location Inventory feature, select a location.
   Then, the list of items that shows is filtered to show only items for the selected location that are
time-phased replenishment items.
4. Select a department if you track them.
5. Select a class if you track them.
6. If you use the Distribution Resource Planning feature, choose a setting for the Plan Through
   Distribution Network field.
   When this box is checked, NetSuite runs demand planning calculations across all locations and
   items within the network.
   ■ First, NetSuite evaluates affected items based on the selection
Demand Planning

- All assemblies associated with this item
- All components associated with this item
- Next, NetSuite evaluates all locations based on the selection
  - All source locations in the Bill of Distribution associated with this location
  - All destination locations in the Bill of Distribution associated with this location

7. The **Start Date** field determines the earliest transaction date that can be shown on any new orders created. Verify the default current date or enter another date.

8. In the **End Date** field, enter the last date in the range you want to create orders through. Orders are created based on item demand on or prior to the end date selected.
   
   For example, if you enter *July 30*, then supply plans are created based on demand between the current date and July 30th.

9. Select all items you want to create supply plans for.

10. Click **Submit**.

When you click Submit, supply plans for the selected items are created.

**Note:** If you use the Assemblies feature, then any linked items also have their supply plan created. For example, if an assembly has a component item that is set to time-phased replenishment, then the component item supply plan is generated as well.

The Item Supply Plan list appears, and you can open individual plans by clicking the plan name.

When you view an individual plan, the Item Supply Plan page displays the orders to be created for the item based on information from the Generate Supply Plan page.

When calculating the supply plan, NetSuite does also consider prior transactions as existing supply orders on the start date of the planning calculation:

- A purchase order that is not closed
- A purchase order that is not fully received
- A purchase order that has a date that is before the start date

When Demand Planning is enabled, if an existing purchase order does not show an expected receipt date, then the order is expected to be received on the transaction date on the purchase order.

To learn more, see [Creating Orders from Supply Plans](#).

**Manufacturing Routings**

If you generate orders and also use the Manufacturing Routing and Demand Planning features, you will have the option to define production scheduling methods on work orders. To learn more, see the help topics [Production Scheduling Methods Overview](#) and [Supply Planning and Routing](#).

**Monitoring the Supply Plan Status**

After you have submitted the supply plan generation page, some plans may take time to be generated. You can check the status of plan generation to monitor progress.

**To monitor supply plan creation status:**

1. Go to Transactions > Demand Planning > Generate Item Supply Plan > Status.
2. The Generate Item Supply Plan Status page shows a list of page submissions.
3. For each line, the following shows:
   - Date and time created
   - Percent complete
   - Status

4. You can filter the list of plans by entering a date range in the From and To fields.

5. After all supply plan calculations are completed, the status for the line shows as **Complete**

**Viewing and Editing a Supply Plan**

After you generate supply plans for an item, you can review the plans to verify the quantities suggested for replenishment. This review enables you to identify items that may need a higher or lower quantity ordered than is calculated by NetSuite. You can change these quantities on the supply plan, and the corresponding order you create will match the quantities indicated on the supply plan.

For example, on June 1st, when you used a demand plan for Deluxe Widgets to generate a supply plan, NetSuite recommended that you order an additional 100 units on July 1 to replenish stock. Today is June 30th and you think you may need more widgets for a last-minute order that might come in. You can edit the supply plan to show a quantity of 150 Deluxe Widgets and the correct amount will show on the Order Items page when you are ready to place the order.

![Supply Plan Image]

**To view or edit a supply plan:**

1. Go to Transactions > Demand Planning > Item Supply Plan > List.
2. Next to a supply plan listed, do one of the following:
   - Click View to see the existing plan.
   - Click Edit to make changes to the existing plan.
3. The item, location, and unit of measure are displayed for reference but cannot be changed.
4. You can edit the Memo field if needed. Text you enter here can be searched for later.
5. Enter an Order Date. This is the transaction date used for purchase orders or work orders created.
6. Enter a Receipt Date. This is the date you expect the goods to be received into the warehouse.
7. In the Order Type field, select the means of generating more stock. This can be by purchase order or by work order, depending on the item.
8. The Quantity field displays the recommended number to replenish. You can enter a larger or smaller number to buy or create another amount of the item.
9. When viewing a plan, the **Order Created** field shows whether or not the order has been created.
10. Click Save.

**To delete a plan:**

1. In the Supply Plan list, beside the plan you want to delete, click Edit.
Manual Item Supply Plans

You can choose to enter a supply plan for creating item orders that is not derived from any demand plan in the system. This enables you to enter plans based on data or projections from external sources other than your NetSuite account.

To manually enter a supply plan:

1. Go to Transactions > Demand Planning > Item Supply Plans > New.
2. If you use NetSuite OneWorld, select a subsidiary.
3. If you use the Multi-Location Inventory feature, select a location.
   Then, the list of items that shows is filtered to show only items for the selected location that are time-phased replenishment items and have no existing supply plan.
4. Select the item to create a supply plan for.
5. Select a Unit of Measure to create a supply plan based on the unit.
6. Click the Order Date field to create a new order with the following entered:
   - Order Date – This is the date when the order is to be sent to the vendor (for a purchase order) or the date to start the assembly (for a work order.)
   - Receipt Date – This is the date when the order is expected to be received from the vendor (for a purchase order) or the date when the assembly is expected to be completed (for a work order.)
   - Order Type – This is the type of supply to be generated to meet the projected demand.
     - For inventory items, supply is always purchased.
     - For assembly items, supply may be generated by either purchasing the item or building the item.
     NetSuite recommends either purchasing or building based on the Supply Type field on the item record.
   - Quantity – Enter a quantity to provide the recommended supply for the order.
7. Click Add.
8. Repeat steps 6 and 7 for each order you want to add to the supply plan.
9. After all orders are added, click Save.

After it is saved, the supply plan shows in the list. To view the plan, go to Transactions > Demand Planning > Item Supply Plan > List.

Note: You also can use the Import Assistant to import item supply plan data from a CSV file. See the help topic Item Supply Plan Import.

Creating Orders from Supply Plans

After you have created supply plans, the orders showing on supply plans also show in the list on these pages:

- Using Order Items
  The Order Items page shows purchase orders to be created.
- Using Mass Create Work Orders
  The Mass Create Work Orders page shows only pending work orders for assembly items.
You can place the orders on the plan in these two ways.

**Using Order Items**

**To bulk order items:**
1. Go to Transactions > Inventory > Order Items.
2. You can filter the list of orders to show only items using the Time Phased replenishment method. To do so, in the **Replenishment Method** field, select **Time Phased**.
3. Verify that the box in the **Order** column is checked next to each item you want to create orders for.
4. Verify that the appropriate quantity and rate are shown for each item.
5. Click **Submit**.

Now, the purchase orders are created for these items.

For more details about using the Order Items page, read the help topic **Order Items Page**.

**Using Mass Create Work Orders**

You can use the Mass Create Work orders function to create many work orders at one time for your assembly items.

To mass create work orders, go to Transactions > Inventory > Mass Create Work Orders.

For detailed instructions on mass creating work orders, read the help topic **Mass Creating Work Orders**.

**Manufacturing Routings**

If you generate orders and also use the Manufacturing Routing and Demand Planning features, you will have the option to define production scheduling methods on work orders. For details, read the help topics **Production Scheduling Methods Overview** and **Supply Planning and Routing**.

**Reporting on Demand Planning**

After you have created item demand plans and supply plans you can use NetSuite demand planning reports to monitor and assess your demand planning activities.

These reports are available at Reports > Demand Planning:

- **Demand History by Item Report** – This report displays the historical data used for item demand analysis based on transaction history.
- **Item Demand Plan by Item Report** – This report displays the item demand quantity by item.
- **Item Demand Forecast vs. Actual Report** – This report shows the forecasted demand for an item compared to the actual demand for the item across a certain period of time. This report helps you determine the accuracy of the forecast and whether supply or pricing needs to be adjusted for an item.

The following inquiry is available at Transactions > Demand Planning:

- **Gross Requirements Inquiry** – This inquiry enables you to have an overview of the progressive supply and demand cycle by listing quantities required and quantities supplied on each transaction date listed. Each transaction and date is listed along with the more-on-hand or less-on-hand quantity of the transaction, as well as the resulting total quantity on hand for the item.
Gross Requirements Inquiry

The Gross Requirements Inquiry enables you to have an overview of the progressive supply and demand cycle by listing quantities required and quantities supplied on each transaction date listed. Each transaction and date is listed along with the more-on-hand or less-on-hand quantity of the transaction, as well as the resulting total quantity on hand for the item.

Optionally choose to check the Show Details box in the header. When this box is checked, each line of the Gross Requirement Inquiry details the orders that create the demand. This includes sales orders, transfer orders and work orders that create demand for items and components.

When the Show Details box is checked, the Gross Requirement Inquiry shows these additional columns:

- **Order** – This column lists the sales order or transfer order number that created the demand for the line. Click the number to open the order.
- **Assembly** – This column lists the work order number that created the demand for the line. Click the number to open the order.

This list shows in segments of 250 lines and has a maximum of 1000 lines. For more information about line limitations, see the help topic Limitations for Displaying Transactions.

For example: Today is August 1st.

The start date of the planning run is August 1st.

Based on the forecast demand, a work order is recommended by the planning engine. The recommended work order start date is July 30th.

Because the recommended work order start date is prior to the start date of the planning run, the dependent demand of the components of this work order will not be considered by the planning engine.

**To run a Gross Requirements Inquiry:**

1. Go to Transactions > Demand Planning > Gross Requirements Inquiry.
2. If you use NetSuite OneWorld, select a subsidiary.
3. Optionally check the **Show Details** box.
4. If you use the Multi-Location Inventory feature, select a location.

Then, the list of items that shows is filtered to show only items for the selected location that are time-phased replenishment items and have existing supply plans generated.

The following information for the selected item is displayed in the form header for reference:

- **Unit of Measure** (supply plan unit only)
- **Safety Stock Level**

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**Note:** NetSuite considers actual work order demand for orders with a production start date that is before the planning start date. NetSuite will not consider recommended work order demand for orders with a production start date that is before the planning start date.
The inquiry displays data retrieved from your account regarding all events that change the stock level of the selected item. Each line of the inquiry results shows the following:

- **Date** – The expected date of receipt (for supply) or shipping (for demand orders.)
- **Order Date** – The date an order needs to be placed to meet demand.
- **Type** – The type of event that affects the inventory level.

The following are the types of events you may see on an inquiry:
- Entered Demand Orders
- Entered Supply Orders
- Forecast from Demand Plan
- Planned Work Order - Component Consumption
- Planned Work Order - Assembly Build
- Planned Purchase Order

- **Quantity** – The amount of the item that will be added to or removed from the on-hand amount resulting from the event on that line.
- **Quantity on Hand** – The new total amount on hand including the amount changed by the event on that line.

The first line of the inquiry shows the beginning quantity on hand of the item. Subsequent lines show each transaction that adds or subtracts inventory to change the stock level and shows the new resulting quantity on hand.

For example, an inquiry may display the following:

<table>
<thead>
<tr>
<th>Date</th>
<th>Order Date</th>
<th>Type</th>
<th>Quantity</th>
<th>Qty on Hand</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/15</td>
<td>1/15</td>
<td>Beginning inventory</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>1/20</td>
<td>1/14</td>
<td>Planned Supply: Purchase Order</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>2/1</td>
<td></td>
<td>Existing Supply Order</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>3/1</td>
<td></td>
<td>Item Demand</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

You can see that an order is placed on January 14th that is expected to be received on January 20th and add 10 units to the on-hand count. Then, on February 1st, an order is expected that adds 8 more units to stock, bringing the total to 18. Finally, on March 1st, demand for the item removes 9 units from stock, leaving a total of 9 units on hand.

**Important:** All posting and non-posting transactions recorded during a day will be posted to Planned Supply Orders. The beginning on hand amount reflects the inventory on hand at the beginning of the day.

The inquiry details the anticipated movement of item quantities into and out of stock, so you can see the expected level of stock at any certain date. By viewing and assessing the inquiry, you can determine if the inventory variances look appropriate. If it appears that stock may dip too low or rise too high at any point, you can make changes to supply plans as necessary to maintain optimal stock levels.

**Note:** If you make changes after viewing a Gross Requirements Inquiry, you need to re-generate the supply plan and run a new inquiry to see the updated changes.

For example, you may view an inquiry and decide to create an order that is being suggested on a supply plan. After you create the order at the Order Items page, you must generate the supply plan again.
and then run a new inquiry to see the new order as a line on the inquiry. For details on ordering, read Creating Orders from Supply Plans.

Distribution and Demand Planning

If your company handles distribution of assemblies, you can use Demand Planning to assist in your production and distribution.

Demand Planning is available for Assemblies only when both the features Advanced Inventory Management and Work Orders are enabled. For details, read Setting Up Demand Planning.

Supply Plans and Assembly Items

When you use Demand Planning for assemblies, you can use a supply plan as a list of daily ordering recommendations. A supply plan is generated based on the following:

- outstanding purchase orders, work orders, and transfer orders
- safety stock
- item demand
- existing sales orders or forecasts from a demand plan

For details, read Generating Item Supply Plans.

When you calculate supply plans for an assembly, the supply for all related components in the assembly's Bill of Materials is also evaluated. If a work order is recommended for an assembly, NetSuite evaluates the need for additional work orders for sub-assemblies or purchase orders for component items. For work orders that prompt component consumption of materials, NetSuite evaluates the additional supply requirements of components when the demand source for sub-assemblies and components is set to Entered and Planned Orders.

Supply Source for Assemblies

When the Allow Purchases for Assemblies preference is enabled, you can determine whether to purchase or build needed assemblies on supply plans, depending on the setting for the Supply Source field on the item record. For details, read about the Supply Source field in Entering Purchasing/Inventory Information on Items.

Assembly Replenishment Strategies

Distributors that sell assembly items can choose an inventory replenishment model that is an appropriate strategy to fit their needs. Two common methods discussed below are the Build to Stock method and Build to Order method. Both of these strategies are supported using NetSuite's Demand Planning feature.

For example, Smith Computers and Jones Computers are companies that sell similar systems, but they each use different supply chain strategies.

Build to Stock

Smith Computers sells their product at retail stores and they use a Build to Stock supply strategy.

When a customer comes in to make a purchase, the Smith Computers product is readily available at the store. There is no wait time. Customers pay for the product at the retail location and take it home immediately.
In the Build to Stock model, Smith Computers determines replenishment ordering requirements for components based on the forecast demand of the final assembly of the item. This forecast demand of the final assembly is in the demand plan.

The graphic below shows that the Smith Laptop Assembly item is comprised of component items that have supply sources of both Buy and Build.

To deploy a Build to Stock model, the following are recommended demand source selections for each item in the Bill of Materials structure:
**Build to Order**

Jones Computers sells their product to customers via their website and they use a Build to Order supply strategy.

Using a Build to Order model, Jones computers are not readily available to consumers during sales order entry. Only after an order for a product is placed, Jones assembles the item that will be delivered to the customer.

The Jones strategy does not require keeping large quantities of stock on hand, and having surplus stock is very rare. Therefore, money is not tied up in idle inventory on shelves, but customers are required to wait the two-week lead time necessary to build the product before they receive it.

Jones determines replenishment ordering requirements for components based on the forecast of existing sales for the item.

The following shows the member items in a Jones Laptop Assembly. When a customer places an order for a Jones Laptop Assembly, demand for these items increases.

To deploy a Build to Order model, the following are recommended demand source selections for each item in the Bill of Materials structure:
Distribution Resource Planning

The Distribution Resource Planning feature is available to facilitate resource planning across multiple locations and subsidiaries within a network. This enables you to transfer items and materials between warehouses, factories and retail stores when you set up networks to encompass locations that contribute to meeting demand. For details, read Distribution Resource Planning.

Demand Planning and Inventory Allocation

When processing backorders, NetSuite helps automate your process for allocating anticipated future inventory when you use customer priority settings. To maintain strategic customer relations, you may choose to prioritize order processing to favor some customers, such as those who comprise a significant portion of your sales. NetSuite enables you to set up order processing to ensure that inventory is reserved for timely fulfillment of priority customer orders rather than basic first-come, first-served fulfillment.

Backordered items can be shipped based on the commitment priority you designate. Rather than fulfilling orders based on a transaction date or expected ship date sequence, employees who manage sales orders in your pipeline can use this prioritization option to reallocate the quantity committed to orders based on designated priority.

First, assign priority numbers for customers. Then, NetSuite calculates the expected ship dates for sales order items based on priority standing and when the inventory is expected to arrive in your warehouse. NetSuite examines the quantity on hand or uncommitted quantities and can automatically prioritize planned sales orders and transfer orders based on their importance.
### Important

The topics below apply only if you have not enabled the Supply Allocation feature in your account. If you have enabled the Supply Allocation feature, read Supply Allocation for additional information.

To set up your account to use enhanced inventory allocation and customer prioritization, use the information below:

- Enabling Features for Enhanced Allocation
- Inventory Allocation Preferences
- Customer Commitment Priorities
- Commit Orders
- Reallocate Open Quantities

### Enabling Features for Enhanced Allocation

To verify that features are enabled in your account:

1. Go to Setup > Company > Setup Tasks > Enable Features.
2. To use enhanced inventory allocation, verify that the box is checked next to these features:
   - Inventory - Items & Inventory subtab, under Inventory
   - Team Selling - CRM subtab, under Sales
   - Demand Planning - Items & Inventory subtab, under Inventory
3. Click Save.

**Note:** This topic is applicable only if you have not enabled the Supply Allocation feature in your account. If you have enabled the Supply Allocation feature, read Supply Allocation for additional information.

### Inventory Allocation Preferences

Set the following preferences to use enhanced allocation functionality.

**Important:** The instructions below apply only if you have not enabled the Supply Allocation feature in your account. If you have enabled the Supply Allocation feature, read these topics for additional information: Supply Allocation, Setting Demand Preferences for Supply Allocation.

To enable allocation preferences:

1. Go to Setup > Accounting > Preferences > Accounting Preferences.
2. Make a selection for each of the preferences below.

### Item Commitment Transaction Ordering

Select one of the following to determine which order will have items committed to it when there is an open quantity.

- **Order by Expected Ship Date** – Commits only based on the latest expected ship date.
- **Order by Order Priority** – Commits based on set customer priority regardless of transaction date or expected ship date. When the Item Commitment Transaction Ordering preference is set to Order by
Order Priority, then an Order Priority column is displayed on forms for work orders, sales orders, and transfer orders. NetSuite uses this field to calculate the order priority for allocation.

- **Order by Transaction Date** – Commits only based on the latest transaction date.

## Default Commitment Options

Make selections to determine the default commitment setting on work orders, sales orders, and transfer orders. The commitment setting you choose defaults to show in the Commit Criteria field on new transactions you enter. When entering a transaction, you can change the setting from the default if necessary.

These preferences can be useful when you use Demand Planning. For example, NetSuite may create a large quantity of new work orders, but you do not want your items committed to those orders yet. You can set your preference for the Default commit option on work order preference to Do Not Commit.

Selections can be made for the following transactions:

- Default commit option on sales order (requires the Sales Orders feature enabled)
- Default commit option on work order (requires the Work Orders feature enabled)
- Default commit option on transfer order (requires the Multi—Location Inventory feature enabled)

For each applicable transaction type, select one of the following default settings:

- **Available Qty** – Items for this order are committed as available. Available items are shipped, and items that are not available are placed on backorder.
- **Complete Qty** – This order ships only when all items are committed.
- **Do Not Commit** – Items are not committed to this transaction until this setting is changed.

These preferences default to the selection Available Qty.

## Perform Item Commitment After Transaction Entry

The Perform Item Commitment After Transaction Entry preference determines whether NetSuite automatically allocates items to orders or not.

- Check this box to enable this preference if you want NetSuite to automatically allocate items based on the preference under Item Commitment Transaction Ordering. For details on setting customer priorities, read [Customer Commitment Priorities](#).

When the preference Perform Item Commitment After Transaction Entry is enabled, NetSuite performs automatic inventory allocation when new item quantities become available. In addition, NetSuite automatically removes available quantities from sales orders, work orders, and transfer orders in some scenarios. For details, read [Commit Orders](#).

- Clear this box if you do not want NetSuite to automatically allocate items. When you disable this preference, you must manually choose which orders to allocate items to. For details on manual allocation, read [Reallocation Items](#).

## Customer Commitment Priorities

To utilize the priority-based item commitment functionality in your account, you must mark customer records to prioritize the importance of filling orders for customers. Then, transactions are processed based on the indicated priority of the selected customer.

When the Item Commitment Transaction Ordering preference is set to Order by Order Priority, then NetSuite commits items based on set customer priority regardless of transaction date or expected ship date and an Order Priority column is displayed on forms for work orders, sales orders, and transfer orders.
orders. NetSuite uses this field to calculate the order priority for allocation. Priority is determined at the transaction line level based on the set customer priority.

**Important:** The topics below apply only if you have not enabled the Supply Allocation feature in your account. If you have enabled the Supply Allocation feature, read Supply Allocation for additional information.

**To create or edit a customer record to check the Order Priority box:**

1. Go to Lists > Relationships > Customers.
2. Click **Edit** or **New**.
3. In the **Default Order Priority** field, enter a number to designate the priority for this customer.

**Important:** The lower the number you enter, the higher the priority. For example, priority 1 is higher than priority 2. You can also enter decimal numbers in this field. For example, priority 1.5 is higher than priority 2.

This field is available only when the **Commitment by Order Priority** preference is enabled. For details about this preference, read Inventory Allocation Preferences.

4. If entering a new record, complete additional fields as necessary.
5. Click **Save**.

**Note:** This topic is applicable only if you have not enabled the Supply Allocation feature in your account. If you have enabled the Supply Allocation feature, read Supply Allocation for additional information.

**Commit Orders**

The commitment of items to orders can be done automatically or manually based on your setting for the Perform Item Commitment after Transaction Entry preference.

- When this preference is enabled, NetSuite will automatically allocate items based on the set priority. The order with the highest priority will have items committed for fulfillment. Automatic calculation of quantities to be committed to prioritized orders can save you time and effort.
- When this preference is disabled, you can manually select specific order lines for allocation. When you disable this preference to manually allocate items to orders, you can use the Reallocate Items page to determine how items will be allocated to orders. Using manual allocation gives you complete control over what items are committed and when.
- When this preference is disabled, you can also schedule items to be committed to orders on a predefined, scheduled basis using the Commit Order Schedule page. For more information, see Commit Order Scheduling.

This preference must be **disabled** to view and use the Commit Orders and Commit Order Schedule pages. For details about setting this preference, read Inventory Allocation Preferences.

The Commit Orders and Commit Order Schedule pages function differently than the Reallocate Items page in the following way:

- You must manually update the quantities on the Reallocate Items page.
- NetSuite automatically calculates the quantities on the Commit Orders and Commit Order Schedule pages.
  - Use the Commit Orders page at Transactions > Inventory > Schedule Commit Orders > Run Now to commit orders on demand.
Use the Commit Order Schedule page at Transactions > Inventory > Schedule Commit Orders to create a schedule for item commitment for a predefined group of orders.

**Note:** This topic is applicable only if you have not enabled the Supply Allocation feature in your account. If you have enabled the Supply Allocation feature, read Supply Allocation for additional information.

**To commit orders on demand:**

1. Go to Transactions > Inventory > Schedule Commit Orders > Run Now.
2. The list on the Commit Orders page shows individual lines for each order. Optionally filter this list using these selections:

   **Primary Options and Criteria**
   - **Location** – Select a location to show only orders associated with that location.
   - **Item** – Select an item to show only orders that include the item.
   - **Customer** – Select a customer to show only orders from that customer.
   - **Order number** – Select to filter the list by order number.
   - **Transaction Type** – Select a type to show only orders of that type.
   - **Commit Criteria** – Select to filter the list by the Commit Criteria setting (Available Qty, Complete Qty, Do Not Commit)
     
     Kits and their components cannot be set to Do Not Commit.
   - **Select All Orders** – Check this box to select all orders in the list.

   **Note:** This option restricts the committed orders to 200 at one time to enhance commit time.

   **Range Criteria**
   - **Order Priority From/To** – Enter a range of priority numbers to filter the list by customer priority.
   - **Transaction Date From/To** – Enter a date range to filter the list by transaction date.
   - **Expected Ship Date From/To** – Enter a date range to filter the list by expected ship date.
3. Check the **Set Order Line to Firm** box to Firm each order line you select. Quantities on lines that are firmed cannot be reallocated to other orders.
4. Select specific rows when inventory is available for commitment. Check the box in the Select column next to each line you want to commit.

   **Note:** When order lines with the Commit Criteria setting Do Not Commit are selected, NetSuite changes the setting to Available Quantity during processing.

5. Optionally sort the list.

   In the **Processing Options** section, make a selection in one or more of these three fields to sort:
   - **Sort By**
   - **Then By**
   - **Then By**

   Sorting options for each field include the following:
   - **Commit**
- Customer
- Item
- Location
- Order #
- Order Priority
- Order Qty
- Qty Committed
- Qty Fulfilled
- Transaction Date
- Transaction Type
- Expected Ship Date

**Note:** Expected Ship Date requires that Demand Planning be enabled in your account. The Expected Ship Date field now shows on the Commit Orders page even if the Demand Planning feature is not enabled. If the Demand Planning feature is not enabled, the expected ship date is equal to the transaction date.

Beneath each field you can check the **Descending** box if you want results to return in descending order instead of ascending order. This box is clear by default. The sorting sequence applies to all orders if the Select All Orders box in the header is checked. NetSuite remembers your sorting choices the next time you open the Commit Orders page.

**Note:** If the Perform Item Commitment After Transaction Entry preference is not enabled, these sorting selections take priority over the preference only if the sorting sequence fields on the Commit Orders page are left blank. Selections in the sorting sequence fields on the Commit Orders page override the Perform Item Commitment After Transaction Entry preference.

6. Click **Submit**.

After you click Submit, the selected orders are committed as indicated.

When the preference Perform Item Commitment After Transaction Entry is enabled, NetSuite does perform automatic inventory allocation when new item quantities become available.

NetSuite will still automatically remove available quantities from sales orders, work orders, and transfer orders in the following scenarios:

- Reducing or deleting a quantity on an item receipt or other adjustment.
  For example, you change a receipt quantity from 10 to 8. NetSuite must automatically update the quantity already allocated to sales orders by -2. This helps ensure a consistent quantity available count for the item.

- Changing the sales order quantity below the quantity committed.
  For example, a sales order has a quantity of 10, and 10 units are already allocated. Then you change the sales order quantity to 9. NetSuite automatically updates the quantity committed to the order to 9 and the one removed returns to the quantity available count for reallocation.

Calculations to de-commit items are based on the Item Commitment Transaction Ordering setting.

If multiple orders are changed and a large amount of inventory is removed, your setting determines which orders are affected and which orders get items allocated first. Quantities will be de-committed based on the following criteria:
When Sales Order feature is enabled, the quantity is reduced on the transaction with a committed quantity and the oldest transaction date.

When the Demand Planning feature and Sales Order feature are enabled, the quantity is reduced on the transaction with a committed quantity and the oldest transaction date, priority, or expected ship date.

**Note:** De-committing items is location specific. Quantity adjustments are made only in the location identified on the line or form header.

Quantities are also de-committed if you set the commit option on order lines to Do Not Commit after an order has been committed.

To view the status of an allocation, go to Transactions > Inventory > Schedule Commit Orders > Status

**EXAMPLES**

The examples below describe situations that can trigger item reallocation and the calculations that are used.

**System Calculation Example 1: Changing Item Receipts or Adjustments**

On an item receipt or other adjustment, if you reduce the quantity indicated or delete the entire transaction, it reduces the quantity of items available to be committed to orders. Such a reduction brings the quantity available below the quantity on hand.

For example, first create an item receipt for Item A for 10 units. Then create a sales order for 5 units of Item A. Next, manually commit 5 units to the sales order. Then, delete the item receipt. After being deleted, NetSuite automatically removes the allocation for the 5 units of A on the sales order.

**System Calculation Example 2: Changing Order Quantities**

On a sales order, if you reduce the item quantity on the order, that quantity becomes lower than the quantity committed.

For example, you create an item receipt for 10 units of Item A. Then, create a sales order for 5 units of Item A. Next, manually commit 5 units to the sales order. Then, change the sales order quantity from 5 to 2. NetSuite automatically changes the committed quantity to 2 units of Item A on the sales order.

**Reallocate Open Quantities**

You can use the Reallocate Open Quantities function to change which orders items are committed to for fulfillment. NetSuite examines orders for item quantities that are committed but not firmed or fulfilled yet. These items are eligible to be reallocated to commit them to another order for fulfillment.

For example, a new order is entered that is a higher priority to fulfill than existing open orders. You can reallocate open quantities of items committed on existing orders to fulfill the highest priority order.

- Sales Order #1 is entered and is assigned a low priority.
- Items are committed to Sales Order #1 using the Commit Orders page.
- Sales Order #2 is entered and is assigned a high priority.
- The customer service rep prefers to fulfill order #2 before order #1. He wants to undo the commitment of items to order #1 and commit those items to order #2.

To reallocate items to different orders, check the Reallocate Open Quantities box on the Commit Orders or Commit Order Schedule page. Then the pages show all sales orders, work orders, and transfer orders that include committed quantities not yet picked, packed, or shipped. Note: Orders that are firmed do not show in the list. This list is sorted by transaction date by default. Click a column header to change the sort order.
If you select a line for processing that has a Commit Criteria setting of Do Not Commit, after you save the form, the status is changed to Available Qty for the selected line.

After you submit the Commit Orders form, a Process Status page displays the status of each object being processed. As each is processed, ONE of the following will occur:

- If the Reallocate Open Quantities box was NOT checked: The item record is immediately updated to reflect the correct quantity committed, quantity available, and quantity backordered.
- If the Reallocate Open Quantities box was checked: NetSuite processes the selections and calculates which are the top priorities for fulfillment. Items are reallocated to the highest priorities.

**Firmed Orders**

When the Item Commitment Transaction Ordering preference is set to Order by Order Priority, lines on the following transactions display a Firmed box:

- work order
- sales order
- transfer order

When the Firmed box is checked, the line items are no longer eligible for reallocation to another order. The items must remain committed to the firmed order.

You can also use the Mass Update function to firm orders.

**Commit Order Scheduling**

To schedule the commitment of items to orders, you must first define search criteria to identify the types of orders to which items should be committed.

You can choose from the following methods to define your saved search:

- Define criteria within the form.
- Define criteria using a saved search.

After setting criteria to identify the orders to which you want to commit items, you can commit items for that group of orders on a predefined, scheduled basis. After you have set a schedule, items are committed at the scheduled time.

**Note:** This topic is applicable only if you have not enabled the Supply Allocation feature in your account. If you have enabled the Supply Allocation feature, read Supply Allocation for additional information.

To create a commit orders schedule:

1. Go to Transactions > Inventory > Schedule Commit Orders.
2. Click **New Commit Order Schedule**.

**Primary Information**

1. Enter a name and description for the commit order schedule.
2. If you do not want to make the commit order schedule active right away, check the **Inactive** box.

**Schedule**

1. In the **Recurrence Frequency** field, set how frequently you want this commit order schedule to run. Choose from the following:
Demand Planning

- Daily
- Weekly
- Monthly
- Quarterly
- Twice a Year
- Annually
- One Time

2. Under **Repeat Every**, if you have set the Recurrence Frequency field to Weekly, Monthly, or Annually, select how many weeks, months, or years the commit order schedule should run.

3. In the **Next Date** field, use the calendar icon to select the next date you want to run this commit order schedule.

4. In the **Next Time** field, select the next time at which you want to run this commit order schedule.

**Commit Order Options**

1. For NetSuite OneWorld accounts, select a **Subsidiary**.

2. To reallocate item quantities that are committed but not firmed or fulfilled yet, check the **Reallocate Open Quantities** box. For more information, see Reallocate Open Quantities.

3. Check the **Set Order Line to Firm** box to firm each order line in the saved search you defined. Quantities on lines that are firmed cannot be reallocated to other orders. When you set a line as firm, it will no longer be updated by changing supply scenarios:
   - Less On-Hand adjustments do not trigger a reduction in a committed line quantity when otherwise typically appropriate.
   - If a line is partially committed and firmed, the balance of the line quantity is never committed unless the partially committed line is marked as not firm.

**Search Criteria**

1. Clear the **Use Search Criteria** box in order to select an existing saved search.
   - Under Commit Order Options, select an existing saved search in the **Saved Search** list.
     - Access a Saved Search Definition page in any of the following ways and then select the record type on which to base the saved search:
       - Transactions > Management > Saved Searches > New
       - List > Search > Saved Searches > New
       - Reports > Saved Searches > All Saved Searches > New
     - To save a search as you are defining it, click **Create Saved Search** on the search page.
     - To save a search after you have run it and viewed its results, click **Save This Search** on the search results page.
     - For more information about defining a saved search, see the help topic Defining a Saved Search.

2. Check the **Use Search Criteria** box in order to define search criteria within the form.
   - Choose how to sort search results in these fields: **Sort By**, **Then By**, **Then By**. Check the **Descending** box next to each if you do not want the results in ascending order.
   - Under **Filter** in the **Type** list, select one or more appropriate filters to define criteria.
     - Read the help topic Formulas in Search for additional information.
   - Note that NetSuite creates a saved search using the criteria entered on the form.
4. Click Save.

## Time Fences

Materials planners can use planning and demand time fences to protect a materials plan. By protecting existing orders from being changed, time fences can prevent disruptions and refine demand requirements in short range materials planning.

You can set up Demand Time Fences as well as Planning Time Fences.

- **Demand Time Fences** – Planners can establish demand time fences to use more accurate data for planning purposes. Demand time fences use actual sales order for short range planning and use forecasts for long term planning.

- **Planning Time Fence** – Planners can establish planning time fences to provide better suggestions of future supply. First, establish a planning time fence, such as the lead time for procuring the materials. Then, after a planning time fence is established, NetSuite creates supply orders only outside the established time fence.

**Note:** The Demand Planning feature must be enabled to use Time Fences.

### Demand Time Fences

Instead of using forecasts for long term planning, demand time fences refine short range planning by using actual sales orders instead of forecast sales. Examining actual sales can provide more accurate data for short-term planning purposes.

For example, to plan for your supply of an item needed right away, your plan can be more accurate if you calculate demand based on the orders that are actually already entered. Existing orders show real-time demand instead of a forecast estimation. To plan the supply needed based on actual orders for an item instead of forecast estimations, set up a time fence for that item. Then, when orders are entered within the time fence, NetSuite knows to make demand calculations based on actual orders.

When NetSuite runs the supply planning engine, the calculation of demand respects demand time fences for items. The demand time fence is time frame of days relative days from the start date of the engine. Based on the item record and preferences set, NetSuite determines if a demand time fence applies.

Then, NetSuite establishes demand for planning based on the following criteria:

1. **Within the time fence**, NetSuite always uses actual orders.
   - Days within the time fence are calculated as being equal to or less than (start date + demand time fence).

2. **Outside the time fence**, NetSuite uses the setting from the demand source.
   - Days outside the time fence are calculated as being greater than (start date + demand time fence).

   For time fences, the start date is determined as follows:
   - Expected ship date (for sales orders and transfer orders)
   - Production end date (for work orders)

You may find it useful to use item lead times as a guide when setting up time fences to make supply planning as accurate as possible.

To learn more, see [Time Fences on Item Records](#).

For details about using forecasts and the Demand Source setting for long term planning, see [Demand Planning on Item Records](#).
Planning Time Fence

Planning time fences enable NetSuite to make better suggestions for planning future item supply. You can establish a planning time fence, such as the lead time of procuring materials. After a planning time fence is established, NetSuite creates only the supply orders outside the time fence. When the supply planning engine is run, the creation of supply orders respects the planning time fence. This means that late orders are no longer immediately created for recommendation. They will be created outside the supply order.

First, NetSuite checks the item record for a planning time fence.

1. Within the time fence, NetSuite will not create a purchase order or work order. Days within the time fence are calculated as being equal to or less than (start date + planning time fence).
2. Outside the time fence, NetSuite processes the order normally. Days outside the time fence are calculated as being greater than (start date + planning time fence).

For time fences, the start date is determined as follows:
- Expected ship date (for sales orders and transfer orders)
- Production end date (for work orders)

**Note:** If the item record does not identify a planning time fence, NetSuite uses the default planning time fence value identified in the inventory preference setting.

For details on this preference, read Time Fence Preferences below. If the Planning Time Fence field is left blank on both the item record and the Inventory Management Preferences page, then no planning time fence is used.

**Planning Fence Example:**

The planning time fence for item #ABC is 5 days, equal to the lead time of the item. A new sales order for item #ABC is created today. This is considered new demand for the item. Although the demand shows today, NetSuite respects the planning time fence and does not create an order today. NetSuite will fulfill the demand with a planned order that has an expected receipt date on day 5.

For details about setting a planning time fence, read Time Fences on Item Records below.

**Time Fence Preferences**

After you have verified that the Demand Planning feature is enabled in your account, you need to set preferences for Time Fences. These preferences provide the system default for item planning.

**To set up preferences for time fences:**

1. Go to Setup > Accounting > Inventory Management Preferences.
2. Enter information for each field described below as necessary.
3. Click Save.

- **Default Demand Time Fence** – Enter a number of days between zero and 365. The number you enter is used as the default demand time fence and shows in the Demand Time Fence field on item records you create. You can change this default number if necessary when you create each item record. This field defaults to zero.

- **Default Planning Time Fence** – Enter a number of days between zero and 365. The number you enter is used as the default demand time fence and shows in the Planning Time Fence field on item
records you create. You can change this default number if necessary when you create each item record. This field defaults to zero.

**Note:** NetSuite recommends maximum values as follows: maximum for Planning Time Fence = 363, maximum for Demand Time Fence = 364. This is because the Generate Item Supply Plan start and end dates can handle a maximum of 364 days. When Demand Time Fence is set to 364, last day is computed as 365 (start date + planning time fence + 1) which exceeds the 364 days limit. The first day that NetSuite can generate an order falls outside of the window of the supply plan start and end dates, and therefore no order is generated.

### Time Fences on Item Records

After your preferences are set, you can use these time fence fields on item records.

- **Demand Time Fence** – This field defaults to the number entered in the Default Demand Time Fence field. Verify the default or enter a number between zero and 365 to determine the demand time fence for this item.

- **Planning Time Fence** – This field defaults to the number entered in the Default Planning Time Fence field. Verify the default or enter a number between zero and 365 to determine the planning time fence for this item.

If the Multi-Location Inventory feature is enabled in your account, these fields show on the locations subtab. Otherwise, these fields show in the header of item records.

### Planning Action Messages

When you use the Demand Planning feature, planners can utilize planning action messages that provide recommendations to take action during each supply plan run to optimize productivity. A Planning Messages subtab on the item supply plan displays a message for each line. Some messages are also incorporated as part of saved search for generating reminders and alerts in a dashboard.
For example, you can see below a message informs us that on 12/3 the quantity on hand is above the safety stock.

The planning messages that can be generated are described below.

**Planning Action Messages: Inventory On Hand**

The following messages reference only the day listed and is a projected quantity:

- Quantity On Hand is Below Zero
- Quantity On Hand is Below Safety Stock
- Quantity On Hand is Above Safety Stock

**On Hand Message Codes**

- Quantity On Hand is Below Zero
  - Message Code = 100
  - This occurs when there is new demand within the time fence and the On Hand Quantity is less than zero.

- Quantity On Hand is Below Safety Stock
  - Message Code = 110
  - This message occurs when the end of day On Hand Quantity is below the safety stock level and more than zero.

- Quantity On Hand is Above Safety Stock
  - Message Code = 120
  - This message occurs when the On Hand Quantity with the recommendation is above the safety stock level.

**Planning Action Messages: Late Purchase and Work Orders**

- Late Purchase Order
  - Message Code = 130
  - This message occurs when purchase orders have not been fully received before the start date.

- Late Work Order
  - Message Code = 140
  - This message occurs when work orders have not been fully built before the start date.

**Planning Action Messages: Reschedule In, Reschedule Out / Cancel**

NetSuite provides recommendations to adjust the order date of work orders and purchase orders based on demand changes. These adjustments will change the date of the order to be earlier or later than originally entered, depending on increased or decreased demand requirements.

For example, if a supply order is generated for an item, but there is no demand for the additional supply, NetSuite can recommend to change the order date to a later date, or Reschedule Out. This can prevent unnecessary expenditures on stock before it is actually needed.

Similarly, if demand for an item has surpassed the supply orders generated, NetSuite can recommend to change the order date to an earlier date, or Reschedule In. This can help you manage stock levels to fulfill orders in a timely manner.

These messages are available as part of saved search for use with reminders and dashboards.
**Note:** Changes recommended by NetSuite in action messages must be entered manually.

Reschedule Out / Cancel

If there is an unapproved purchase order or work order that is scheduled to be received on a day that lacks demand for the item, NetSuite can recommend the following:

- Reschedule the items ordered on that line to a later date to meet anticipated future demand.
- Cancel the items ordered on that line when there is no anticipated demand in the future.

**Note:** Reschedule Out messages are available only for unapproved purchase orders and work orders that are outside the planning time fence. For details about time fences, read Time Fences.

To use Reschedule Out messages, specify the number of allowed Reschedule Out Days on individual item records.

**To setup reschedule out messages:**

1. Go to Lists > Accounting > Items.
2. Click Edit next to an item to open the item record in Edit mode.
3. In the Reschedule Out Days field, enter a number between one and 180 that is the maximum number of days that the order can be delayed from the current day.
   
   For example, if you enter 10 in this field, an order for this item can be moved to ten days later, but not eleven or more days.
   
   This field defaults to be blank.

   **Note:** If this field is left blank, NetSuite does not make recommendations to reschedule orders for this item to a later date.

4. Click Save.

Reschedule Out Code

The following message code can appear for rescheduled or cancelled transactions:

<table>
<thead>
<tr>
<th>Code</th>
<th>220</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message</td>
<td>Cancel or Reschedule Out</td>
</tr>
<tr>
<td>Date</td>
<td>Transaction Date</td>
</tr>
<tr>
<td>Reschedule Date</td>
<td>Proposed Rescheduled-Out Date</td>
</tr>
<tr>
<td>Transaction</td>
<td>Order</td>
</tr>
<tr>
<td>Quantity</td>
<td>Order Quantity</td>
</tr>
</tbody>
</table>

Reschedule Out: Example 1

Reschedule Out Days = 5

![Demand Quantity](chart.png)

![Supply Quantity](chart.png)
The supply order scheduled for day 6 is not needed on that day, based on demand. NetSuite recommends delaying this order, moving it out from day 6 to day 8, when there is demand for the item.

**Reschedule Out: Example 2**

Reschedule Out Days = 7

The supply order scheduled for day 6 is not needed on that day based on demand. Additionally, no demand shows after day 6. NetSuite recommends to cancel the order line.

**Reschedule Out: Example 3**

Reschedule Out Days = 2

The supply order scheduled for day 6 is not needed on that day based on demand. Because the Reschedule Out Days is set to 2, NetSuite reschedules the order from day 6 to day 8.

**Reschedule In**

If for a specific day there is demand but no supply is scheduled to cover it, NetSuite can examine future unapproved supply orders and recommend rescheduling the order to an earlier date.

Reschedule In messages are available only for unapproved purchase orders and work orders that are outside the planning time fence. For details about time fences, read Time Fences.

**To setup reschedule in messages:**

1. Go to Lists > Accounting > Items.
2. Click Edit next to an item to open the item record in Edit mode.
3. In the Reschedule In Days field, enter a number between one and 90 that is the maximum number of days that the order can be advanced from the current day.
   
   For example, if you enter 10 in this field, an order for this item can be moved up ten days earlier, but not eleven or more days.

   This field defaults to be blank.

   **Note:** If this field is left blank, NetSuite does not make recommendations to reschedule orders for this item to a later date.

4. Click Save.

**Reschedule In Code**

The following message code can appear for rescheduled or cancelled transactions:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>220</td>
<td>Rescheduled or cancelled transaction</td>
</tr>
<tr>
<td>Message</td>
<td>Reschedule In</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Date</td>
<td>Transaction Date</td>
</tr>
<tr>
<td>Reschedule Date</td>
<td>Proposed Rescheduled-In Date</td>
</tr>
<tr>
<td>Transaction</td>
<td>Order</td>
</tr>
<tr>
<td>Quantity</td>
<td>Order Quantity</td>
</tr>
</tbody>
</table>

**Reschedule In: Example 1**

Reschedule In Days = 5

There is a demand for a quantity of 5 items on day 1. However, there is no order for additional supply to meet that demand until day 4. NetSuite recommends to move the supply to an earlier date, from day 4 to day 1.

**Reschedule In: Example 2**

Reschedule In Days = 2

Day 1 shows demand for 5 items, but no planned supply for that day. NetSuite checks for existing supply orders from day 1 to day 3 to try to find an order it can move up to an earlier date. Finding no supply orders through day 3, NetSuite recommends the creation of a new supply order on day 1 for the five items.

**Distribution Resource Planning**

Supply chain planners can use the Distribution Resource Planning feature to plan and optimize inventory across locations and, for OneWorld accounts, subsidiaries. Items can be transferred between locations to meet supply needs within a preset distribution network.

When Distribution Resource Planning is enabled, in addition to increasing supply by either purchasing or building an item, you also have the option to increase inventory by transferring items from another location within your distribution network. Using NetSuite, distribution planning is implemented based on a distribution network made up of subsidiaries that trade with each other.

For example, Wolfe International includes the following subsidiaries:

- North America
- South America
- EMEA
- APAC

Each subsidiary manages multiple distribution categories:
For each distribution category, goods are distributed across locations within the network, per subsidiary.

**Soap Category**

- Factory 1
  - Warehouse 1
    - Retail Location 1
    - Retail Location 2
  - Warehouse 2
    - Retail Location 3
    - Retail Location 4

Retail Location 1 has a large supply of Deluxe Soap, but low demand for it. Retail Location 3 has a low supply of Deluxe Soap, but high demand for it. Because both locations are in the same subsidiary, Wolfe can use Distribution Resource Planning to transfer items from Location 1 to Location 3 to meet demand.

When you enable the Distribution Resource Planning feature, in addition to increasing supply by either purchasing or building an item, you also have the option to increase inventory by transferring items from another location within your distribution network. An item record shows a supply type called Transfer. When a supply type of Transfer is identified, NetSuite determines the source location of the transfer order based on the bill of distribution associated with the item.

**To use Distribution Resource Planning:**

1. Set up the feature:
   - Enable the **Distribution Resource Planning** feature.
     - To use the Distribution Resource Planning, enable Demand Planning and Multi-location Inventory.
   - Set preferences.
     - Read **Setting Up Distribution Resource Planning**.
2. Create distribution categories.
   - Read **Creating a Distribution Category**.
3. Create a distribution network.
   - Read **Creating a Distribution Network**.
4. Create bill of distribution.
   - Read **Creating a Bill of Distribution**.
5. Associate the distribution category and network to an item.
   - Read **Associating Distribution Categories**.

After the setup is complete, generate supply plans that incorporate Distribution Resource Planning settings into demand planning and order generation. To learn more, see **Generating Supply Plans Using DRP**.

**Setting Up Distribution Resource Planning**

Set up Distribution resource planning by enabling the feature and setting preferences.
To enable Distribution Resource Planning:

1. Go to Setup > Company > Enable Features.
2. On the Items & Inventory subtab, check the box next to Distribution Resource Planning.

**Note:** To use Distribution Demand Planning, you must first enable Demand Planning and Multi-location Inventory.

3. Click Save.

To set Distribution Resource Planning preferences:

1. Go to Setup > Accounting > Inventory Management Preferences
2. Click the Order Management subtab.
3. In the Transfer Orders section, make selections in these fields:
   - Default Transfer Order Status
   - Generate Transfer Orders in Supply Planning
   For details about setting these preferences, read Transfer Order Preferences.
4. Click Save.

Creating a Distribution Category

To use Distribution Resource Planning, you must set up distribution categories. A distribution category is a group of items that is commonly sold together. For example, you might create categories called Paper and Soap to use for the distribution of these items:

- Paper
  - Paper towels
  - Paper cups
- Soap
  - Hand soap
  - Dish soap

To set up distribution categories:

1. Click New.
2. Click Distribution Category.
3. Enter a name for the distribution category.
4. Click Save.

Creating a Distribution Network

After you have created distribution categories, you can set up a distribution network. A distribution network is made of categories that are grouped for trading.

**Note:** A network can have multiple subsidiaries.

First, identify which categories are included in each network. Then, NetSuite distribution planning can be implemented based on a subsidiary-wide distribution network and goods can be transferred between locations as needed.
For example, Wolfe International includes the following subsidiaries:

- North America
- EMEA
- APAC

Each subsidiary manages multiple distribution categories:

- North America: NA Soap, NA Paper, NA Drinks
- EMEA: EMEA Soap, EMEA Paper, EMEA Drinks
- APAC: APAC Soap, APAC Paper, APAC Drinks

To manage these categories, Wolfe can set up a network such as the following:

- Network = North America
  - Category = NA Soap
  - Category = NA Paper
  - Category = NA Drinks
- Network = APAC
  - Category = APAC Soap
  - Category = APAC Paper
  - Category = APAC Drinks

When each network identifies categories and subsidiaries in this way, NetSuite can identify sources within the network to process distribution planning.

To set up a distribution network:

1. Enter a name for the distribution network.
2. Optionally enter a memo. Later, you can search for the text you enter here.
3. For OneWorld accounts, select the appropriate subsidiaries to associate with this network.
4. If you do not want this network to show in lists, check the **Inactive** box.
5. In the **Distribution Category** field, select a category. For information on creating categories, read [Creating a Distribution Category](#).
6. Click **Add**.
7. Add additional categories as appropriate.
8. Click **Save**.

## Creating a Bill of Distribution

After you have set up categories and defined distribution networks, you need to create bill of distribution records. A bill of distribution defines the relationship between locations within a network and determines how each location sources materials.

For example, the network for Wolfe International includes the following:

- Factory 1
  - Warehouse 1 (East Coast)
  - Warehouse 2 (Midwest)
  - Warehouse 3 (West Coast)

Wolfe sets up bill of distribution records to determine the way the East Coast warehouse will source its goods. For example, supply may be sourced from warehouse to warehouse, or factory to warehouse. Bills of distribution can be created to define the required scenarios.
Creating a Bill of Distribution

For the example above, all three warehouses receive goods from Factory 1. Therefore, three bills of distribution need to be created; one for each warehouse that needs goods from the factory.

The bill of distribution defines the distribution network, category, subsidiary and location. This information defines where the goods will be received. Then, set up distribution sources that specify the source location and subsidiary, as well as lead time and safety time. This information defines where the goods will be supplied from.

The screenshot below shows a bill of distribution that defines whenever DRINKS are to be received into the US ONLY location of the Parent Company, those drinks will come from the Canadian Subsidiary source in the form of a transfer.

To create a bill of distribution:

1. Select a distribution network. The source location and the receiving location must both be members of the network you select.
2. Select a distribution category.
3. Select the receiving subsidiary.
4. Select the receiving location.
5. Check the Inactive box if you do not want this bill of distribution to show in lists.
6. Select the source subsidiary.
7. Select the source location.
   
   Each source location has an effective date defined.
8. Enter the appropriate lead time. This is the amount of time required to transfer the item from the source to the destination location.
9. Enter the appropriate safety time. This amount is the buffer time required for a transfer in addition to the lead time. For example, this buffer can account for transportation variations.
10. Click Save.

Associating Distribution Categories

On the item record, an item can be associated to a distribution network and distribution category within a network. This defines the ways in which this item can be distributed within the network. For example:
Wolfe International can associate item records for different kinds of drinks to be part of the North America Network: Drinks category.

**To associate distribution categories:**

1. Open an item record in Edit mode.
2. In the Distribution Network field, choose the appropriate network. The network you select determines the categories available for you to choose. If the distribution network field is blank, then distribution category must also be blank.
3. In the Distribution Category field, choose the appropriate category.

**Note:** The network and category you select must be associated with the subsidiary selected for the item in the Classifications section of the item record.

To learn more see Creating a Distribution Network and Creating a Distribution Category.

4. Complete additional fields as necessary.
5. Click **Save**.

After a distribution category is defined on the item record, NetSuite can incorporate network transfers into demand planning for the item. In addition to increasing stock using purchases and assembly builds, network transfers can move an item where it is needed. When a supply type of Transfer is used, NetSuite determines the source location of the transfer order based on the bill of distribution associated with the item.

## Generating Supply Plans Using DRP

After you have completed the setup for Distribution Resource Planning (DRP), you can generate supply plans that incorporate Distribution Resource Planning settings into demand planning and order generation. This is done by using the Plan Through Distribution Network setting on the Generate Item Supply Plan page. When you enable this setting, NetSuite examines the Bill of Distribution for appropriate items to determine sourcing for orders. For details, read Generating Item Supply Plans.

When generating supply plans the Plan Through Distribution Network setting, NetSuite considers availability and lead times for all required assemblies and components across the network. In the example below, the ultimate goal of filling an order at a retail store requires considering purchasing components from a vendor, warehousing and factory processing, as well as transit times.
When generating supply plans, NetSuite checks the Bill of Distribution to determine the source location for the transfer if the following is true on the item record:

- The replenishment method is set to Time Phased.
- A distribution network and category are selected.
- The location has a Supply Type of Transfer

When these criteria are met, NetSuite generates transfer orders as indicated by the Bill of Distribution.
In the example above, demand is met working backwards using the following steps:

- A forecast of finished goods is established at a Retail Store. The finished good is received at the Retail Store.
- A transfer order of finished goods is created from Warehouse One to the Retail Store. Warehouse One transfers the finished good to the Retail Store.
- A transfer order of finished goods is created from the Factory to Warehouse One. The Factory transfers the finished good to Warehouse One.
- A work order of finished goods is created in the Factory. The Factory manufactures the finished good.
Dependent demand of a component generates a transfer order from Warehouse Two to the Factory. Warehouse Two transfers the component item to the Factory.

A purchase order is created for the component to the Vendor. The Vendor ships the component item to Warehouse Two.

If at any stage in the process a component is selected, NetSuite re-evaluates the demand supply across the entire network and modifies orders accordingly. When the netting calculation requires new supply and the new supply is a transfer, NetSuite does the following:

1. If the required transfer is within one subsidiary, NetSuite creates an unapproved transfer order.
2. If the required transfer is across multiple subsidiaries, NetSuite creates an unapproved intercompany transfer order.

Transfer order creation using Distribution Resource Planning respects applicable demand time fences and planning time fences. To learn more, see Time Fences.

If supply plan generation cannot be completed quickly, the job calculations are queued and the results will display on a status page.

After NetSuite generates supply plans, you can view individual plans that detail transfer orders that have been generated for items. The transfer orders identify the source location for the transfer, quantity to be transferred and expected receipt date.

After supply plans are verified you can place the actual orders.

**Important:** To actually create the orders, you must use the order items page or mass create work order page. Read Creating Orders from Supply Plans.

### Supply Planning

NetSuite Supply Planning 2020.2 helps Supply Planners determine how to best establish criteria to fulfill Demand Plan requirements. Supply planning takes sales order details to generate dependent demand for work order components. The objective is to balance supply and demand to achieve your organization's financial and service objectives.

Supply plans generate a recommended schedule for purchasing or manufacturing items for supply. A supply plan lists the recommended purchase orders and work orders to increase item supply based on lead times and expected demand. Planners can make multiple supply plans which can vary depending on the planner's criteria, such as planning horizon, planning scope, and planning rules.

Supply Planners can use NetSuite to establish the following criteria for your supply plan:

- **Planning Horizon** - The number of days into the future the plan will cover. For example, if the plan start date is June 1 and the horizon is 30 days, the end date will be June 30.

- **Planning Scope** - The items and locations that are being considered in the plan and the associated demand source(s) for each location.

- **Planning Rules** - Determine how transfer rules will work for specific items and locations. These rules essentially, define your supply chain.

### Supply Planning Overview

Supply Planning is built on a number of processes and steps that enable supply planners to balance supply and demand to achieve an organization's financial and service objectives. The following diagram represents the NetSuite Supply Planning process:
Supply Planning Overview

Transactional System

The NetSuite Supply Planning process starts when one, or a combination, of the following transactions is created or initiated:

- **Transactions** – a Purchase Order, Transfer Order, or Work Order.
- **Item Demand Plan** – records the expected future demand for an item based on previous or projected demand.
- **Allocation** – matches inventory supply sources to demand sources.
- **Bill of Materials** – lists the quantities of raw materials, assemblies, sub-components, and parts needed to manufacture a product.
- **Item Attribute**

Planning Data Repository

The Planner refreshes the planning repository to send the transactional information to The Planning Repository. It is then copied into a new set of tables to provide data consistency and improve supply.
planning performance. Planners use this data in conjunction with the Supply Plan Definition to run the Supply Plan.

**Supply Plan Definition**

Planners use **Supply Planning Definition** to establish supply planning criteria. The Plan Definition provides the information that drives the scheduling process, such as Planning Horizon and Planning Scope. For example: you can run supply planning at multiple facilities at the same time.

**Planning Engine**

After the Supply Plan is run, the Planning Engine generates planning messages, planned orders, engine supply, engine demand, and **Pegging** information. After the planning engine completes its build, the information is presented in **The Supply Planning Workbench**.

**Planning Workbench**

The Planning Engine data is presented in **The Workbench Interface**. From the workbench you can review action and exceptions messages, Firm, Release, create planned orders, and create new Supply Change Orders. These records are then fed back into the Supply Plan for the planner to update and run supply plans.

**Implement Planned Orders**

After the planner has firmed, released, and create changed orders, they can **Implement and Approve Orders**. You implement planned orders from the existing transaction creation page, order items, mass create work orders, or replenish inventory by transfer orders to create the transactions.

**Approve Change Orders**

Finally, the planner then goes to the New Supply Change Orders record to **Implement and Approve Orders** which may change the dates on the transaction, reschedule in, reschedule out, or cancel the transaction.

**Setting up Supply Planning**

To set up NetSuite Supply planning, you need to install or enable supply planning, the supply planning workbench, and then setup an item for supply planning.

**To set up supply planning:**

1. Go to Setup > Company > Enable Features.
2. In the **Company** subtab, check the **Locations** box.
3. In the **Items & Inventory** subtab, check the following boxes:
   - **Multi-Location Inventory** – stock levels of assembly items needed for the supply plan.
   - **Assembly Items** - if you are planning for manufactured items.
   - **Advanced Bills of Materials** - where components assembly items are stored and ensure that the assembly components are available.
   - **Work Orders** - the order that builds the assembly item must be included in the supply plan.
Supply Planning

- **Advanced Inventory Management** – so that reorder point and safety stock levels are included in the supply planning run.
- **Material Requirements Planning** – activate the Supply planning feature.
- **Demand Planning** – if you are using demand plans (forecasts) with supply planning.

4. Click **Save**.
5. Go to Setup > Accounting > Accounting Preferences.
   a. In the **Order Management** subtab, check the **Allow Purchase of Assembly Items** box.
   b. In the **Approval Routing** subtab, check the **Purchase Orders** box.
6. Click **Save**.
7. Go to Setup > Accounting > Inventory Management Preferences.
8. Check the **Use lead Time and Safety Stock per Location** box.
9. Click **Save**.

**To setup an item for a supply plan:**

1. Go to Lists > Accounting > Items.
2. In the **Items** window, beside the item record you want to add, click **Edit**.
3. Click the **Purchasing/Inventory** subtab.
4. In the **Inventory Management** section, **Replenishment Method** list, select **Material Requirements Planning**.
   The new supply planning engine will use this replenishment method.
5. Click **Save**.

**Enabling Supply Planning**

Enabling the Supply Planning feature in NetSuite ensures that the inventory management preferences are included during supply planning runs.

**To set a supply planning method:**

1. Go to Lists > Accounting > Items.
2. On the **Items** window, beside the item in which you want to enable Supply Planning, click **View**.
3. In the **Purchase/Inventory** subtab, click the **Locations** tab.
4. In the **Action** column, click **Edit**.
5. In the **Item Location Configuration** window, click the **Planning** subtab.
6. Complete the **Planning** subtab:
   The **Demand Source** is captured on the supply plan definition.
   a. Select a **Supply Type** to show how stock is procured. For example, Purchase or Assembly.
   b. If you selected **Fixed Lot Size** as the lot sizing method, enter a quantity in the **Fixed Lot Size** field.
      This represents the quantity that item procurement is based on.
   c. Select a **Supply Lot Sizing Method**:
      - **Lot For Lot** - orders are suggested for procurement based on daily projections.
      - **Fixed Lot Size** – orders are suggested for procurement based on a fixed amount or a multiple of the fixed amount.
- **Periods of Supply** - generates aggregated purchase orders or work orders based on the overall demand requirements extended over a designated period, such as weekly or monthly.

  To learn more, see Demand Planning on Item Records.

d. In the **Period of Supply Increment** field, enter a number from 1 to 90. The default setting is 1.

  The increment starts on the first day an order is required. From the first day, NetSuite totals all orders in the increment. Orders are placed on the first day of the period.

e. If you selected Periods of Supply as the lot sizing method, select a **Periods of Supply Type**:

  - **Interval** – Order aggregation starts when a requirement is established and continues for a fixed period defined in the Interval field. Interval is the default setting.
  - **Monthly** – Order aggregation starts at the beginning of each month. The requirement date is always the first day of each month.
  - **Weekly** – Order aggregation starts at the beginning of each week. The requirement date is always the first day of the week as defined under Company Settings.

  **Preferred Stock Level** is used for Reorder Point Planning.

  **Reorder Point** is used for Reorder Point Planning.

f. Enter your **Safety Stock Level**.

  The amount of an item you want to keep in stock. Safety stock can be a quantity or several days worth of stock.

g. Enter a purchase **Lead Time**.

  Lead time is the average number of days between ordering this item from the vendor and receiving it.

7. In the **Planning Times** subtab, complete the following fields:

   - **Late Period Days** – how far into the past the engine will investigate the past for late transactions.
   - **Backward Consumption Days** - Number of days after the order date to consider.
   - **Foreword Consumption Days** - Number of days prior to the order date to consider.
   - **Demand Time Fence** – defaults to the number entered in the Default Demand Time Fence field.

     Accept the default or enter a number between zero and 365 to determine the demand time fence for this item.

   - **Planning Time Fence** - defaults to the number entered in the Default Planning Time Fence field.

     Accept the default or enter a number between zero and 365 to determine the planning time fence for this item.

   - **Reschedule in Days** – enter a number between one and 90 to represent the maximum number of days that the order can be advanced from the current day.

     For example, if you enter 10 in this field, an order for this item can be moved up ten days earlier.

   - **Reschedule out Days** - enter a number between one and 180 to represent the maximum number of days that an order can be delayed from the current day.

     For example, if you enter 10 in this field, an order for this item can be moved to ten days later.

   - **Reschedule Horizon** - How far will the engine scan for reschedule opportunities.

8. Click **Save**.
Supply Planning Prerequisites

NetSuite Supply Planning enables you to create supply plans which details when to buy and manufacture items to fulfill demand. This information is displayed on the supply planning workbench. The supply plan accounts for multiple items across multiple locations by subsidiary.

NetSuite Supply Planning enables you to create multiple plans. Plan definition rules enable you to create output based on definition.

Before you can build a supply plan, complete the following prerequisites activities:

- Planning Item Categories
- Planning Items Group
- Planning Rules Group
- Supply Planning Definition
- The Planning Repository

Planning Item Categories

Planning item categories organize and display items in a hierarchy. Due to the volume of data involved in supply planning, this hierarchy helps you to more easily aggregate and inspect items.

To assign a planning category to an item:

1. Go to Transactions > Supply Planning > Planning Item Category > New.
2. Enter a Planning Item Category Name.
3. Enter a Planning Item Category Description.
4. In the Name list, select an item or item category to include in planning group.
5. Click Save.

The Planning Repository

The Planning Repository stores related planning information that enables you to control how often NetSuite updates the planning inputs. The repository refresh process brings the latest data from NetSuite for planning. The planning engine calculates projected available quantity, generates supply orders, and action and exception messages.

This extraction process offers the following advantages:

- Enables planners to control the timing of the input coming from the execution system.
- Optimizes the data repository that supply planning depends on.
- Integrates with other manufacturing and logistics execution solutions.
- A time consistent view of supply and demand for the engine during a supply planning run.
- A time consistent view of supply and demand for the planner while resolving issues and doing analysis.

This process runs in the background to update the planning data repository which stores data for the supply planning run on the supply plan. It selects all items containing the supply plan setup on the replenishment method field on the item record.

To transfer data from the repository:

1. Go to Transactions > Supply Planning > Planning Repository Transfer.
2. On the **Planning Repository Transfer** window, select one of the following options:
   - Select **Complete Refresh** to purge data from the repository and reload all item setup data and transactions for the supply plan.
   - Select **Net Change** to reload data that has changed since the last repository refresh to present the latest supply planning data. Select one of the following options:
     - Select **Item Setup** when you have changed planning times or lead times but do not want the transactions to change.
     - Select **Item Setup and Transactions** to bring in only transactions within the defined date range.

3. Select the **Supply Plan Definition** you want to launch after you have successfully refreshed the repository.

4. Click **Refresh Data**
   - Click Reset to clear the data you entered.

   The **The Planning Repository Event Log** displays the submissions and submission status.

5. Click **Refresh** to update status.

### The Planning Repository Event Log

The Planning Repository Initialization process searches for items tied to the plan to make sure there are item location configuration records. If no records are found, the system will create them.

The Planning Repository Event Log displays the status of the data repository process. After the data repository refresh process completes, the event log displays the initialization line and the refresh line. The Planning Repository Initialization line ensures that the planned items item location configuration is set. The Planning Repository Refresh line displays the data resulting from the refresh process.

#### To view the planning repository event log:

2. To filter the event log results, open the **Filters** and adjust the event log date.
3. Click **Refresh**.

### Supply Planning

NetSuite Supply Planning uses information from Manufacturing and the Logistics Data Repository to determine which component items are required to produce items defined in the schedule. The supply plan produces planned orders, planning suggestions, and supply planner exceptions.

Supply Planning enables planners to view the impact of changes made in the supply planning workbench without re-running the planning engine on all data. This is especially useful when only a subset of the data has changed.

#### The supply planning process:

1. Create a snapshot containing the planning input from the manufacturing and logistics data repository.
   - A snapshot records the inputs at the time of the planning run. Snapshots provide a persistent view of the information that is used for reporting, comparison, and more.
2. Use demand for items defined in the supply plan with the planning bills of materials (BOM) to determine the gross requirements for the components.
3. Use the on-hand inventory information, quantities on-order, and firm planned orders, and net gross component requirements.

4. Delete existing planned orders for the items and organizations within the plan definition.
   Firm planned orders are not deleted or rescheduled, they are considered part of the netting process.

5. Use the BOM hierarchy, lot-size information, and component lead-times to offset the start dates for ordering the components. Create planned orders for each component.

6. Use the item definition and planning rules to determine which planned order type to create purchase order, work order, or transfer order.

7. Quantities on order (purchase and/or work order) are considered during the process. Changes to these reschedule in, reschedule out, or cancellation are recommended to fulfill the current net requirements.

8. When supply planning evaluates independent demand (end-items and service parts), it reviews the rescheduled and canceled purchase and work orders suggested by the supply plan.

9. Use planning rules to determine item sourcing when creating planned orders.

10. Trace the pegging information for each planned order and then store the results.

11. The planner produces planning suggestions using the supply planning work bench.

12. Produce exceptions noted during the supply planning process.

**Note:** Some components can be the child of more than one assembly and could also be a service part.

Planning Items Group

Planners want to specify which items are in a plan at the item category or item level. A planning item group provides a reusable (across different plans) method for specifying a set of items to be planned together.

**To create a planning items group:**

2. Enter a planning items group **Name**.
3. Enter a **Description** of the planning item group.
4. In the **Planning Items** subtab, select an **Item Type**.
5. Select an **Item/Category**.
   - The related item Description is automatically displayed.
   - To clear your entries, click the Undo (.undo) icon.
6. Click **Save**.

- **Supply Planning Overview**
- **Planning Rules Group**
- **Supply Planning Definition**

Planning Rules Group

Planning Rules Groups enable planners to create rules that govern the supply planning process in order to define how items and item categories are replenished. In NetSuite 2020.2, you can only apply these
rules to transfer orders. For example, you can define where to source supply for an item when it is required at a specified location.

**To create a planning rules group:**

2. Enter a planning rules group **Name**.
3. Enter a planning rules group **Description**.
4. In the **Planning Rule** subtab, select an **Item Type**.
5. Select an **Item/Category**.
   If available, the related item **Description** is automatically displayed.
6. Select a **Location**.
   The default **Action** is **Transfer** (Transfer Order).
7. Select a **Source Location**.
   This is the location you are transferring items from.
8. Enter **Lead Time in Days**.
   Lead-time represents the in-transit lead-time, or how long it takes to ship the item from its source location.
   To clear your entries, click the **Undo** icon.
9. Click **Save**.

- Supply Planning Overview
- Planning Items Group
- Supply Planning Definition

**Supply Planning Definition**

Supply Plan Definition enables planners to establish the criteria to be used for supply planning. The plan definition provides the information that drives the supply planning process, such as planning horizon and planning scope. For example: you can run supply planning at multiple facilities at one time. A supply plan definition provides a permanent holding place for your planning criteria and planning results.

A supply planning definition enables you to do the following:

- Define and save supply planning criteria, such as planning horizon, items, locations, and planning rules.
- Refer to multiple plans for comparison.
- Reference to plan output for integration.
- Copy a plan and modify its criteria to use in “what-if” analysis.

A supply plan offers the following benefits:

- Enables planner to create multiple plans:
  - By product line
  - For “what-if” analysis
- Provides control over items, locations, and associated demand sources for the plan.
- Enables planners to launch a supply plan for processing.
To set up a supply plan definition:

1. Go to Transactions > Supply Planning > Planning Item Categories > Search.
2. In the Search window click Submit.
   A list of item categories is displayed. You can add to this list or edit items.
   After item category is defined here, they are assigned at the item level.
3. Create a Planning Items Group.
5. In the Search window click Submit.
   The Planning Rule Groups are displayed.
   For example, If you need item G in the New York distribution center, to replenish it, transfer it from
   the Pittsburgh center. You can define the lead time, in this example 1 day.

To create a supply plan definition:

2. Enter a supply plan definition Name.
   Defines how transfer orders work for the plan.
4. Enter a Horizon (in Days).
   How far into the future are you want to plan. For example, 180 days.
   The start date and end date are calculated based on the current date and the horizon days when
   the planning engine is run.
5. Select a Planning Items Group.
   A planning item group is a reusable method for specifying a set of items to be planned together.
   You can use a group across different plans.
6. Enter a Description of the supply plan definition.
7. Click the Source subtab.
8. Select a Location.
   The source locations and the demand source type are displayed.
9. Select a Demand Source Type for the selected location.
   For example, demand plans or sales orders.
10. Optionally, check the Consume Forecast box.
    Forecast consumption replaces forecasted demand with actual sales order demand. Each time you
    create a sales order line, you create actual demand. If the actual demand is already forecasted, the
    forecast demand must be decremented by the sales order quantity to avoid counting the same
    demand twice.
    To clear your entries, click the Undo icon.
11. Click Save.
    After you have setup a new supply plan definition record, added rules, defined scope, identified the
    items to plan for, you can click Launch to launch the record.

The Supply Planning Event Log displays the latest supply planning results.

After the initialization process runs and you have identified your batches, the supply planning process is
initiated.
Supply Planning Event Log

After launching the supply plan definition, the Supply Planning Event Log is displayed. The event log displays any errors encountered during the planning engine run. The log also contains a link to the Planning Workbench.

The supply planning event log displays the following columns:

- **Submission ID** – the identification number for event.
- **Plan Definition** – the name of the plan definition is a link to the plan definition.
- **Process Type** – for example, Materials Requirement Planning.
- **Submission Status** - indicates whether the supply plan was completely submitted for processing.
  
  Click the link (status or plan generation) to open the processed items window to view the items included in the supply plan.
- **Percent Complete** - displays the percentage that the planning engine run has completed processing the supply plan.
- **Message** - indicates the number of errors encountered during processing. Click the link to open the message.
- **Date Created** – the date the supply plan was launched.
- **Horizon in Days** – the number of days in the supply plan horizon.
- **Created By** – the name of the planner who created this plan.
- **Repository Refresh Date** – the date the planning data repository was updated.
- **Planning Workbench** – click the View Results link to display the The Supply Planning Workbench.

The Supply Planning Workbench

Supply Planners monitor supply plans and adjust for anticipated inventory shortages. The NetSuite Supply Planning Workbench enables planners to view information about the items and their corresponding supply and demand orders in the supply plan and act on the results from the planning engine. The workbench guides planners on how they will execute their supply plans.

The workbench displays the following information:

- How demand and the corresponding supply orders align to their due dates.
- Inventory levels for all items used by your organization.
- The issues that could delay the demand order schedule.
  
  This enables planners to respond when important supply orders are in danger of not meeting demand orders.
- Presents the planner with possible actions from processing planned orders to processing supply orders.

The Supply Planning Workbench offers the following benefits:

- Enables you to review, modify, create, and release planned orders.
- You can release reschedule in/out and cancel supply order suggestions.
- Flexible search and browse capability for reviewing planning results.
- Create summary pages by item and location, or across all items and locations. This enables you to drill-down into the numbers and through hierarchical pegging.
The Workbench Interface

This section describes how the supply planning workbench is organized and functionality available in the workbench interface:

Top Panel

- **Supply Plan Definition** – displays the supply plan name that links to the supply plan definition page.
- **Planning Horizon** – the date range for the supply plan.
  - **Start Date** – the date the supply plan was initiated (clicking Launch in the supply plan definition). Planning horizon is set to start date by default.
  - **End Date** – calculated by adding the number of days defined on the horizon field on the supply plan definition to the start date.
- **Repository Refreshed** – the date the repository was updated.
- **Results Generated** – the date the supply plan was Launched to generate the results.
- **Date Range** – The planner can change the end date to filter the information displayed on the workbench.
  
  You cannot edit the start date or select an end date beyond the default end date (the end of the planning horizon).
- **Supply Plan Definition List** – click the link to open the supply plan definition list.
- **Event Log** – click the link to open the supply planning event log.

Item Filters

Select item filters to display a more refined set of planning results. You can select one or a combination of available criteria to filter the Results Summary to display the data you want to view.

- **Planning Item Category** – select an item to display user-defined categories in the results summary.
  
  For example, created planning item categories represent component, premium, product, standard product, or subassembly items.

- **All Locations** – All locations are displayed by default and grouped by subsidiary. All locations represent an aggregate view of all items across all locations. NetSuite enables you to change the detail view by selecting an item filter.
  
  For example, select the Detroit Manufacturing subsidiary to display all items for only that location.
  
  To view how the supply affects a subsidiary, click the subsidiary to display the filtered results.
  
  You can further refine the workbench results location.

Message/Order Filters

You can filter workbench results by selecting one, or a combination of, the Action, Exception, Supply, or Demand Type filters. The corresponding results summary section message and order columns are updated. The results summary section and the corresponding message/order columns are updated. All message/action filters can be accessed from the results summary.

NetSuite Supply Planning 2020.2 enables you to filter the Supply Planning Workbench by the following message and order filters:

- **Action Type** – In the Action Type filter, you can select from the following pre-defined messages:
  
  - Cancel
- Lead Time Threshold
- Reschedule In
- Reschedule Out
- Time Fence Threshold

To learn more, see the Action Tab.

Exception Type – In the Exception Type list, you can select from the following pre-defined messages:
- Insufficient Lead Time
- Item has no Activity
- Negative Starting Balance
- Negative Time Fence Balance
- Past Due Demand
- Past Due Supply

To learn more, see Exception Tab.

Supply Type – In the Supply Type list, you can select from the following pre-defined messages:
- Inbound Shipment
- On-hand Quantity
- Planned Transfer Order
- Planned Work Order

To learn more, see Supply Tab.

Demand Type – In the Demand Type list, you can select from the following pre-defined messages:
- Actual Demand
- Forecast Demand
- Planned Transfer Order
- Planned Work Order
- Safety Stock
- Supply Change Order
- Transfer Order
- Work Order

To learn more, see Demand Tab.

After you select a pre-defined message, it is displayed as a tag in its corresponding filter type field.

The Supply Workbench enables you to select multiple messages. After you select multiple messages, and then click the message list, the selected messages are highlighted.

To show only the selected filters, check the View Selected box.

Action Tab

The Action tab displays system recommendations for the supply plan. When displayed in the results grid, the Action subtab displays the following columns:

- Message/Order Counts – Each column displays the total number of messages for all items and the messages by item.
The message order numbers are hyperlinks. Click a number to open the corresponding tab. These columns indicate how well the supply plan was executed and the volume of the supply plan.

To release all orders the engine created for the entire plan, hover over the Release Selected Orders list and then click Release All Orders.

- **Action** describes the action recommended by the supply planning engine. For example, “consider releasing proposed planned order before 06/07/2020 as it is nearing its lead-time threshold.”
- **Change Order** displays the recommended action status.
- The transaction **Date**.
- The **Item Name**.
- The **Location** the recommended action applies to.
- The **Quantity** of items effected.
- **Units** – this column is displayed if units of measure are enabled. Units of measure describes how the item is measured.
- **All Items** - displays all the items for the selected filter. Displaying all items (aggregate view) enables you to review all their data in one location.

You can then execute a recommended action from the workbench. You can check the box beside an item to release it. Check the box at the top of the column to release all items by page.

Click **Return to Summary** to open the Results Summary.

**To process recommended actions:**

1. Check the box beside the recommended action you want to process.
2. Click **Perform Selected Action**.
3. Click **OK**.
4. In the **Status** box, click the link to open Planning Workbench Event Log.
5. Click **Refresh**.
   The completed and un-editable change order is displayed.
   You can click the Change Order link to display the change order.

**To process all recommended actions for all pages:**

1. Hover you mouse over the **Perform Selected Actions** button.
2. Click the **Perform All Actions** option.
3. Click **OK**.
   A confirmation message appears stating that records have been submitted for processing.
   Message contains a link to the status page.
4. To review the status of processed and submitted actions, click the **Status** page link to open the planning workbench event log page.
5. To view successfully processed actions, beside **Perform Selected Actions**, click **Refresh**.

**Exception Tab**

All challenges to the supply plan are listed on the Exceptions tab. This tab is for informational purposes only. These are called exceptions because the supply plan run estimates that no action to these orders will support demand.

The Exceptions tab displays the following columns:
Supply Planning

- **Exception** – displays the exception message text.
  
  For example, "Insufficient lead time for proposed Planned Order scheduled for 06/07/2020 by 1 day(s)."

- **Date** – the due date of exception alert record.

- **Item** – the item ID or item name effected by the exception message.

- **Location** – the location where the affected item is stored.

- **Quantity** – the number of items affected.

- **Units** – this column is displayed if units of measure are enabled. Units of measure describes how the item is measured.

Click **Return to Summary** to open the Results Summary.

Supply Tab

The Supply tab displays all the supply order information including on the supply plan. NetSuite defines supply orders as purchase orders, work orders, and transfer orders. The supply tab enables you to create and release different planned orders.

The results summary displays newly generated planned orders, unfirmed and unreleased, and any firmed or released orders that were brought back into the plan from previous supply planning engine runs.

The supply tab displays the following columns and features:

- **Message/Order Counts** – Each column displays the total number of messages for all items and the messages by item.
  
  The message order numbers are hyperlinks. Click a number to open the corresponding tab.
  
  These columns indicate how well the supply plan was executed and the volume of the supply plan.
  
  To release all orders the engine created for the entire plan, hover over the Release Selected Orders list and then click Release All Orders.

- **All Items** - displays all the items for the selected filter. Displaying all items (aggregate view) enables you to review all their data in one location.
  
  You can then execute a recommended action from the workbench. You can check the box beside an item to release it. Check the box at the top of the column to release all items by page.

- **Release** – check the box beside the planned order you want to release to NetSuite. The planned order is than consolidated and turned into a supply order. Released orders are visible to all supply plan definitions.

- **Supply** – displays planned purchase orders, work orders, or planned transfer orders.

- **Pegging icon** – Click the pegging icon (adget) to display how supply and demand orders are connected from a supply perspective. To learn more, see Pegging.

- **Start and End Dates** – the expected receipt dates for purchase and transfer orders while manufacturing time for the work order.

- **Firm** – check this box to firm an order. Firmed orders remain in the supply plan and are not erased when the supply planning engine is run. Non-firmed orders are deleted.

- **The Item** name or identification number.

- **The item Location** ID.

- **The item Source location** (transfer orders) ID.

- **The Quantity** of items.

- **Units** – this column is displayed if units of measure are enabled. Units of measure describes how the item is measured.
Click **Return to Summary** to open the *Results Summary*.

**To firm an order:**

1. To firm an order, beside the order, check the **Firm** box.
2. To review the order, click the order link.
   - The Planned Order window opens displaying a Firmed status.
   - You can also open the Planning Workbench Event Log to verify that the order has been firmed.
3. Click **Save**.

**To release a selected order:**

1. Beside the unreleased planned rows you want to release, check the box, or boxes.
2. Click **Release Selected Orders**.
   - Select Release all Planned Orders to release all planned orders in the results set (based on current criteria).
3. In the confirmation message, click **OK**.
   - A confirmation message appears stating that records have been submitted for processing. The message contains a link to the status page.
4. To review the status of processed and submitted/planned orders, click the **Status** page.
5. In the **Planning Workbench Event Log**, you can review the order status.
   - When you refresh the planned order record, the status is Released.

**To release all planned orders:**

1. Click the All items view.
2. In the **Supply Type** list, select one or all Planned Orders:
   - Planned Purchase Order.
   - Planned Transfer Order.
   - Work Order.
   - All Planned Orders are listed in the details pane.
3. Hover over **Release Selected Orders**.
4. Click the **Release All Orders**.
5. In the confirmation message, click **OK**.
   - A confirmation message appears stating that records have been submitted for processing. The message contains a link to the status page.
6. To review the status of processed and submitted/planned orders, click the **Status** page link to open the planning workbench event log page.
7. To display orders that were successfully processed, beside the **Create Planned Order** button, click **Refresh**.

**Integrating Action Messages**

After rescheduled or cancelled messages are released, the messages are generated by the supply planning engine. After the planner releases an action, the system requires a secondary level of approval. For example, if an existing PO is being rescheduled, the buyer will be given an opportunity to approve or reject the reschedule or cancel suggestion.
Releasing planned orders enables you to consolidate individual planned orders released at the item level into larger transfer orders across items or purchase orders to be shipped at the same time or added to the same PO.

After a planned order is released, the order can be consolidated specifically to the planned order type:

- Purchase Order consolidation occurs in the Order Item page.
- Transfer Order consolidation occurs in the Replenish Location by Transfer Order page.
- Work Order consolidation occurs in the Mass Create Work Order page.

**To integrate an action:**

1. In the **Supply Planning Workbench**, in the row for the item you want to integrate, click the **Supply** link.
2. In the **Supply Type** list, select **Planned Transfer Order**.
3. In the **Details** pane, check the box beside the transfer order you want to integrate.
4. Click **Release Selected Orders**.
5. Click **OK**.
   An information message box appears.
6. Go to **Transactions > Supply Planning > Replenish Location by Transfer Order**.
7. In the **Replenish Location by Transfer Order** window, in the **From Location** list, select the location you want to replenish from.
8. Click the **Planned Orders** subtab.
   The released transfer order is displayed.
   Multiple orders can be displayed here.
9. To release the orders, check the box beside the order to consolidate the order based on the locations (from and to) and date.
10. Click **Submit**.
    A Transaction successfully saved confirmation message appears.
    When the refresh process is run for supply planning, this new supply order will be included in the plan to reflect future supply.

**Creating a Planned Order**

Supply Change Orders are created automatically when you react to an Action message. Planned Orders are created by planning engine. You can also create a planned order from the supply planning workbench.

**To create planned orders**

1. In the Supply Planning Workbench, click the **Supply Type** tab.
2. Click **Create Planned Order**.
3. In your **Supply Plan Definition**, complete the **Create Planned Order** window:
   a. Select an **Item**.
   b. Select a **Location**.
   c. Select a **Source Location**.

   Source location represents the stocking location you are replenishing. This is where the purchase order and transfer order will be received, and where the work order will be stocked after completion.
d. Select a **Transaction Type**.

e. Select planned order **Start** and **End Dates**.

f. Enter the planned order **Quantity**.

g. To firm this order, check the **Firm** box.

   Firmed orders remain in the supply plan and are not erased when the supply planning engine is run.

h. To release this order, check the **Released** box.

i. Enter any instructions or information you want to accompany this order in the **Memo** field.

4. Click **Save**.

**To create a transfer order:**

1. Go to Transactions > Supply Planning > Replenish Location by Transfer Order.

2. In the **Replenish Location by Transfer Order** page, click the calendar icon to select a **Date**.

3. Select the **From Subsidiary** location.

4. Optionally, you can select a **To Subsidiary** location.

5. Select the **From Location**.

6. Optionally, to refine this replenishment, you can select a **To Location**, **Department**, or **Class**.

7. The planned order is displayed in the **Planned Orders** subtab.

8. To process the order, check the box beside the order and then click **Submit**.

   The **Processed Transfer Orders** window displays the location status as **Complete**.

9. In the **Number** column, click the created transfer order link.

   The new Planned Transfer Order is Implemented, and the transaction is created.

10. In the Planned Transfer Order, click the Transaction Created link to display the new Transfer Order.

    This transaction was created from the planned order.

**Demand Tab**

The Demand tab lists all demand sources included on the supply plan that are brought in from the repository. This tab is for informational purposes only.

The Demand tab displays the following columns:

- **Demand** – displays the demand source: actual, forecast, planned transfer, planned order, safety stock, supply change order, transfer order, and work order.

- **Pegging icon** – click the pegging icon (agation) to display how supply and demand orders are connected from a demand source. To learn more, see Pegging.

- **Due Date** – corresponds to the demand source due dates. When demand needs to be fulfilled.

- The **Item** name or identification number.

- The item **Location** ID.

- The **Quantity** of items.

- **Units** – this column is displayed if units of measure are enabled. Units of measure describes how the item is measured.

Click **Return to Summary** to open the **Results Summary**.
Results Summary

After the planning engine has run, the supply plan data for an item or set of items is displayed in the results summary section. The results summary is made up of the following sections and columns:

The pagination control at the top of the Results Summary enables you to control the number of rows you want to display per page. The Show box displays the number of rows. The box beside it displays the number of results pages. For example, the results summary could display 20 rows in 3 pages.

- **Item Details and Description** – the Item name and Item Description columns display the child item on the first level of its Bill of Materials (BOM).
  You can expand the parent (assembly) item to show its child (component) items. You will be able to see whether there is an issue at the component level.

- **Inventory Measures** – columns display the number items on-hand, on order, and how much late demand there is per item.

- **Units** – this column is displayed if units of measure are enabled. Units of measure describes how the item is measured.

- **Late Demand** is the projected late demand within a selected date range. This includes planning horizon when default dates are used. It represents projected negative balances in the plan for the date range.
  - **All items** – Displays all the counts for all items for the selected filter.
  - **Message/Order Counts** – Each column displays the total number of messages for all items and the messages by item.

Pegging

When the pegging icon (▼) appears beside an order, it indicates that there is a link between supply and demand for this plan.

Pegging links demand to incoming supply. You can create a peg chain between a supply transaction and a demand transaction from either side. Demand transactions can peg to supply transactions and supply transactions can peg to demand transactions. The supply planning engine populates pegging data. If Supply Allocation is enabled, the system first looks for allocations and populates pegging with that information.

Remaining supply is pegged to un-allocated demand chronologically. You cannot create the associations for pegging, only review them. Only actual allocations are reserved. The pegging generated chronologically by the engine is only provided for review/analysis.

If a firm allocation exists for a supply order, it cannot be rescheduled or canceled by the supply planning engine. A peg prevents the incoming supply from being reserved or allocated to another demand transaction.

Initially, only the top-level order is displayed.

Click the arrow icon beside a parent item to display the related child item next pegging levels. For example, if there is an issue with the balance, not enough supply, the supply order is late or the purchase order was not received on time, you can see how demand that is impacted by that issue.

Creating Change Orders

After you have firmed and released orders and run have the supply plan, you can create a change order. Change orders are produced when a recommended action is processed from the Action tab. Change orders need to be approved for the recommended supply plan changes to be implemented.
To create a change order:

2. In the Planning Workbench column, click the View Result.
3. In the Planning Workbench Results Summary section, locate the order you want to create. For example, Planned Transfer Order for Item A14 in the Ottawa Location.
4. In the order row, click the Supply column link.
5. Select a Supply Type. For example, Planned Transfer Order. The workbench displays the generated supply types.
6. To review the change order, click Return to Summary.

Implement and Approve Orders

After you create a change order, you can implement and approve it.

To implement and approve orders:

2. In the Planning Workbench Event Log, click the link beside the change order you want to implement.
3. In the Created Change Orders window, click the link in the Change Order column. For example, Work Change Order 514.
4. In the Work Change Order window, click Approve. The work change order status is Implemented.
5. To verify that the order has changed, click the New Date link. The Production End Date should match the New Date.

Supply Allocation

Supply Allocation matches inventory supply sources to demand sources. This feature enables you to meet demand requirements with the right product, amount, and location, by the required date. The Supply Allocation feature can expand inventory commitment calculations to consider future inventory on supply orders in addition to current, on-hand inventory.

When you enter demand orders (sales orders or transfer orders), the allocation process also considers planned inventory orders and the supply required by date. When Supply Allocation matches demand orders with future ship dates to supply orders with future receipt dates, on-hand inventory remains available to fill demand orders.

Supply Required By Date

To efficiently match supply with demand, you must know the required shipping date for the product. For these calculations, you identify a Supply Required By Date on demand order lines. Then, you can calculate allocation to determine which supply sources should be used to meet the demand on specific orders by the required date. This applies to demand created from customer orders, as well as demand from
Supply Allocation

Transfer orders and work orders. For more information, see Setting Supply Required By Dates on Order Lines.

Allocation Strategies

Use allocation strategy records to define rules for allocating inventory. When you allocate inventory for particular types of orders, NetSuite assigns allocation strategies to order lines.

For example, you can create an allocation strategy to allocate the total ordered quantity as soon as it all becomes available. Or, you can create a strategy to allocate any portion of the full ordered quantity as close to the Supply Required By Date as possible. For more information, see Creating Allocation Strategies.

Allocation Calculation

Supply Allocation calculations assess current and future inventory supply and determine the best ways to allocate supply to the demand on orders. NetSuite bases these calculations on the allocation strategies defined on order lines. The system can perform calculations automatically based on preference settings or predetermined schedules. For more information, see Supply Allocation Calculations.

Allocation Exceptions

Supply Allocation matches supply with demand based on allocation strategies. It identifies orders that will not have a supply source to meet the demand by their Supply Required By Date. When this occurs, NetSuite generates a Supply Allocation Exception to warn you that demand may not be met in time.

For more information, see Supply Allocation Exceptions.

Supply Allocation Setup

Use the following topics to set up Supply Allocation in your account:

- Enabling Supply Allocation
- Setting Demand Preferences for Supply Allocation
- Setting Supply Preferences for Supply Allocation
- Setting Up Location Records for Supply Allocation
- Setting Up Item Records for Supply Allocation
- Setting Up Inventory Status Records for Supply Allocation
- Enabling Inbound Shipment for Supply Allocation

Enabling Supply Allocation

Enable the Supply Allocation feature to expand inventory commitment to consider future inventory as well as current inventory.

To enable Supply Allocation:

1. Go to Setup > Company > Enable Features.
2. Click the Items & Inventory subtab.
3. Check the Supply Allocation box.
4. Verify that the Multi-Location Inventory box is checked.
5. To initiate the required data check, click Save.
6. On the Supply Allocation Migration page, click Submit.
7. If necessary, click Refresh to update the status of the data check.
8. After the data check is complete, the system informs you if the check was successful.
   - If the data check is unsuccessful, a message indicates that you need to contact NetSuite Customer Support.
   - If the data check is successful, return to Setup > Company > Enable Features. Check the Supply Allocation box on the Items & Inventory subtab and then click Save.

Setting Demand Preferences for Supply Allocation

Define how Supply Allocation sorts demand orders when allocating inventory.

To set demand preferences for supply allocation:

1. Go to Setup > Order Management > Supply Allocation.
2. In the Demand Transaction Sorting Options section, select the first, second, and third columns by which to sort demand orders:
   - From the Sort By list, select the first column field by which to sort demand transactions.
   - From the Then By list, select the secondary column field by which to sort demand transactions.
   - If required, from the next Then By list, select a third column field by which to sort demand transactions.
   For example, if you want to sort picking tickets by Transaction Date first, then by Expected Date, you can select the following:
   - From the Sort By list, select Transaction Date.
   - From the Then By list, select Expected Date.
3. To change the sort order, check the Descending box. The default order is ascending.
4. Under Allocation Timing, check or clear the Perform Supply Allocation After Transaction Entry, Update or Delete box:
   - To automatically reallocate inventory whenever a demand transaction is created, changed, or deleted, check the Perform Supply Allocation After Transaction Entry, Update or Delete box.
   - To manually reallocate inventory, clear the box.
   Affected transactions include purchase orders, sales orders, transfer orders, and work orders.

Setting Supply Preferences for Supply Allocation

Define the default allocation strategy for each demand order type. The strategy you set appears as the default selection on demand order lines. You can change the default to another strategy on individual orders.

To set supply preferences for Supply Allocation:

1. Go to Setup > Order Management > Supply Allocation.
2. On the Supply Preferences subtab, set the following preferences:
   - From the Default Allocation Strategy on Sales Order list, select an allocation strategy for the default selection on new sales orders.
From the Default Allocation Strategy on Work Order list, select an allocation strategy for the default selection on new work orders.

From the Default Allocation Strategy on Transfer Order list, select an allocation strategy for the default selection on new transfer orders.

3. Click Save.

Setting Up Location Records for Supply Allocation

For each location, choose to make inventory available to be allocated and committed.

To set up location records for Supply Allocation:

1. Go to Setup > Company > Classifications > Locations > New.
2. Next to the location from which you want to allocate inventory, click Edit.
3. Check the Make Inventory Available box on the location record. This allows NetSuite to allocate and commit inventory from this location.
4. Click Save.

For more information about location records, see the help topic Creating Locations.

Setting Up Item Records for Supply Allocation

After you enable the Supply Allocation feature, item records include additional fields that require values. On the Locations subtab, choosing the Inventory View, the Quantity Allocated field displays the sum of allocated quantities across all demand orders for each location.

After enabling Supply Allocation, in the Locations subtab, View field, choose Order Management for details about quantities of the item that are committed and allocated. Note that the total quantity allocated includes the total quantity committed. The quantity committed is a subset of the quantity allocated.

To set up item records for Supply Allocation:

1. Go to Lists > Accounting > Items.
2. Next to the item you want to set up, click Edit.
   - The Purchasing/Inventory subtab and the Locations subtab under it are open by default.
3. Enter an ATP Lead Time:
   a. On the Locations subtab, from the View list, select Order Management.
   b. Next to a location, click Edit.
   c. In the Item Configuration window, click the Order Management subtab.
   d. In the ATP Lead Time field, enter the number of day for the lead time.
      - If no current or future supply is available, Supply Allocation used this lead time to calculate item availability dates for demand orders in each location.
4. Click Save.

Setting Up Inventory Status Records for Supply Allocation

If you also use the Inventory Status feature, you can determine allocation and commitment availability on each inventory status record. For example, you may choose to exclude items that are undergoing an
inspection. Or, you may wish to completely exclude a status of “bad” from availability for commitment or allocation.

For each status, set inventory availability for commitment, for supply allocation, for both, or for neither.

To set up inventory status records for Supply Allocation:

1. Go to Lists > Supply Chain > Inventory Status > New.
2. Click Edit next to a status.
3. To make on-hand inventory associated with this status available for NetSuite to commit to orders, check the Make Inventory Available for Commitment box.
   If you prefer that on-hand inventory associated with this status is excluded from the available count, clear this box.
4. To make on-hand inventory associated with this status available for Supply Allocation to allocate to orders, check the Make Inventory Available for Allocation box.
   If you prefer that on-hand inventory associated with this status is excluded from being allocated to orders using Supply Allocation, clear this box.
5. Click Save.

After a status is associated with items on completed or pending transactions, you cannot check nor clear these boxes.

**Important:** The settings chosen here do not apply to items on drop shipments and special order purchases. Items with an unavailable status can be allocated to sales orders marked as drop shipments or special orders. You can also receive unavailable items on the associated purchase order created from a drop shipment or special order sales order. For more information on drop shipments and special orders, see the help topic Drop Shipment and Special Order Purchases.

For more information about the Inventory Status feature, read Inventory Status.

Enabling Inbound Shipment for Supply Allocation

The NetSuite Inbound Shipment for Supply Allocation feature enables you to create multiple inbound shipments, each with a delivery date and receiving location, for each purchase order line. Supply allocation can allocate both the inbound shipments and the purchase orders to ensure that the allocated quantities are reconciled across these sources of supply. This new source of information enables you to provide more accurate availability information on sales orders.

To set up inbound shipment for supply allocation:

1. Go to Setup > Company > Enable Features.
2. Click the Transactions subtab.
3. Check the following boxes:
   ■ Purchase Orders
   ■ Advanced Receiving
   ■ Inbound Shipment Management
4. On the Items & Inventory tab, check the following boxes:
   ■ Advanced Bin/Numbered Inventory Management
     Basic Bins are not supported
Supply Allocation Management

After completing setup for the Supply Allocation feature, you can use Supply Allocation to maximize efficiency of allocating your inventory. The following topics to assist you with day-to-day allocation functions.

- Creating Allocation Strategies
  Create an allocation strategy to define rules used to allocate particular inventory.

- Creating Order Allocation Schedules
  Create schedules to automate when NetSuite calculates allocation to periodically re-assess the demand orders that are being prioritized to be fulfilled.

- Applying Allocation Strategies to Order Lines
  After you have created allocation strategies, assign them on demand orders.

- Setting Supply Required By Dates on Order Lines
  Define the date when demand on an order needs to be met.

- Supply Allocation Calculations
  Learn more about ways that allocation is calculated in NetSuite.

- Supply Allocation Exceptions
  If allocation calculations determine that supply will not meet demand in time, you are alerted.

- Manually Allocating Supply to Orders
  Supply can be allocated manually in addition to automated calculation.

Creating Allocation Strategies

Create an allocation strategy to define the rules that allocate particular inventory. You can create multiple strategies, then select them on demand order lines to specify the inventory allocation to respond to that demand.

For example, you want to allocate e-commerce orders quickly and allocate wholesale orders close to the Supply Required By Date. You can create several strategies to cover various cases and create new ones as situations change over time.

When you enable the Supply Allocation feature, two predefined allocation strategies are available by default. Note that these default strategies only consider inventory that is currently on-hand, not future inventory.

- **Predefined Available Allocation Strategy** - This strategy uses the Allocation Quantities setting to allocate any available quantities.
- **Predefined Complete Allocation Strategy** - This strategy uses the Allocation Quantities setting to allocate only complete quantities.

To learn more, see Inbound Shipment Management Prerequisites and Setup.

If a demand order line has an allocation strategy that includes Inbound Shipment in the Future Inventory options, Inbound Shipment lines can be allocated to that order line.
To view a complete list of allocation strategies, go to Setup > Order Management > Order Allocation Strategies.

**To create an allocation strategy:**

2. Enter a **Name** for the strategy. This name appears in strategy dropdown lists.
3. Check the **Inactive** box if you do not want this strategy to show in lists.
4. To consider future inventory for allocation, under **Inventory Options**, check the **Future Inventory** box.
   This includes inventory that is on-order and in-transit, but not yet received. Note that inventory that is currently on-hand is always considered for allocation.
5. To include future inventory as an allocation consideration, check the **Future Inventory** box.
6. In the **Future Inventory Order Types** field, click each type to consider for future inventory. To select more than one, press the **Shift** key while clicking each item.
   To exclude future inventory from consideration for allocation, clear the Future Inventory box.
7. Use the **Allocation Period** fields to limit the allocation of inventory by defining a specific period before or after the Supply Required by Date.

   **Note:** If no allocation period is defined, this allocation strategy considers all inventory that is available to allocate.

   a. To limit the inventory allocation to a period before the Supply Required by Date:
      i. Under **Current and Future Inventory**, check the **Limit Inventory Allocation Period Before Supply Required by Date** box.
      ii. In the **Days** field, enter the number of days for the limited allocation period. The default value is 180 days. The maximum value you can enter is 9999.

   b. To limit inventory allocation to the period after the Supply Required by Date:
      i. Under **Future Inventory Only**, check the **Limit Inventory Allocation Period After Supply Required by Date** box.
      ii. In the **Days** field, enter the number of days in the period after the Supply Required by Date to consider. The default value is 0 days. The maximum value you can enter is 9999.

For example, for seasonal items, you want to limit allocation to 30 days before and 30 days after the Supply Required by Date. To do this, check both boxes and enter 30 in the Days fields.

8. Under **Allocation Method**, choose one of the following:
   - **Earliest** - Allocate inventory as soon as available before Supply Required by Date.
   - **Closest** - Allocate inventory as close as possible to Supply Required by Date.

9. Under **Allocation Quantities**, choose one of the following:
   - **Available Quantity** - Allow NetSuite to allocate a partial quantity of items as soon as any portion of the total amount needed becomes available. NetSuite will allocate the remainder at a future time after another allocation calculation.
     For example, a sales order line needs 10 items. Only five items are available now to be committed. Using this setting, NetSuite allocates five items to demand on the line now and the remaining five in the future.
   - **Complete Quantity** - Allocate items only when the total amount needed for the line is available for commitment. If only a portion of the full amount is available, NetSuite does not yet commit any of the items.
For example, a sales order line needs 10 items. Only 5 items are available now for commitment. When you choose this option, NetSuite allocates 0 items to demand on the line now. No items are allocated against the demand until the full amount is available for commitment. NetSuite will allocate all 10 items in the future.

10. **Under Allocation Type**, choose one of the following to indicate the allocation type:
- **Reserved Allocation** - NetSuite commits inventory, but can also reallocate it to other orders.
- **Firm Allocation** - NetSuite commits inventory and cannot reallocate it to other orders by the system. You can only reallocate this inventory manually.

**Note:** When part of the ordered quantity is a Firm Allocation, the system may allocate further quantities in addition to the amount that has been allocated. The system can drop such allocation only when the user sets the strategy on the order line to Do Not Allocate.

11. Click **Save**.

### Allocation Strategy Examples

The following image shows how NetSuite allocates inventory based on the values set in the Allocation Method, Allocation Quantities, and Allocation Period fields.

Consider a sales order line that has a quantity of 100 units of Item_1:
- 60 units of Item_1 from a transfer order in week 1.
- 100 units from a transfer order in week 3
- 60 items from a purchase order in week 4.

If you set Allocation Method to Earliest and Allocation Quantities to Available Quantity, NetSuite allocates Supply 1 in Week 1 to the sales order line. Supply 1 represents the allocation of a partial quantity of inventory as soon as it's available before the Supply Required by Date.

NetSuite allocates Supply 3 or Supply 4 to the sales order line based on the alternate methods and quantities. Supply 3 represents the allocation of the total quantity of inventory for the sales order, close to the Supply Required by Date. Supply 4 represents the allocation of a partial quantity of inventory as close as possible to the Supply Required by Date.

Use the Allocation Period field to limit the allocation of inventory by defining a specific period before or after the Supply Required by Date. In this example, the system would not consider Supply 1 for allocation, when the Allocation Period is 14 days before the Supply Required By Date. You can also consider using the Allocation Period option to limit allocation of future supplies arriving later than the Supply Required By Date.

For more information, see [Creating Allocation Strategies](#).
Creating Order Allocation Schedules

Create an allocation schedule to automate allocation calculations based on rules defined on the schedule.

**Note:** When you use approval routing, allocation calculations consider only approved inventory supply orders. This applies to purchase orders, work orders, and transfer orders. Additionally, work orders must have a Released status for NetSuite to consider them in allocation calculations.

To create an allocation schedule:

1. Go to Transactions > Inventory > Allocate Orders > Schedule Transactions > Inventory > Allocate Orders > Schedule.
2. Click New Allocation Schedule.
3. Under the **Primary Information** heading, complete the following steps:
   a. Enter a **Name** for this schedule. For example, enter the name **Weekly Order Allocation** for an allocation you plan to run once a week.
   b. Enter a **Description** with additional details that identify this schedule.
   c. Check the **Inactive** box to exclude this schedule from lists.
4. Under the **Schedule** heading, complete the following steps:
   a. To select how often to run this schedule, make a selection from the **Recurrence Frequency** list.
   b. If the selected Recurrence Frequency is Weekly, Monthly, or Annually, from the **Repeat Every** list, select a number to specify the recurrence.
      For example, using a monthly recurrence, select **2** to repeat every two months. Using a weekly recurrence, select **3** to repeat every three weeks.
   c. To specify the next date on which the schedule runs, enter or select a **Next Date**.
   d. To specify the hour and minute the next schedule runs, enter or select a **Next Time**.
5. Under the **Order Options** heading, complete the following steps:
   a. To select a subsidiary to limit the list of Locations when you set search criteria described later in this procedure, select from the Subsidiary list.
      **Note:** In the Intercompany Cross-subsidiary Fulfillment Feature, the list is expanded to include cross-subsidary locations defined as an Inventory Subsidiary on the Global Inventory Relationship record.
   b. Check the **Set Order Line to Firm** box to set items as firmed when this allocation schedule is run. Clear this box to set items as committed but not yet firmed when this allocation schedule is run.
6. Under the **Select and Sort Orders** heading, select one of the following options in the to filter the list of orders using a saved search:
   - **Select orders manually** - Choose this option if you do not want to filter the list using a saved search. You can define search criteria later in this procedure.
   - **Select orders using a saved search** - Choose this option to filter the list of orders using an existing saved search.
   - **Select orders by creating a new search** - Choose this option to open a form to choose filters for a new saved search. For more information on creating a saved search, read the help topic **Defining a Saved Search**.
7. If you choose Select orders manually under Select and Sort Orders, NetSuite displays the following fields for you to define search criteria. These criteria determine which orders show in the list.

   a. Location - Choose a location to filter orders by location. Press and hold the Ctrl key to select more than one location.
   b. Item - Choose an item to filter orders by that item.
   c. Customer - Choose a customer to filter for orders associated with a customer.
   d. Order No. - Enter an order number to filter for a certain number.
   e. Transaction Type - Choose a type of transaction to filter the list for that type. Choose one of the following: sales order, transfer order, or work order.
   f. Transaction Date From - Enter a beginning date to define a transaction date range.
   g. Transaction Date To - Enter an end date to define a transaction date range.
   h. Expected Ship Date From - Enter a beginning date to define an expected ship date range.
   i. Expected Ship Date To - Enter an end date to define an expected ship date range.
   j. Order Priority From - Enter a beginning date to define an order priority range.
   k. Order Priority To - Enter an end date to define an order priority range.
   l. Commit Criteria - Choose to filter the list by the commit criteria setting: Available Qty, Complete Qty, or Do Not Commit.
   m. Under Sort By, make selections in the fields below to define how the orders are sorted.

   Note: The sorting option on the Order Allocation Schedule page defaults to use the predefined preferences. For details, read Setting Demand Preferences for Supply Allocation.

   i. In the Sort By field, choose a field to sort the orders.
   ii. In the Then By field, choose a field for a secondary sort for orders.
      For example, you can sort orders in this manner:
      ■ In the Sort By field, choose Transaction Date.
      ■ In the Then By field, choose Expected Ship Date.
      Using these sorting options, the list is first sorted by Transaction Date, and within each date, orders are sorted by the Expected Ship Date.
      The sort order on custom forms is ascending by default, but you can check the Descending box to change the sort order.

8. Click Save.

Applying Allocation Strategies to Order Lines

When you enter a sales order, you can select an allocation strategy for each line item. The strategy you select for each line determines the way NetSuite allocates inventory for each line's demand. You can assign a unique strategy for each line.

For details about creating allocation strategies, read Creating Allocation Strategies.

To apply an allocation strategy to an order line:

1. Open or create a sales order, transfer order, or work order.
2. Click the Items subtab.
3. On an item line, in the Allocation Strategy field, select a strategy.
4. Click Add or Save on the line.
5. Repeat the steps above for each line item to which you want to assign a strategy.
6. Click Save.

Setting Supply Required By Dates on Order Lines

Demand order lines on can help you identify the Supply Required By Date. This information enables you to learn the date the order must be shipped to the customer. Supply allocation calculates which supply sources you can use to meet the demand created from customer orders, transfer orders, and work orders.

Supply orders display all related demand orders that have been allocated from the incoming supply. This then shows you which demand orders are affected when a supply order is not received on the scheduled date. You can then identify which supply order could cause a demand order to miss its supply required by date.

To set a supply required by date on a sales or transfer order line:

1. Open or create a sales order or transfer order.
2. Click the Items subtab.
3. Add an assembly item.
4. On an item line, in the Supply Required By Date field, select a date.
5. Click Add or Save on the line.
6. Repeat the steps above for each line item to which you want to assign a Supply Required By Date.
7. Click Save.

To set a supply required by date on a work order line:

1. Open or create a work order.
   To learn more, see the help topic Entering an Individual Work Order.
2. Click the Items subtab.
3. Add an assembly item.
4. In the Supply Required By Date field, select a date.
5. Click Save.

Set the preference to Perform Supply Allocation After Transaction Entry, Update or Delete and then save the form. The allocation calculations determine whether inventory supplies can meet the demand on the order by the required date. If demand cannot be met, NetSuite displays an allocation alert to warn you that demand for one or more lines cannot be met in time.

View the lines on the order to compare the Supply Required By Date and the Expected Ship Date to investigate the problem. Click the link in the Allocated Supply field to view details about where NetSuite is allocating the supply. The Allocated Supply window also details the number of days late that supply will arrive.

Supply Allocation Calculations

Set the preference to Perform Supply Allocation After Transaction Entry, Update or Delete and then save a demand order form. NetSuite then performs a new allocation calculation in real time for each
order line. This calculation determines whether inventory supplies can meet the demand on the order by the Supply Required By Date.

Inventory demand can come from several sources, including:

- Sales to customers (sales orders)
- Retail store locations (transfer orders)
- Warehouse distribution centers (transfer orders)
- Assembly manufacturing locations (work orders)

After you enter these transactions, the Supply Allocation feature uses them to calculate demand for the items on the order. Then, demand for items is matched to current and future sources of supply for the items. Inventory supply sources can include these examples:

- Vendor fulfillment of purchase orders (purchase orders)
- Warehouse distribution centers (transfer orders)
- Assembly manufacturing locations (work orders)

NetSuite bases supply allocation calculations that determine the best ways to commit supply to demand on the allocation strategies defined on order lines. For details about strategies, read Allocation Strategies.

NetSuite can perform allocation calculations automatically based on preference settings or based on predetermined schedules. The following are allocation calculation triggers:

- **Automated Real Time** - NetSuite calculates allocation automatically in real time if you set the Perform Supply Allocation After Transaction Entry, Update or Delete preference.
  - NetSuite calculates allocation each time a demand order is created, edited, or deleted (Sales Order, Transfer Order, Work Order).
  - NetSuite calculates allocation each time a supply order is created, edited, or deleted (Purchase Order, Transfer Order, Work Order).
  - NetSuite calculates allocation for each order line.
  - Reallocation whenever supply falls below allocated quantities

  For details on this preference, read Setting Demand Preferences for Supply Allocation.

- **On Demand** - NetSuite calculates allocation for demand orders using the Allocate Orders page.

- **Scheduled** - NetSuite calculates allocation automatically for demand orders based on schedules using the Order Allocation Schedule page.
  
  For details, read Creating Order Allocation Schedules.

- **Manual** - Manually calculate reallocation for demand orders using the Reallocate Items page.

When a supply quantity is matched to a demand quantity, that quantity is allocated to the specific demand order. When the allocation is set as Firm, that quantity cannot be changed, or reallocated to another order. If the allocation is not firmed, the quantities allocated to that demand order may be reallocated by the supply allocation engine during a future calculation.

You can set an allocation as firm in one of two ways:

- On the allocated order line, check the Commitment Confirmed box.
- On an Allocation Strategy, set the Allocation Type field to Reserved Allocation. Then, apply the associated strategy to the order line before allocation.

For more information, see Creating Allocation Strategies and Applying Allocation Strategies to Order Lines.
If a calculation determines that demand cannot be met, an alert warns you that demand for one or more lines cannot be met in time. For details, read Supply Allocation Exceptions.

**Supply Allocation Exceptions**

A supply allocation calculation may determine that inventory will not be available to meet order demand by the indicated Supply Required By Date. When this occurs, a Supply Allocation Exception is generated to warn you that an order may not be fulfilled in time.

You can check the Supply Allocation Alerts page to view all sales orders currently generating an exception alert. This page summarizes orders with one or more exceptions and displays details about exceptions that are generated.

**To view the Order Allocation Alerts page:**

1. Go to Transactions > Inventory > Allocate Orders > Order Allocation Alerts Transactions > Inventory > Allocate Orders > Order Allocation Alerts.
2. You can optionally filter the list of alerts by subsidiary, status, and style.
3. Click the order number on a line to drill down to demand exception details.

For each exception, NetSuite displays the following information about exception warnings:

- Order Number
- Order Line Alerts
- Customer
- Order Priority
- Status
- Subsidiary
- Ship Complete
- Order Date
- Earliest Alert
- Supply Required By Date

Exception details can include number of days late for a demand order line. Also, related supply orders are linked on the demand order line.

**Tip:** If you customize a view, you can select an option in the View field to change the displayed information.

**Supply Allocation Exceptions Management**

In NetSuite 2020.1 Supply Allocation Exceptions Management is designed to help you make informed reallocation choices. To respond to supply shortages, review all sources of supply and order allocations to ensure that high priority sales orders ship complete and on time.

To help you achieve these goals, the NetSuite Reallocate Order popup window can be accessed from order lines. The Reallocate Order item generates intelligent supply re-allocation recommendations with reasonably little effect on other orders. Automating reallocation significantly reduces the time to find, review, and execute reallocations. After you accept a recommendation, the system automatically re-aligns the supplies to the affected orders. This system reallocation logic produces recommendations by reviewing all available (un-allocated) supplies and then reviewing which orders are best suited to reallocate supplies.
The exceptions management process:

1. Review existing exceptions to identify which orders cannot be fulfilled by the supply required by date.
   NetSuite offers the following two options for exception lists:
   - Order Allocation Alerts.
   - Customized Late Order Allocations or Transaction Saved Searches.
   Order Allocation Alerts are based on late order allocation searches which display orders without order line break-down.
   Transaction searches can display each order line with allocation information.

2. After reviewing the exception lists, review sources of supply and existing orders to decide how to re-allocate to the high priority, or target, orders.
   On all of these lists you can drill down on each order and act on an exception.
   Sales order lines display a link to the Reallocate Order Item.

3. Select one or more order lines from less urgent orders to move to the target sales order line to meet the requested date and quantity.

4. However, if the generated recommendations aren't suitable, you can generate a new set of allocation recommendations.

5. Review the new reallocation scenarios until you arrive at a suitable solution.

6. After the reallocation is approved, NetSuite automatically executes the re-allocations across the selected orders.

7. The system opens the sales order enabling you to reallocate any other order lines.

Setting up Access to Reallocate Order Items

Complete the following procedure to enable the Reallocate Order items to generate intelligent supply re-allocation recommendations.

To set up access to reallocate order items:

1. Go to Setup > User/Roles > Manage Roles.
2. Check that you have Create, Edit, or Full permission for Reallocate Order Item.
   To view this permission, in the Permissions subtab, click Lists.
3. Check that you have View permissions for Sales, Transfer, Work, and Transfer Orders.

Creating Reallocate Recommendations

NetSuite 2020.1 enables you to create reallocation recommendations to address your supply shortages. By reviewing all sources of supply and order allocations, you can ensure that high priority sales orders are shipped complete and on time. These recommendations are designed to have minimal effect on other orders.

To create a reallocation recommendation:

1. Go to Transactions > Inventory > Allocate Orders > Order Allocation Alerts.
   The Order Allocation Alerts page displays the late orders.
2. Review the information in the following Order Allocation Alerts results columns to understand which orders most urgently need to be filled:
Supply Allocation

- Earliest Alert Supply Required by Date
- Order Date
- Order Priority
- Customer

3. After deciding which order needs to receive allocations, click the Order column number link.
   The Sales Order, Items subtab displays how late the order is and how much inventory needs to be reallocated to fulfill this order.

4. In the exception list or sales order, review each order line's allocation details.

5. To take allocations from other orders to fulfill this order, in the Reallocate Order Item column, click Reallocate.

6. Review the Reallocate Order Item window order details to understand what to reallocate do to satisfy the order requirements:
   - Supply Required by Date – how late is this order.
   - Quantity – how many items are assigned to this order.
   - Expected Ship Date – date is based on existing allocations.
   - Priority – orders are ranked by importance.
   - Customer – helps decide order of importance.

7. In the Select Orders for Reallocation subtab, review the possible source orders where you can take resources from.
   The order items must be at the same location:
   a. Review the Order Priority and Commitment Confirmed columns to locate possible reallocation sources.
   b. Check the box beside the order, or orders, you want to reallocate.
      You may need to select more than one order if the source orders do not have enough inventory to fulfill the target order.
      To customize the Select Orders for Reallocation subtab list, click Customize View.

8. Click Generate Recommendation.
   When the recommendation is available, NetSuite enables the Accept Recommendation and Reallocate button.

9. Click the Affected Orders subtab to display a list of system recommended where resources were taken from.
   - The Recommendation of Success and Recommendation Summary sections display whether the Quantity and Expected Ship Dates will be met as a result of this reallocation.
   - The target order is identified.
   - If the Impact in Days column displays a negative number, the expected delivery date has moved forward as a result of the reallocation.
   - If source orders display positive numbers in the Impact in Days columns, the source orders will be shipped later than the reallocation.
   - To customize the Affected Orders subtab list, click Customize View.

You may need to select a wider range of orders to meet the target order needs.
To reallocate, repeat steps 5 to 9.
10. To assess the affects of this reallocation, click the **Allocated Supply** subtab.
    The Allocated Supply subtab shows the supplies available to the target and source orders after reallocation.
    - The Supply Type column displays where the inventory came from. For example, purchase order or inventory.
    - The Quantity Allocated column shows the remaining inventory allocated to that sales order.
    - To customize the Allocated Orders subtab list, click Customize View.
      For example, you can add a Demand Order # column to show that the target sales order is receiving the supplies it needs. It also displays the new allocation of orders that lost inventory due to the reallocation.

11. If this order satisfies the target order needs without adversely harming the source orders, click **Accept Recommendations and Reallocate**.
    The window closes and the customer is returned to the sales order.
    On the sales order the reallocated order line is expected to be shipped on time and the Reallocate link is no longer visible.

**Lot and Serial Numbered Items on Reallocate Order Item**

Enabling Serialized Inventory or Lot Tracking makes entering Lot Numbers on Lot or Serial numbers on Serial Numbered Items optional. Order line quantity on Purchase, Work, Transfer, or Sales Orders can be greater than the sum of all Inventory Details Serial or Lot numbers.

The Reallocate Order Item does not remove existing serial or lot numbered inventory commitments from the order line if it has serial or lot numbers. For the candidate order, this means that existing order commitments cannot be reallocate quantities that are serial or lot numbered on the order line.

**Optimize Fill Rate**


NetSuite defines Fill Rate as the number of order lines that have been fully allocated in time divided by the total number of order lines during a defined time period. For example, your organization is receiving supplies at a single location. You have several sales orders all with differing priorities, for multiple customers, and on different dates. Unfortunately, there is an inventory quantity shortage of 10%. This shortage may not cause a significant delay, but it inconveniences most of your customers. These delays also affect your organization’s Fill Rate KPI.

NetSuite 2020.2 enables you to allocate orders using the new Fill Rate Optimization feature.

**To optimize order allocation on the Allocate Orders page:**

1. Go to Transactions > Inventory > Allocate Orders.
2. Complete the **Allocate Orders** form.
   To learn more, see Manually Allocating Supply to Orders.
3. In the **Orders** section, select an **Allocation Processing Option:**
   - **Using Sorting Options Only**
   - **Using Fill Rate Optimization** - prompts NetSuite's batch allocation logic to calculate the largest possible number of order lines fully allocated on time.
     Check the boxes beside the orders you want to allocate:
Supply Allocation

- Check the **Set Order Line to Firm** box to Firm each order line you select. Quantities on lines that are firmed cannot be reallocated to other orders.
- Check the **Select All Orders** box to select all orders in the list. Note that this option limits order processing to 200 at one time to optimize allocation time.

4. In the **Orders** section, check the box beside the orders that you want to optimize.
5. Click **Submit**.

To optimize order allocation on the Order Allocation Schedule page:

1. Go to Transactions > Inventory > Allocate Orders > Schedule.
2. Click new **Order Allocation Schedule**.
3. Complete the **Order Allocation Schedule** form.
   To learn more, see Creating Order Allocation Schedules.
4. In the **Order Options** section, **Allocation Processing Option** list, select **Using Fill Rate Optimization**.
   Selecting this option prompts NetSuite's batch allocation logic to calculate the largest possible number of order lines fully allocated on time.
5. Select a **Sort Order** filter.
6. Click **Save**.

After the allocation batch completes its calculations, NetSuite automatically allocates the existing supplies to satisfy as many order lines as possible using the following parameters:

- Allocates the full required quantities.
- Allocate the latest supplies that meet the Supply Requited By Dates.
- Prioritizes smaller quantities over larger quantities.

Beyond the optimization priorities, Supply Allocation follows the allocation preferences and the allocation strategy of each order.

Manually Allocating Supply to Orders

You can manually choose which order lines to allocate inventory to. Use the steps below to filter and sort the list of order lines, then choose which lines to allocate items for.

To manually allocate supply to orders:

1. Go to Transaction > Inventory > Allocate Orders.
2. Under the **Order Filters** section, complete the following steps:
   a. In NetSuite OneWorld accounts, select a **Subsidiary**. Press and hold the Ctrl key to select multiple types.
   b. To show only orders associated with one location, select that **Location**. Press and hold the Ctrl key to select multiple locations.
   c. To show only orders that contain one item, select that **Item**. Press and hold the Ctrl key to select multiple items.
   d. To show only orders associated with one customer, select that **Customer**. Press and hold the Ctrl key to select multiple customers.
   e. Enter an **Order No.** to filter the list by order number.
f. To show only orders of one type, select a **Transaction Type**. Press and hold the Ctrl key to select multiple types.

g. In the **Transaction Date From/To** field, enter a date range to filter the list by a transaction date.

h. In the **Expected Ship Date From/To** field, enter a date range to filter the list by expected ship date.

i. In the **Order Priority From/To** field, enter a range of priority numbers to filter the list by customer priority.

j. In the **Commit Criteria** field, select to filter the list by the Commit Criteria setting (Available Qty, Complete Qty, Do Not Commit).

   Note that Kits and their components cannot be set to Do Not Commit.

3. Under the **Sorting Options** heading, you can optionally sort the order list. Note that the sorting options default based on your set preferences.

   For details about these preferences, read **Setting Demand Preferences for Supply Allocation**.

   a. Make a selection in one or more of these three fields to sort:

      ■ **Sort By**
      ■ **Then By**

      Beside each field you can check the **Descending** box if you want results to return in descending order instead of ascending order. This box is clear by default. The sorting sequence applies to all orders when you check the **Select All Orders** box. NetSuite remembers your sorting choices the next time you open this page.

4. Under the **Orders** heading, perform the following actions:

   a. Check the **Set Order Line to Firm** box to Firm each order line you select. Quantities on lines that are firmed cannot be reallocated to other orders.

   b. Check the **Select All Orders** box to select all orders in the list. Note that this option limits order processing to 200 at one time to optimize allocation time.

5. Check the **Select** box next to each line for which you want allocate items.

6. Click **Submit**.

### Confirming Order Allocation Status

You can view the status of order allocations you have initiated at Transactions > Inventory > Allocate Orders > Status. Click Refresh to reload the list of order allocations.

### Inbound Shipment in Supply Allocation

NetSuite 2020.2 Supply Allocation includes Inbound Shipments as a source of supply for calculating purchase order supply allocations. NetSuite defines an Inbound Shipment as a trading document that lists items ordered and received in a shipping consignment (for example, a container). This new functionality enables you to create multiple inbound shipments, each with a delivery date and receiving location for each purchase order line.

The Supply Allocation Engine can assign both the inbound shipments and the purchase orders to ensure that the assigned quantities are allocated across these sources of supply. This additional source of information provides more accurate availability information on sales orders.

Inbound shipments in supply allocation handles each shipment and its related purchase order as separate sources of supply which it allocates demand orders. This enables you to do the following:
Supply Allocation

- Assign a single purchase order line into multiple supply events and allocate each event by their own date of supply.
- Direct the supply to a location other than the purchase order location.
- Commit received inventory to the allocated demand order.

NetSuite reconciles the purchase order allocations and related inbound shipments, so that:

- The purchase order supply quantity is depleted by the related inbound shipment quantities to ensure that the total available supply is not counted twice.
- The remaining order supply quantity and shipment item receipts are updated by location.
- The quantity received against the purchase order, including all shipments, is maintained on the order.

To setup Inbound Shipment for Supply Allocation, see Enabling Inbound Shipment for Supply Allocation.

NetSuite 2020.2 includes the Inbound Shipment Future Inventory Type that is now included in the Order Allocation Strategy form. To create an Allocation Strategy that includes Inbound Shipments as a source of supply, see Creating Allocation Strategies.

To view allocated demand on an inbound shipment:

1. Go to Transactions > Purchases > Create Inbound Shipment > List.
2. Beside the inbound shipment you want to see, click View.
   In the Items subtab, the new Allocated Demand column displays the quantity allocated to different sources of demand. It also displays the Expected Delivery Date for this shipment.
3. You can click hyperlinked number to open the Allocated Demand window.
   The Allocated Demand window displays the data for all allocations associated with the Inbound Shipment line:
   - Demand Type – Work Order, Transfer Order, or Sales Order.
   - Order Number
   - Allocated – the number of items allocated to the work order.
   - Supply Required by Date – the date the items need to be supplied by.
   - Days Late – the number of days the delivery is late.
     If the Expected Demand Date has not been met. The Allocation Engine uses this date to calculate whether the allocated demand has been met on time. If this date is not met, the engine displays the number of late days in the Days Late column.
   - Reallocated Order From – the location the items will be reallocated from.

To find inbound shipment as an allocated supply:

1. Go to Transactions > Sales > Enter Sales Orders > List.
2. Beside the order you want to see, click View.
   In the Items subtab, the Allocated Supply column displays the quantity allocated to different sources of supply. The number is hyper-linked.
3. You can click hyper-linked number to open the Allocated Demand window.
   The Allocated Supply window displays the data for all allocations associated with the Inbound Shipment line:
   - Item – Item name or ID number.
   - Supply Type – Inbound Shipment.
Supply Allocation

- **Order** – the order number.
- **Order Status** – To be Shipped, In-Transit, Partially Received.
- **Source** – the name or ID for the source location.
- **Supply Quantity** – the number of items supplied.
- **Supply Receipt Date** – the date the supply is expected to be received.
- **Allocated** – the number of items allocated.
- **Days Late** – the number of days the delivery is late.

### Supply Allocation

- Enabling Supply Allocation
- Setting Demand Preferences for Supply Allocation
- Setting Supply Preferences for Supply Allocation
- Supply Allocation Management
- Setting Up Location Records for Supply Allocation
- Setting Up Item Records for Supply Allocation
- Setting Up Inventory Status Records for Supply Allocation
- Creating Allocation Strategies
- Creating Order Allocation Schedules
- Applying Allocation Strategies to Order Lines
- Setting Supply Required By Dates on Order Lines
- Supply Allocation Calculations
- Supply Allocation Exceptions
- Manually Allocating Supply to Orders

### Inbound Shipment Example

The following example and images show how NetSuite allocates inventory items to the sources of demand orders when Inbound Shipment is considered as a source of supply.

In NetSuite, you can create a purchase order that displays the quantity of items to supply, the location to deliver the items, and the expected receipt date.

In the first image, the purchase order has a quantity of 15 items in your San Francisco facility. These items are available to be allocated to the sources of demand.
Using the purchase order data, you can allocate the items to the sources of demand, work orders, transfer orders, or supply orders. After the purchase order PO is received, the quantity goes into inventory, and the inventory would be committed to the demand.

<table>
<thead>
<tr>
<th>Purchase Order</th>
<th>Inbound Shipment - 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>San Francisco</td>
</tr>
<tr>
<td>*Remaining quantity</td>
<td>15</td>
</tr>
<tr>
<td>Quantity available to allocate</td>
<td>11</td>
</tr>
<tr>
<td>Availability date</td>
<td>Expected Receipt Date</td>
</tr>
</tbody>
</table>

With the release of NetSuite 2020.2, the purchase order can now account for inbound shipment quantities. In this second part of the example, we add an inbound shipment. From an allocation perspective, the inbound shipment is seen as a new source of supply. The inbound shipment expected delivery date represents the date for the expected supply.

The original purchase quantity available to allocate of 15 is reduced by the inbound shipment quantity of 4. This resulting available quantity to allocate is now 11. The Allocation Engine now considers two sources of supply which may affect the source of supply for the demand orders.

Supply allocation now enables you to receive inbound shipments to multiple locations. This means that the allocation engine will have to consider multiple sources of supply from different locations. The following third part of the example illustrates this:

<table>
<thead>
<tr>
<th>Purchase Order</th>
<th>Inbound Shipment - 1</th>
<th>Inbound Shipment - 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>San Francisco</td>
<td>Santa Cruz</td>
</tr>
<tr>
<td>*Remaining quantity</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>Quantity available to allocate</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Availability date</td>
<td>Expected Receipt Date</td>
<td>Expected Delivery Date</td>
</tr>
</tbody>
</table>

You have received a second inbound shipment for this purchase order. This new shipment is coming to the Santa Cruz facility bringing a further 3 items. This reduces the purchase order quantity available to allocate to 8 items.

**Inventory Count**

The Inventory Count feature supports improved tracking of inventory and tighter control over assets. When this feature is enabled, you can enter regular periodic counts of on-hand item quantities to maintain inventory accuracy. Keeping an accurate item count can help reduce required safety stock, which lowers your overhead costs.
To use this feature, first define the Next Count Date and your intended Count Interval in days on an item record. NetSuite then uses this information to calculate when that item needs to be counted.

You can create an inventory count in two ways:

- **Creating Calculated Inventory Counts** – Use NetSuite's calculated list of items to create one or more inventory counts that are due.

  The Create Inventory Count page shows a list of items that are due to be counted. Check the box in the Select column next to each item you want to count, or check the All Items box to count all items that meet your specified criteria. When you click Submit, the inventory count is recorded.

- **Creating Manual Inventory Counts** – Manually create an individual inventory count for an item.

After an inventory count is created, click Start Count on the record to begin the process. NetSuite takes a snapshot of the on-hand count of the items to be counted. After a manual count of items has been completed in the warehouse, the count data can be entered in NetSuite using the Inventory Count form. Click Edit on the count and enter the number of items on hand. You can edit and change the count data on a count form multiple times until the count is marked Complete.

When the inventory count transaction status is set to Started, a snapshot of the inventory on hand quantity is taken from the system for comparison. If you continue to process inventory changes while the counting activities are occurring, please note these changes. Please include these changes when you enter the Count Quantity into the inventory count transaction.

A completed count can be reviewed to be approved or rejected. A rejected count must be counted again by the warehouse manager. An approved count generates variances to account for any quantity differences between the original snapshot and the final count.

For items using calculated inventory counts, when you return to the item record of an item you have completed a count for, the Inventory subtab shows count data, including the last count date and next count date.

The Advanced Bin/Numbered Inventory Management feature must be enabled to support inventory counts of serialized or lot numbered items.

### Setting Up Inventory Count

To use the inventory count feature complete the following procedures:

- **To enable inventory count:**
- **To set up preferences:**
- **Setting Up Item Records for Inventory Count**

#### To enable inventory count:

1. Go to Setup > Company > Enable Features.
2. Click the **Items & Inventory** subtab.
3. Check the **Inventory Count** box.
4. Click **Save**.

#### To set up preferences:

1. Go to Setup > Accounting > Accounting Preferences.
2. Click the **Items/Transactions** subtab.
3. In the **Default Inventory Count Account** field, select the default account you want to show in the **Account** field on inventory count records.
   Typically an expense account, this account is used to post inventory count variances to.

4. Click **Save**.

**Note:** You can enable the Show Display Name with Item Codes preference to view both the item name and display name of an item on inventory count records. To set this preference in your account, go to Setup > Company > General Preferences. For more information, see the help topic [Setting General Account Preferences](#).

---

### Setting Up Item Records for Inventory Count

If you want NetSuite to calculate inventory count information for an item, you need to set up the item record to do so.

**To set up an item record for inventory count:**

1. Go to Lists > Accounting > Items.
2. Click **Edit** next to the name of an inventory or assembly item.
3. On the item record, click the **Purchasing/Inventory** subtab.
4. On the **Purchasing/Inventory** subtab, click the **Locations** subtab.
5. Enter or select values in the following inventory count fields:

   **Tip:** If you use the Multi-Location Inventory feature, you can fill out these fields for each location.
   
   - In the **Next Count Date** field, enter the date of the next planned inventory count for this item. NetSuite uses this date to determine and calculate when a count is required.
   - In the **Count Interval** field, enter the total number of days between required counts. For example, if you enter 30, NetSuite calculates the date a count is required based on 30 day intervals.
   - (Optional) In the **Classification** field, select the inventory classification. You can sort the list to create inventory counts based on classifications you select in this field.

6. Click **Save**.

After the count date and interval are recorded for an item, NetSuite uses them to calculate when a count is required. When a new count is due to be recorded, it shows in the list on the Create Inventory Count page.

### Creating Calculated Inventory Counts

After the count date and interval are recorded for an item, NetSuite uses them to calculate when a count is required. When a new count is due to be recorded, it shows in the list on the Create Inventory Count page.

**To create calculated inventory counts:**

1. Go to Transactions > Inventory > Create Inventory Count.
2. Select a location.
3. Enter or select a **Count Start Date**.
   This filters the list to show only items that require a count on or after the date entered in this field.
4. Enter or select a **Count End Date**.
   This filters the list to show only items that require a count on or before the date entered in this field.
5. Optionally choose an **Item classification** to filter the list.
6. Check the **Count Bin Rows With Zero Quantity** box to include in the list items with an on-hand count of zero.
7. Check the **Sort Rows by Bin** box to sort the item list by bin number instead of by item number. This can be useful to count all items in a specific area of a warehouse.
8. Select an account to post variances to. This is typically an expense account.
   You can choose an account to show in this field by default. For details, read Setting Up Inventory Count
9. Check the box in the **Select** column next to each item you want to count.

**Note:** If you use bin management, an item does not appear in the list if it uses bins and has no prior transaction history.

10. Click **Submit**. When you click **Submit**, the inventory count transaction is recorded, but not started.

After an inventory count is on record, it has an Open status and is a non-posting transaction.

**To edit an inventory count:**

1. Go to Transactions > Inventory > Enter Inventory Count > List.
2. Click **Edit** next to the count you want to change.
3. Make necessary edits to the record.
4. Click **Save**.

**Starting an Inventory Count**

Read more about starting an inventory count in the topic Working with an Inventory Count.

**Creating Manual Inventory Counts**

After the count date and interval are recorded for an item, NetSuite uses them to calculate when a count is required. When a new count is due to be recorded, it shows in the list on the Create Inventory Count page.

**To create manual inventory counts:**

1. Go to Transactions > Inventory > Enter Inventory Count.
2. Select a location.
3. Optionally enter a reference number for this transaction.
4. Verify or select a date for this transaction.
5. Choose an account to post inventory count variances to. This is generally an expense account.
You can choose an account to show in this field by default. For details, read Setting Up Inventory Count.

6. If you track departments or classes, optionally select them. (Note that this Class field is distinct from the inventory classification used for calculated inventory counts.)

7. Optionally enter a memo for this transaction. Later you can search for this transaction using the text in this field.

8. On the Items subtab, choose an item to count.

9. Verify or select the bin for this item.

10. Verify or select the unit for this item.

11. Optionally enter a memo for this line item.

12. Click Add.

13. Repeat these steps for each item you want to count.

14. Click Save.

When you click Save, the inventory count transaction is recorded, but not started. After an inventory count is on record, it has an Open status and is a non-posting transaction.

To edit an inventory count:

1. Go to Transactions > Inventory > Enter Inventory Count > List.
2. Click Edit next to the count you want to change.
3. Make necessary edits to the record.
4. Click Save.

Starting an Inventory Count

Read more about starting an inventory count in the topic Working with an Inventory Count.

Working with an Inventory Count

After an inventory count is recorded, you must complete these steps:

1. Start the count to begin the process of recording count data.
2. Edit the count record to enter count numbers for items.
3. Complete the count to record the final number counted for each item on the count.
4. Approve or reject the final count.

To start an inventory count:

1. Go to Transactions > Inventory > Enter Inventory Count > List.
2. Click View next to the count you want to start.
3. Click Start Count.

When you click Start on an Open status inventory count, NetSuite takes a snapshot of the on-hand count of the items to be counted by bin and serial number. This data is recorded on the count.

An inventory count with a status of Started can be reviewed and edited by the warehouse manager. Data in quantity fields can be edited, but items cannot be added to or deleted from the count.
To edit the count record:

1. Go to Transactions > Inventory > Enter Inventory Count > List.
2. Click Edit next to the count you want to work with.
3. Based on the physical count numbers taken in your warehouse, record the number actually counted in the Count Quantity field. Repeat this for each item you count.

```
Note: When the inventory count transaction status is set to Started, a snapshot of the inventory on hand quantity is taken from the system for comparison. If you continue to process inventory changes while the counting activities are occurring, record the changes and include them when you enter the Count Quantity into the inventory count transaction.
```

4. After entering data on a started count, click Save to come back and complete the count later.

To complete an inventory count:

1. Go to Transactions > Inventory > Enter Inventory Count > List.
2. Click View next to the count you want to complete.
3. Click Complete Count.
   Until an inventory count is completed, you cannot start a new inventory count for that item.

Two inventory adjustment transactions are created for the count:

- One positive inventory adjustment (more on hand)
- One negative adjustment (less on hand)

When you return to the item record of an item you have completed a count for, the Inventory subtab shows the following:

- Last Count Date – Date when the last count occurred
- Next Count Date – System calculated next date to enter an item count
- Count Interval – Preset count interval

To approve or reject an inventory count:

```
Note: After a count transitions to the Complete/Pending Approval status, the supervisor can approve or reject the count entered.
```

1. Go to Transactions > Inventory > Enter Inventory Count > List.
2. Click View next to the count you want to complete.
3. Do one of the following:
   - Click Reject – The count status returns to Started and the warehouse manager must conduct another count.
   - Click Approve – The count is final and the status becomes Approved.

Inventory Count History

After Approval, the Inventory Count record shows a History subtab that includes an Inventory Adjustments subtab which shows all adjustments related to this count.
Available to Promise

The Available to Promise feature gives purchasing and sales departments visibility into the projected ship date of goods during the quote and order processes. It enables you to check item availability based on outstanding transfer orders, purchase orders, work orders, and sales orders.

For example, on April 1, a sales rep has a customer who wants to place an order for 100 widgets and the rep needs to know how soon the order can be fulfilled. Using Available to Promise, the sales rep checks item availability to find out the soonest date that all 100 widgets will be available in stock. According to NetSuite calculations, by April 15 only 50 widgets will be available, but by May 1, all 100 items on the order can be fulfilled. This information enables the sales rep to have confidence when assuring the customer that he can receive the items he needs on the date promised.

To determine availability, NetSuite examines the following:

1. Quantity of items expected to be received on purchase orders, work orders, transfer orders based on their expected receive date.
2. Quantity of items expected to be fulfilled on sales orders and transfer orders based on their expected ship date.

Knowing how many items will be removed and added to inventory on each day allows the calculation of a virtual “bucket” quantity that describes the amount available to be applied to orders for that day. These calculations track the quantity available for any certain date and allow you to find a date when the quantity to fill an order will be available.

For details on these calculations, see Available to Promise Methods.

Note that Available to Promise differs from Demand Planning in the following way:

- Demand Planning provides supply recommendations based on a forecast or actual sales orders in a Build to Order or a Build to Stock environment.
- Available to Promise provides demand date recommendations based on available firmed supply.

The Available to Promise feature is accessible only when you have enabled the Demand Planning feature. To learn more, see Enabling Available to Promise.

**Important:** A user must have the Check Item Availability permission for their role to use the Available to Promise feature. The View setting is the default for this permission. To learn more, see the help topic NetSuite Roles Overview.

After you have enabled the Available to Promise feature, you need to set up item records to use the feature. To learn more, see Setting Up Item Records for Available to Promise.

After item records are set up, you can review item availability either on transaction lines or using the Check Item Availability page.

**Check Item Availability Page**

Use the Check Item Availability page to review the supply and demand of an item based on the projected receipt and ship date of outstanding sales orders, work orders, and transfer orders.

For example, a customer requesting a quote or placing an order may ask about the projected shipment date. The sales rep can access the Check Item Availability page to provide the customer with the soonest date that the full quantity of the item will be available. Also, buyers can review the projected inventory for handling projected stock-outs.
Check Item Availability Popup

The Check Item Availability popup can accessed from a quote, opportunity, sales order, or item record. The popup displays the same data as the Check Item Availability page.

To learn more, see Checking Item Availability.

Enabling Available to Promise

You can enable the Available to Promise feature to check availability of inventory and assembly items.

**Note:** Using this feature requires that you have also enabled the Demand Planning feature.

To enable the Available to Promise feature:

1. Go to Setup > Company > Enable Features.
2. On the Items & Inventory subtab, check the Available to Promise box.
3. Click Save.

After the feature is enabled, you can set up item records for it. Read Setting Up Item Records for Available to Promise.

Setting Up Item Records for Available to Promise

After you have enabled the Available to Promise feature, you can set up item records to use the feature.

To set up an item record for Available to Promise:

1. Go to Lists > Accounting > Items.
2. Click Edit next to the name of an inventory or assembly item.
3. On the item record, click the Purchasing/Inventory subtab.
   For details and examples, read Available to Promise Methods.
5. In the ATP Lead Time field, you can enter a lead time to always use in Available to Promise calculations.
   The ATP lead time is used as a planning horizon for supply and demand considerations in the ship date recommendation calculations. The ATP lead time is also used to provide a ship date on an order when no inventory is available based on future supply and demand.
   If you use the Multi-Location Inventory feature, the Locations subtab shows an ATP Lead Time column. You can enter a distinct ATP lead time for each location in the fields in this column.
6. Enter additional data in fields as necessary.
7. Click Save.

Available to Promise Methods

On item records, you can choose the Available to Promise (ATP) method used to calculate the available date for the item. You can choose one of the following:

- Discrete ATP
Discrete ATP

The discrete ATP method reviews the amount available in each supply order and provides an available date for the specific quantity.

Non-posting purchases are considered to be “buckets” and sales orders fill those buckets. The quantity that is available for an item is based on the quantity available within an individual purchase bucket.

In the example below, four supply sources are entered into NetSuite:

1. A purchase order with an expected receipt date of January 1st.
2. A work order with a production end date of February 10th.
3. A transfer order with an expected receipt date of February 15th.
4. A purchase order with an expected receipt date of March 1st.

Based on these sources of supply, NetSuite develops “buckets” for inventory calculations. Next, demand sources are counted against these buckets based on the following:

- Expected ship date for sales orders and transfer orders
- Production start date for work orders

The quantity that is available on a certain date is based on the supply and demand calculated for each bucket.

Using Discrete ATP, NetSuite calculates the earliest date that the item is available within the bucket.
If a sales rep requests a quantity of 10, then the available date is 1/1.
If a sales rep requests a quantity of 30, then the available date is 2/15.
If a sales rep requests a quantity of 100, the available date is calculated based on the sum of the current and ATP lead time.

Using the Discrete ATP method, the quantity available is based on the discrete buckets. If you anticipate that your sales order quantities will always be greater than the supply quantities, you should consider the Cumulative ATP with Look Ahead method to handle inventory shortages.

**Cumulative ATP with Look Ahead**

Using the Cumulative ATP with Look Ahead method, supply estimates are cumulative based on all outstanding orders within a horizon. This enables you to account for shortages that may occur in the future.

These supply calculations are based on future-dated non-posting transactions: purchase orders, sales orders and work orders.

For example, you can build a maximum of 50 widgets per week based on current capacity. Widget Mart places an order of 200 units to be delivered a month from now. You must accumulate inventory for the next month to fulfill this Widget Mart order. This means that any new sales orders must have a delivery date of over one month from now.

For example, four supply sources are entered into NetSuite:

1. A purchase order with an expected receipt date of January 1st.
2. A work order with a production end date of February 10th.
3. A transfer order with an expected receipt date of February 15th.
4. A purchase order with an expected receipt date of March 1st.

On March 1, a sales order for 60 units is entered, as well as a purchase order for 50 units.

- The 50 units on the purchase order will be consumed by the sales order.
- The sales order will also use 10 units from the transfer order on February 15.
- The total amount available reflected includes this transfer amount.

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<th>PO #1</th>
<th>WO #1</th>
<th>TO #1</th>
<th>PO #2</th>
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<tr>
<td></td>
<td>January 1</td>
<td>February 10</td>
<td>February 15</td>
<td>March 1</td>
</tr>
</tbody>
</table>
Available to Promise

<table>
<thead>
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<th></th>
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<th>WO #1</th>
<th>TO #1</th>
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<td>January 1</td>
<td>February 10</td>
<td>February 15</td>
<td>March 1</td>
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<tr>
<td>Demand</td>
<td>(Orders dated from January 1 – February 9)</td>
<td>(Orders dated from February 9 – February 14)</td>
<td>(Orders dated from February 15 – February 28)</td>
<td>(All orders on March 1st and beyond, within ATP lead time)</td>
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<td>Available</td>
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<td>20</td>
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<td>50</td>
</tr>
</tbody>
</table>

Checking Item Availability

When you have enabled the Available to Promise feature, you can check the future availability of an item. This shows the demand date recommendation based on available supply.

Item availability calculations use the following assumptions:

- When the item availability check is done on an assembly, all existing orders for the assembly are reviewed. NetSuite does not review possible component shortages of components.
- The current item availability check is available only for assembly and inventory items.
- Existing drop ship orders and special orders are not considered as part of supply or demand.
- Recommended purchases or work orders in a supply plan are not considered for availability calculations because these orders are not yet firmed.

You can check item availability in the following ways:

- Using the Check Item Availability Popup on Transactions
- Using the Check Item Availability Page

Using the Check Item Availability Popup on Transactions

To view recommendations based on available supply:

1. Open a sales orders, opportunity, or quote.
2. On a line-item for an assembly or inventory item, click the Expected Ship Date field.
   The Check Item Availability icon shows next to the field.
3. Click the Check Item Availability icon.
   The item availability popup opens and displays the following data about the item.
   - Primary Information
     - Location
     - Item name
     - Quantity shown on the transaction
Line quantity shipped – Quantity shipped on the transaction line
Line quantity committed – Quantity committed on the transaction line
Quantity remaining – Quantity that is neither shipped nor committed on the transaction line
Unit of Measure
Earliest Available Date - This is the soonest date that the remaining quantity on the transaction line will be available.

- **Item Information**
  - ATP Method
  - Quantity on hand
  - Quantity available
  - Quantity committed
  - Lead time
  - Safety stock level

4. Enter a new quantity in the popup.
   When you click **OK**, the new quantity populates the transaction.

5. Select an alternate unit of measure in the popup.
   When you click OK, quantities are updated based on the alternative unit of measure.
   The bottom portion of the popup displays the quantity available of the item based on future dates.
   The supply, demand and balance quantities are shown for each date.

6. Close the popup by clicking one of the following:
   a. Click **Close** to close the popup without updating any data on the transaction.
   b. Click **OK** to close the popup and to update the transaction with new data entered in the popup.

Using the Check Item Availability Page

The Check Item Availability page can be used to verify availability of assembly and inventory items.

**To check item availability:**

1. Go to Transactions > Inventory > Check Item Availability.

**Primary Information**

1. Select a location.
2. Select an item.
3. After you have selected an item and location, the general availability data shown below populates the form.
   The page also displays the following data about the item.
   - **Primary Information**
     - **Location**
     - **Item name**
     - **Quantity shown on the transaction**
     - **Line quantity shipped**
     - **Line quantity committed**
- Quantity remaining
- Unit of Measure

  - Item Information
  - ATP Method
  - Quantity on hand
  - Quantity available
  - Quantity committed
  - Lead time
  - Safety stock level

If a unit of measure is set for the item, it is displayed. You can optionally select a different unit. Note that to show an availability date, you must enter a specific quantity.

4. Enter the quantity required.
   - The date shown in the **Earliest Available Date** field is the soonest date the full quantity is available.
   - The **Earliest Available Date** changes based on the quantity being requested.

5. For each date shown, the **Supply** column displays the quantity to be added to the available total. The **Demand** column displays the quantity to be removed from the available total.

You can click a quantity in either column to open the Check Item Availability Detail window. The detail window lists all transactions that affect the totals for that date.

   - The supply detail shows existing purchase orders and work orders that add inventory on that date.
   - The demand detail shows existing sales orders and transfer orders that deplete inventory on that date.

You can click on the transaction number in the detail window to open the transaction form.

6. To check availability for additional items, make new selections in the **Location**, **Item**, and **Quantity** fields.
Available to Promise Earliest Availability

After the Supply Allocation feature is enabled, NetSuite 2020.2 enables you to view the earliest availability estimate in the Sales Order line, in accordance with your supply allocation policies. This new availability calculation provides an earliest available date based on a real-time simulated supply allocation.

The computed availability date follows supply allocation policies, which means sales order required by dates have a higher probability of being met.

Enabling supply allocations prompts the following changes in NetSuite:

- The Expected Ship Date field is disabled and the embedded link to the Check item Availability pop-up is not visible.
- The Transactions > Inventory > Check item Availability page is not available.
- The new Earliest Availability icon is embedded in the Sales Order Supply Required By Date column.

To enable Earliest Availability:

1. Go to Setup > Company > Enable Features.
2. Click the Items & Inventory subtab.
3. In the Inventory section, check the Supply Allocation box.
4. Click Save.

To enable the Earliest Availability pop-up, grant Create, Edit or Full permissions the Earliest Availability role. To learn more, see the help topic NetSuite Roles Overview.

To calculate earliest availability on sales orders:

1. Go to Transactions > Sales > Enter Sales Orders.
2. In the Sales Order Custom Form, select Sales Order – Allocations.
3. Complete the Sales Order form.
   To learn more, see the help topic Creating Sales Orders.
4. In the Sales Order, click the Items subtab.
5. Select an Item.
6. Enter an item Quantity.
   Enter other details for this item.
7. In the Supply Required by Date column, click the Earliest Availability icon (Earliest Availability).
8. Complete In the Earliest Availability window fields:
   The Subsidiary and Item information is displayed.
   a. Select the Location you want to check supply availability.
      Selecting other locations may change the Supply Required by Date.
   b. Enter the Quantity of items you want to ship.
   c. The Fulfilled amount is displayed.
   d. Select an Allocation Strategy.
   e. Enter the Supply Required by Date target that you and your customer have agreed to.
   f. Any change to the following fields prompts the system to re-compute the earliest available date:
      - Location
Available to Promise

- Quantity
- Supply Required by Date
- Allocation Strategy

9. To accept the earliest availability date, click **OK**
   The Location, Quantity, Supply Required by Date, and Allocation Strategy fields are updated.
   To reject the earliest availability date and to return to the order line without populating the fields, click **Close**.

To not use the Supply Allocation calculation method, set the Sales Order line allocation strategy to **Do Not Allocate**. The Check Item Availability pop-up will be shown in the Sales Order Expected Ship Date column. The system then records treats all sources of supply as consumed against the demand orders, regardless of their allocations.

Multi-Location Inventory

If you stock, sell, and fulfill items in more than one location, you can use the Multi-Location Inventory feature to manage the inventory for your distinct locations.

The Multi-Location Inventory feature enables you to associate each item and transaction with a location. Then, you can track the purchase, sale, stock level and value of items in your locations, as well as transferring inventory between locations.

You should enable the Multi-Location Inventory feature when you enable the Locations feature, even if you plan to track only one location.

![Note:](image-url) After you have enabled the Multi-Location Inventory feature and distributed items, you cannot turn the feature off without contacting Customer Support.

Click one of the following links to learn more about Multi-Location Inventory:

- Setting Up Multi-Location Inventory
- Enabling the Multi-Location Inventory Feature
- Distributing Inventory
- Tracking Inventory in Multiple Locations
- Transferring Inventory
- Inventory Replenishment and Withdrawal
- Serialized Inventory with Multiple Locations
- Inventory Level Warnings
- Non-Available Inventory Locations
- Returned-Item Costing Using Multi-Location Inventory

Setting Up Multi-Location Inventory

To set up multi-location inventory:

1. Before you enable the Multi-Location Inventory feature, you must fully ship or otherwise close all open orders.
Important: Do not skip this step.

2. Enable all features required to use Multi-Location Inventory.

Note: After you have enabled the Multi-Location Inventory feature and distributed items, you cannot turn the feature off without contacting Customer Support.

To learn more, see Enabling the Multi-Location Inventory Feature.

3. Create a location record for each location.

For more information, read the help topic Creating Locations.

After you enable this feature, all inventory defaults to an unassigned location. Your inventory must then be distributed to each location.

For more information, read Distributing Inventory.

After you have enabled the feature and distributed items, you can track the inventory you stock in each location. To learn more, see Tracking Inventory in Multiple Locations.

Enabling the Multi-Location Inventory Feature

When you enable the Multi-Location Inventory feature, you must also enable these features: Locations, Track Inventory, Multi-Location Inventory, Advanced Shipping and Advanced Receiving.

Important: You cannot post inventory transactions dated prior to the date you enable Multi-Location Inventory. Verify that inventory levels on item records are current.

To enable Multi-Location Inventory:

1. Go to Setup > Company > Enable Features.
2. On the Company subtab, check the Locations box.
3. On the Items & Inventory subtab, check the Inventory box and the Multi-Location Inventory box.
4. On the Transactions subtab, check the Advanced Shipping box and the Advanced Receiving box.
5. Click Save.

Note: After you have enabled the feature and distributed items, you cannot turn the feature off without contacting Customer Support.

After you have enabled the Multi-Location Inventory feature, you need to create a record for each of your company’s locations and distribute items.

To learn more, see the help topic Locations Overview.

To learn more, see Distributing Inventory.

Distributing Inventory

An inventory distribution updates item information for all your locations. After you have enabled the Multi-Location Inventory feature, you must to perform a distribution before you can enter inventory transactions.
Distribution Requirements

To distribute inventory, you must first have the Multi-Location Inventory feature enabled. For more information, read Setting Up Multi-Location Inventory.

Then, create location records for each of your company locations. For more information, read the help topic Creating Locations.

When you enable the Multi-Location Inventory feature, all inventory items are considered to be in a Null location. The Distribute Inventory transaction allocates inventory from its original, unassigned location to the various locations you created.

An item shows on the list for distribution if:

- The item has not already been distributed.
- The distribution is dated after the last inventory-affecting transactions.
- The item has a non-zero quantity on hand.
- It is an inventory item or assembly item.
- The item is active.

**Note:** the following before you distribute inventory:

- NetSuite recommends that you distribute inventory during non-peak business hours.
- Your data is most accurate if you distribute all unassigned inventory at one time and make no changes to transactions dated before the distribution. If you change earlier transactions and then return to Distribute Inventory, the Undistributed column may show an incorrect or negative quantity. To correct for this error, go to Transactions > Inventory > Adjust Inventory.
- Inventory is distributed only if the stock level is 0 or greater.

**Note:** Because an item’s inventory level should be zero or positive prior to distribution, NetSuite recommends that you run the Reviewing Negative Inventory report before distributing inventory. Read more about inventory distribution in Reviewing Negative Inventory.

**Warning:** You should not delete or change inventory transactions dated prior to an inventory distribution, as this can cause difficulties maintaining accurate inventory data.

Entering an Inventory Distribution

You can choose from two ways to enter an inventory distribution:

**Simple Inventory Distribution**

The Simple method is the easiest way to distribute inventory and is ideal if you want to get started with inventory transactions right away.

No details are entered to distribute particular items and amounts to specific locations. It is intended that these details will be entered at a later date. All of your inventory is distributed to a single location.

Later, you may create inventory transfers for inventory that needs to be relocated and set the correct quantity on hand for each location.
Multi-Location Inventory

For details on how to enter a Simple Inventory Distribution, read Simple Inventory Distribution.

Manual Inventory Distribution

The Manual method enables you to enter specific details to distribute particular items and quantities to specific locations.

This method requires more time than the Simple method, which means more time before you can enter inventory transactions. Using the Manual method is ideal if you want to set a quantity on hand for each location before any inventory transactions are entered for individual locations.

For details on how to enter a Manual Inventory Distribution, read Manual Inventory Distribution.

Simple Inventory Distribution

A Simple Inventory Distribution is the simplest way to distribute inventory. All of your inventory is distributed to a single location and transfer requests are created for inventory that needs to be relocated. No details are entered to distribute particular items and amounts to specific locations. It is intended that these details will be entered at a later date.

Using the Simple method is ideal if you want to get started with inventory transactions right away and you are able to wait to specify particular quantities for each location.

You can alternatively choose to enter a Manual Inventory Distribution. For more information, read Manual Inventory Distribution.

Warning: You should not delete or change inventory transactions dated prior to an inventory distribution, as this can cause difficulties maintaining accurate inventory data.

To enter a Simple Inventory Distribution:

1. Go to Transactions > Inventory > Distribute Inventory.
2. Click Simple.
3. The Date field autofills with the current date. You can select or enter another date.

   Note: If you postdate this distribution transaction, be sure that the date you choose is after the date of any other postdated inventory transactions, especially transactions not associated with locations.

4. Select the posting period you want to post this distribution to. If a period is closed, you cannot post to that period.
5. In the Ref. No. field, enter information to identify this distribution in a list of other transactions. If you have enabled auto-generated numbering, this will autofill.

   Auto-generated numbering is enabled at Setup > Company > Auto-Generated Numbers. On the Transactions subtab, check the box in the Allow Override column next to Inventory Distribution.

6. In the Variance Account field, select an account for this distribution. Usually, an expense account for inventory distribution is selected here.
7. In the Location field, select the one location you are distributing ALL items into.
8. Select a Department or Class if you track them.
9. In the Memo field, enter a memo to identify this inventory distribution.

10. In the item list shown, you can review the items and quantities that will be distributed. You cannot make changes to this list. Click the arrow in the field above the Total Stock column to select additional items to review.

11. Click Save.

After you have saved the distribution, you can enter inventory transactions.

It is important to enter a Manual Inventory Distribution at a later point in time after you have done a Simple Distribution to maintain accurate inventory records for all of your locations.

Manual Inventory Distribution

A Manual Inventory Distribution enables you to enter specific details to distribute particular items and amounts to specific locations. This method requires more time than the Simple distribution method, which means more time before you can enter inventory transactions.

Using the Manual method is ideal if you want to specify quantities for each location before inventory transactions are entered for individual locations.

You can alternatively choose to enter a Simple Inventory Distribution. For more information, read Simple Inventory Distribution.

Warning: You should not delete or change inventory transactions dated prior to an inventory distribution, as this can cause difficulties maintaining accurate inventory data.

To enter a Manual Inventory Distribution:

1. Go to Transactions > Inventory > Distribute Inventory.
2. Click Manual.
3. The Date field autofills with the current date. You can select or enter another date. If you postdate this distribution transaction, be sure that the date you choose is after the date of any other postdated inventory transactions, especially transactions not associated with locations.
4. Choose a posting period for this transaction.

   Note: You cannot post to a closed accounting period.

5. In the Ref. No. field, enter information to identify this distribution in a list of other transactions. If you have enabled auto-generated numbering, this will autofill.
6. In the Variance Account field, select an account for this distribution. Usually, this is an expense account for inventory distribution.
7. Select a Department or Class if you track them.
8. In the Memo field, enter a memo to identify this inventory distribution. When you use the Search Transactions feature, you can search for specific words and phrases in the Memo field.
9. The table at the bottom of the page shows information about undistributed items.
   - The Item column shows all items in your initial inventory, 50 items at a time.
   - The Total Stock column shows the stock count for each item in your initial inventory.
There is a column for each of your company location records with a data-entry field beneath it.

10. In the field beneath each location, enter the quantity you want to allocate to that location.

   For each item, if the total of quantities entered for all locations is not equal to the number in the Total Stock column, the variance quantity appears in the Variance column.

   The variance amount for each item appears in the Variance Amount column.

   The total variance of your inventory distribution appears in the Total Variance Amount field at the top of the page.

11. If you are distributing lot-numbered items or serialized items, enter these numbers in the Serial/Lot Numbers field.

   Separate each serial number with a space, comma or by pressing Enter after each one.

   You must enter a serial number for each of the quantity on hand that you enter. For example, if you enter a quantity on hand of 2, then you must enter two serial numbers.

   Lot numbers must be entered in this format: LOT#(Quantity)

   For example, to enter a quantity of 100 items as Lot number ABC1234, enter ABC1234(100) in the Lot Numbers column.

12. Click Save.

For any items with an undistributed stock quantity, you can distribute inventory again at a later time.

Note: These Distribute Inventory changes are permanent. Your stock counts entered as of the date specified are not changed as of that point, even if you enter transactions with dates prior to the worksheet date.

For example, you can enter an inventory distribution dated 10-25-08 and allocate 10 of item number UNV21200 to Location One. You then create an invoice dated 10-24-08 which sells two of item UNV21200 from Location One. The quantity of the item at Location One on 10-25-08 remains at 10 as determined by the inventory distribution.

After you have distributed an item, if you enter a transaction that is dated before the distribution and includes the distributed item, the transaction will not have location impact. This is true even if you choose a location on the transaction.

From the previous example, the UNV21200 items sold on the invoice created on 10-24-08 would not be able to be tracked by location, because the invoice date is prior to the distribution date of that item on 10-25-08.

Tracking Inventory in Multiple Locations

After you have distributed inventory to each of your locations, you can keep track of stock using these processes:

To view the stock status of all inventory items:

1. Go to Lists > Accounting > Items.
2. When the Items page opens choose Stock in the View field.

   The Stock view shows information about each item such as the following:

   - Quantity On Hand – the number of units of an item in stock
   - Quantity On Order – the number of units of an item pending receipt from a vendor
Multi-Location Inventory

- **Quantity Committed** – the number of units of an item reserved by unfulfilled sales orders
- **Reorder Point** – the stock level at which a new order for the item needs to be placed

When an item reaches its Reorder Point, a reminder is generated to purchase the item.

**To view the stock status of individual inventory items:**

1. Go to Lists > Accounting > Items.
2. Click on the name of an item to check stock status per location.
3. The **Inventory** subtab of the item record shows information such as the following:
   - **Quantity On Hand** – the number of units of an item in stock
   - **Reorder Point** – the stock level at which a new order for the item needs to be placed

   When an item reaches its Reorder Point, a reminder is generated to purchase the item.
   - **Purchase Price** – the price paid for the item
   - **Total Value** – the number of items in stock multiplied by the purchase price

**Note:** If you sell items online with a NetSuite Web Store, you cannot designate a single particular location for your Web Store inventory.

Your Web Store shows the quantity on hand for all locations combined, including locations such as In Transit, Consignment, and international warehouses. To learn more, see the help topic **Shopping Preferences.**

**Fulfillments and Multiple Locations**

- Changing locations on partially fulfilled order lines can cause out-of-sync inventory counts. You should split items into multiple lines on each order by location.

  For example, you have an order line for Item #2345 with quantity of 30. Location A is selected on that line.

  You fulfill 20 of the items from Location A. Then, you decide to fulfill the last 10 from Location B.

- Instead of changing the location on that fulfillment line, you should close that line. Next, change the original order to add a new line showing a quantity of 10 with Location B selected on that line. Then, you can fulfill the items from Location B.

  For details about closing lines, read the help topic **Closing Line Items on Sales Orders.**

**Serialized Inventory with Multiple Locations**

When you are using multiple locations to track inventory, serial numbers are also tracked by location. A serial number can be in stock at only one location and transactions with serialized items must have the correct location selected.

For the purchase of new serialized items, you must select a location and enter the serial numbers you are receiving. The quantity of serial numbers entered must equal the quantity of items you are receiving.

For the sale of serialized items, you are only able to sell a serial number from the location where it is in stock. If you attempt to sell a serial number from an incorrect location, you are notified when you try to save the transaction. If you have customized your forms to select inventory locations per line item, entering a serial number automatically selects the correct location where the number is located.
Non-Available Inventory Locations

When you use the Multi-Location Inventory feature, you can identify individual locations where inventory can be stocked, but cannot be committed on sales or fulfillments.

This is useful to maintain inventory records for items you prefer to keep separate while they are not available for sale. For example, you can track the following:

- Returned items that require inspection or repair
- Items not available for sales placed in your web store

Identify the availability of inventory on each location record by checking the appropriate boxes on the location record:

- **Make Inventory Available**
  - Check this box on a location record to make all on-hand inventory stored at the location available to be added to orders.
  - Clear this box if you prefer that on-hand inventory stored at the location is excluded from the available count.

- **Make Inventory Available in Web Store**
  - Check this box on a location record for on-hand inventory stored at the location to be included in the total quantity available that displays in the Web Store.
  - Clear this box if you prefer that the on-hand inventory stored at the location is excluded from the total quantity available that displays in the Web Store.

To learn more, see the help topic Creating Locations.

Returned-Item Costing Using Multi-Location Inventory

With the Multi-Location Inventory feature, the method for tracking costs for items returned by customers depends on when you started using NetSuite.

- If you began using NetSuite with Version 2007.1.0, NetSuite uses the exact cost from the original sale for returns that are linked to the sale. This is true even if the sale is associated with a different location than it is returned to. If you are not restocking, NetSuite uses the average cost at the location you are returning to.
- If you began using NetSuite prior to Version 2007.1.0, returned-item costing uses the cost identified for the location it is being returned to.

For example, costs for widgets at two locations are as follows:

- Location A widget cost: $10
- Location B widget cost: $12

If a widget is sold from Location A and is returned to Location B, what is the cost tracked for the returned widget?

- If you began using NetSuite with Version 2007.1.0, the returned-item cost shows as $10.
- If you began using NetSuite prior to Version 2007.1.0, the returned-item cost shows as $12.

If your account uses the older returned-item costing method but you would prefer to use the new method, you can choose to activate exact costing by location for returned items in your account. For
more information on changing returned-item costing in your account, please contact NetSuite Customer Support.

If you use the Serialized Inventory feature, the below applies:

- If the item return is not linked to a sale or if the exact-cost preference is not enabled, NetSuite uses the average cost at that location for the serial number on the return. If the serial number has never been received at that location, then the cost used is zero and you must use the Return Cost Override field on the item receipt to enter the correct cost.

**Important:** Using the new costing method can affect historical costing. For example, costing on some or all historical transactions may be recalculated using the new method in the following cases:

- When you edit an existing transaction and save it
- When NetSuite performs a requested inventory costing calculation correction

For more details on ways the new costing method may affect historical costing, please contact NetSuite Customer Support.

More information about item costing can be found by reading Item Return Costing.

### Advanced Item Location Configuration

When you use the Inventory and Locations features, certain attributes about each item are associated with locations. These attributes include information about the item's cost, stock levels, supply management, and more. To best access and manage large amounts of item data, you can enable the Advanced Item Location Configuration feature, which offers the advanced management of assigning and maintaining item attributes associated with locations.

Using the Advanced Item Location Configuration feature, you have the ability to filter the location information that displays on item records to make item attribute data more accessible.

The following are shown by default:

- Only show locations where attributes have been assigned
- Only show locations where inventory activity occurred or transactions have been entered

Then you are able to filter by subsidiary and location, as well as choose preset View filters such as Costing, Inventory, Planning, and more.

You can also set up template items to simplify item record creation. For example, set up a template item with standard packaging attributes you generally assign to items. Later, when you add a new packaging item, you can copy the attributes over from the template item.

**Note:** Enabling the Advanced Item Location Configuration feature removes the limitation of having a maximum allowance of 100 location records. Enabling the Advanced Item Location Configuration feature also removes the ability to update the Location sublist related fields on item records using CSV Import.

Enabling Advanced Item Location Configuration

To use Advanced Item Location Configuration, you must enable the feature.
Enabling Advanced Item Location Configuration

Note that this feature requires that the Multi-Location Inventory feature is also enabled. For details about this feature, read Multi-Location Inventory.

The location attributes that will display for items depends on the features you have enabled.

For details, read Advanced Item Location Configuration.

**To enable Advanced Item Location Configuration:**

1. Go to Setup > Company > Enable Features.
2. Click the Items & Inventory subtab.
3. In the Inventory section, verify that the Multi-Location Inventory feature is enabled. Check this box if it is not.
4. In the Items section, check the Advanced Item Location Configuration box.
   - Enable this feature for advanced management of item attribute information that is associated with each location. This helps you filter to access only the data you need for specific locations.
5. Click Save.

Using Advanced Item Location Configuration

After you have enabled the Advanced Item Location Configuration feature, when a new item record is added, no data shows on the Locations subtab of the item record at first. This is because no attributes have been added yet to the record and no inventory transactions have been entered. Location data shows only after attributes have been assigned or inventory transactions resulting in on-hand balances have been entered. For details, read Working with Item Location Attributes.

After item location attributes are assigned or inventory balances exist in a location, make selections in the following fields on the Locations subtab of an item record to determine which locations show on the subtab and which columns of information show for each location in the list.

**Note:** Using the Advanced Item Location Configuration feature, locations do not display data for serial or lot numbered inventory. You must open the Inventory Detail for an item in order to view serial or lot numbered inventory data.

Subsidiary Filtering

**Note:** This field shows only in NetSuite OneWorld accounts.

In the Subsidiary field, select a subsidiary to filter the list to show only the selected location. To select more than one subsidiary, make a selection and then hold down the Shift key while clicking additional selections.

After making your selections, the locations and item attribute data show at the bottom of the subtab.

Location Filtering

In the Location field, select a location to filter the list to show only the selected location. To select more than one location, make a selection and then hold down the Shift key while clicking additional selections.

After making your selections, the locations and item attribute data show at the bottom of the subtab.
View Filtering

In the View field, select the custom list view you want to use to view the contents of this subtab. The view you select determines the item data displayed for each location.

Standard list views include the following:

- Costing
- Inventory
- Inventory count
- Order management
- Other
- Planning
- Planning times

To create a new custom list view, click Customize View. Custom views allow you to view a list based on the results of saved search criteria. After a custom view is created, it shows in the View list for selection.

Working with Item Location Attributes

After you have added subsidiaries or locations on an item record, you can specify the attributes for that item that are specific to each location. The details below describe how to add a location and assign specific attributes.

Note: The Subsidiary field shows only in NetSuite OneWorld accounts.

To add a location to an item record:

1. Open the item record.
2. On the Locations subtab, click the Add Location button. The Item Location Configuration window opens.
3. Enter a Name for the location.
4. Select the appropriate Subsidiary. Your selection in this field determines the choices available in the Location field. Only locations associated with the chosen subsidiary will show.
5. Select the Location you want to add.
6. Optionally add a Memo. Later, you can search for the text you enter here.
7. Complete the steps below to assign item attributes for the location.

You can assign or edit the particular attributes for a location.

Important: When you first associate a subsidiary on an item record, you must save the item record to add the subsidiary before you add location attributes for the newly added subsidiary.

To assign or edit item location attributes:

1. Open the item record.
2. On the Locations subtab, click Edit next to a location.
   The Item Location Configuration window opens.

After item location attributes are assigned, you can change them later, if needed. Read Edit Item Location Attributes.

### Duplicate Item Attributes from a Single Location

When you use the Advanced Item Location Configuration feature, you are able to copy the item attributes that exist in a single location to duplicate them in another location. The attributes can be copied to another location on the same item record, or to a location on another item record.

**To duplicate item attributes from a single location:**

1. Open the item record that contains the attributes you want to copy.
2. On the Locations subtab, click the Duplicate link next to the location you want to copy.
   The Duplicate Single Location window opens. It enables you to duplicate attributes from one location on a source item to target items and locations.

   **Note:** For NetSuite OneWorld accounts, the target items and locations must be in the same subsidiary as the source.

3. Under the Source heading, the source item and source location are displayed. The item and location displayed are the source from which location attributes are derived.
   The attributes associated with this item in this location are displayed at the bottom of the window.
4. Check the box next to one or more attributes to duplicate them from the source location to the target.
   Check the box to the left of the Field column heading to select all shown attributes.

   **Note:** Attribute values shown in this window are display only, they cannot be changed here.

5. Under the Target heading, make selections to determine which items and locations that attributes will be copied to.
   a. Click the Item field.
      i. Enter or select one or more items to determine which items the attributes are copied to.
      ii. Click the Select Multiple icon to open the Choose Item window and select more than one item.
      If the source item is a different item type than the target item, data in extraneous fields is copied over but does not affect calculations. For example, if the source item processed is a time-phased planning item but the target item is not a time-phased planning item, fields relevant to time-phased planning will be populated on the target item but the data is not used for calculations.
      iii. Click Done after selecting items.
   b. Click the Location field.
      This list displays only locations that are not yet assigned.
      i. Select one or more locations to determine which locations the attributes are copied to.
Check the **Select All Locations** box to choose all locations.

ii. Click the **Select Multiple** icon to open the Choose Location window and select more than one location. Click a location in the left side of the window to select the location and move it to the right side.

iii. Click **Done** after selecting locations.

6. After all target items and locations are selected, click **Submit**.

When the form is submitted, a bulk process to update the item attribute records begins. After the process is complete, a confirmation page displays the processed item location configurations.

### Duplicate Item Attributes from Multiple Locations

When you use the Advanced Item Location Configuration feature, you are able to copy the item attributes that exist in multiple locations for a single item to multiple locations for other items. One or more attributes can be copied from the source locations to the target items and the selected locations.

**To duplicate item attributes from multiple locations:**

1. Open the item record that contains the attributes you want to copy.
2. On the **Locations** subtab, click the **Duplicate Multiple Locations** button next to the location you want to copy.
   The Duplicate Multiple Locations window opens. It enables you to duplicate multiple attributes and locations on a source item to target items.
3. Under the **Source** heading, the source item is displayed. This item is the source from which location attributes are derived.
4. Under the **Source** heading, choose one or more source locations in the **Location** field. Check the **Select All Locations** box to select all available locations.
   Click the **Select Multiple** icon to open the Choose Location window add multiple source locations. Click the **Done** button after making your selections.
   The attributes associated with this item in the selected locations are displayed at the bottom of the window.
5. Under the **Target** heading, make selections to determine which items that attributes will be copied to.
   1. Click the **Item** field.
      a. Enter or select one or more items to determine which items the attributes are copied to.
      b. Click the **Select Multiple** icon to open the Choose Item window and select more than one item.

<table>
<thead>
<tr>
<th><strong>Note:</strong> If the source item is a different item type than the target item, data in extraneous fields is copied over but does not affect calculations. For example, if the source item processed is a time-phased planning item but the target item is not a time-phased planning item, fields relevant to time-phased planning will be populated on the target item but the data is not used for calculations.</th>
</tr>
</thead>
<tbody>
<tr>
<td>c. Click <strong>Done</strong> after selecting items.</td>
</tr>
</tbody>
</table>

Inventory Management
6. After all source locations and target items are selected, click **Submit**.

When the form is submitted, a bulk process to update the item attribute records begins. After the process is complete, a confirmation page displays the processed item location configurations.

**Edit Item Location Attributes**

After you have set up attributes for an item location, you can make changes to that configuration.

**To edit item location attributes:**

1. Open the item record.
2. On the **Locations** subtab, click **Edit** next to a location.
   
   The Item Location Configuration window opens and displays the attributes for that location.

   **Note:** Only attributes relevant to the item are accessible. For example, data on the Planning subtab is available only if the item is a time-phased item.

3. Click the **Name** field to edit the item name.
4. Optionally add a **Memo** to the record.
5. The **Location** field displays the location that this record identifies attributes for.
   
   For details about all fields available on this record, read the help topic **Locations**.
6. Click the **System Information** subtab to view details about changes made to the Item Location Configuration record.

**Supply Chain Control Tower**

You use the Supply Chain Control Tower feature to simulate inventory supply and demand across your supply chain. These simulations, or Snapshots, are used to analyze whether inventory levels are in line with demand or planned levels. This can assist you to juggle matching customer requests with supply availability.

Snapshot analysis can help you plan to receive a product only when it is needed, reducing inventory investment. Understanding your inventory levels in conjunction with forthcoming supply and demand helps you analyze your supply chain logistics to plan inventory purchases and production.

When the Supply Chain Control Tower feature is enabled, forecasting simulations, called snapshots, can be performed for Inventory items and Assembly/Bill of Materials items, including lot numbered and serial numbered items. These snapshots show a running balance of inventory based on sales orders and future inventory levels.

The following transactions are considered to calculate supply and demand on snapshots:

- Sales Orders (Demand only)
- Transfer Orders (Demand and Supply)
- Intercompany Transfer Orders (Demand and Supply)
- Work Orders (Demand and Supply)
- Purchase Orders (Supply only)
When you generate a snapshot for an assembly item, the snapshot simulates the inventory level only for the assembly item. You would need to generate additional snapshots for each component to analyze component inventory levels.

Snapshot simulations may also be useful for inventory planning to introduce new products or for end-of-life product phases.

**Note:** If item record and location restrictions apply to users in your account based on their assigned role, those restrictions will continue to apply when accessing inventory information using this feature.

Setting Up the Supply Chain Control Tower Feature

To set up the Supply Chain Control Tower feature, do the following:

- **To enable Supply Chain Control Tower features:**
  1. Go to Setup > Company > Enable Features.
  2. Click the **Items & Inventory** subtab.
  3. Verify that these features are enabled:
     - Inventory
     - Multi-Location Inventory
     - Advanced Inventory Management
     - Demand Planning
  4. Check the **Supply Chain Control Tower** box.
  5. Click **Save**.

- **To set Supply Chain Control Tower preferences:**
  1. Go to Setup > Accounting > Control Tower Preferences.
  2. Enter the following preferences:
     - **Default Supply Chain Past Order Horizon** – Enter the number of days prior you want to be included in the snapshot. This will include past due orders dated during a range from current date back through the number of days defined here. The default for this field is 14 days.
     - **Default Supply Chain Future Order Horizon** – Enter the number of days ahead you want to be included in the snapshot. This will include future orders beyond the current date in the snapshot generated for this item.
For example, when you select 30 in this field, open orders are included that are due between the current date and 30 days out.

The default for this field is 30 days.

The maximum you can enter in this field is 365 days.

- **Vendor Predicted Days Late/Early** — Enter the number of days that a vendor is predicted to be late. The default for this field is 0 days. This value is used for all vendors by default, but you can set a vendor-specific value on the vendor record.

- **Vendor Predicted Risk Confidence** — Enter the confidence in percent of a vendor providing ordered items. The default for this field is 100. This value is used for all vendors by default, but you can set a vendor-specific value on the vendor record.

3. Click **Save**.

To set vendor-specific Supply Chain Control Tower preferences:

1. Go to Lists > Relationships > Vendors.
2. Click **Edit** next to the name of the vendor whose record you want to change.
3. Under User Entry Predicted Risk, enter:
   - **Predicted Days Late/Early** — Enter the number of days that this vendor is predicted to be late. When you create a new vendor, this field is automatically set to 0.
   - **Predicted Risk** — Enter the confidence in percent of a vendor providing ordered items. When you create a new vendor, this field is automatically set to 100.

4. Click **Save**.

**Accounting Preferences**

When using the Supply Chain Control Tower feature, the accounting preference Create Work Order in Supply Planning can use any selection except Do Not Generate.

To learn more, see the help topic **Items/Transactions Accounting Preferences**.

To set up Supply Chain Control Tower location records:

On location records, check the **Include in Control Tower** box to allow the location to appear in snapshots you generate.

To learn more, see the help topic **Creating Locations**.

**Set up item records for Supply Chain Control Tower:**

On inventory and assembly item records, in the Supply Chain Future Horizon field, enter the number of days ahead you want to be included in the snapshot. This will include future orders beyond the snapshot date generated for this item.

To learn more, see the help topic **Inventory Management**.

**Generating a Supply Chain Snapshot**

You can generate a Supply Chain Snapshot for Assembly or Inventory items.

**Generate a Supply Chain Snapshot**

1. Go to Lists > Accounting > Items.
2. In the **Item Name/Number** field, select an Assembly or Inventory item.

3. Optionally enter a **Memo**.

4. Optionally change the setting for **Past Horizon**. Select the number of days prior you want to be included in the snapshot. This will include past orders from the last generated snapshot for an item. The maximum is 60 days.

5. Note that the **Future Horizon** can be changed only on the item record or using the default preference. Read Setting Up the Supply Chain Control Tower Feature.

   Even if no setting is shown for the Future Horizon on a snapshot, the default future order horizon is used to generate the snapshot.

6. Click **Save** to generate a snapshot.

   The snapshot displays inventory and order data at the bottom of the form.

7. Click **Refresh** to view the latest updates.

8. Click **Edit** to modify the Memo you entered.

9. Click **Customize View** to customize the snapshot. For details, read the help topic Saved Searches.

The snapshot utilizes data in this order:

1. Supply
2. Demand
3. Past Due Supply
4. Past Due Demand

Planned orders from supply plans are included in snapshot calculations, as well as planned orders from reorder point planning. Planned orders are purchase orders only, not transfer orders.

Memorized transactions are excluded from the Supply Chain Snapshot for all order types: sales orders, transfer orders, and work orders.

### Generate Snapshots from Item Records

You can also generate a Supply Chain Snapshot directly from an item record. Go to Lists > Accounting > Items and click View next to the Assembly or Inventory item you want to generate a snapshot for. Then, click the Supply Chain Snapshot button in the record header to perform a simulation.

### Customizing a Snapshot Form

You can customize your Supply Chain Snapshot form to have better insight for analyzing inventory supply and demand. This enables you to more efficiently plan future purchases and product line production.

Customize your snapshot form to use the following new fields:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entity</strong></td>
<td>Add the Entity field to show information about the vendor or customer in the Supply Chain Snapshot.</td>
</tr>
<tr>
<td><strong>Original Date</strong></td>
<td>Add the Original Transaction Date field to show the Original Transaction Date in the Supply Chain Snapshot.</td>
</tr>
<tr>
<td><strong>Past Due Date</strong></td>
<td>Add the Past Due Date field to show the number of days past due in the Supply Chain Snapshot.</td>
</tr>
</tbody>
</table>
To customize Supply Chain Snapshot forms:

1. Go to Lists > Accounting > Items.
2. Click Customize View.
3. In the Field list, select the appropriate field value.
4. Click Add.
5. Click Save.

To use the above fields on Supply Chain Snapshots, you must use Advanced Inventory Management with these features enabled:
- Inventory
- Multi-Location Inventory
- Supply Chain Control Tower

Supply Chain Control Tower Dashboard

The Supply Chain Control Tower Dashboard gives you visibility into inventory, supply, and demand across your supply chain, enabling you to balance your inventory levels. For more information about the Supply Chain Control Tower, go to Supply Chain Control Tower.

The Dashboard provides a single, high-level view using three portlets:
- Alerts – Displays the actions you should take immediately based on the snapshot. This can include receipts past due, shipments past due, work order builds past due.
- Key Performance Indicators – Displays the current state of the supply chain based on the Inventory Asset Account, including inventory values, costs, and turnover.
- Predicted Risks – Displays risks you should address to prevent potential problems in the future based on the User Entry Predicted Risks fields on vendor records.

To view the Control Tower Dashboard, go to Lists > Supply Chain > Control Tower Dashboard.

Alerts Portlet

The Alerts portlet shows actions you should take immediately based on the snapshot. The data shown here is sourced from the Supply Chain Snapshot. The portlet must be manually or automatically refreshed to show current values. Each alert is a link to a Supply Chain Snapshot Details saved search. Click the link to go to the saved search results. The alerts include:
- Transfer Order Receipt Past Due
- Purchase Order Receipt Past Due
- Sales Order Shipment Past Due
- Transfer Order Shipment Past Due
Key Performance Indicators Portlet

The Key Performance Indicators portlet shows the current state of the supply chain. The portlet must be manually or automatically refreshed to show current values. The values shown are sourced from the Inventory Asset Account.

By default, the KPI portlet shows six indicators:

- Inventory (value)
- Cost of Goods Sold (COGS)
- Inventory Turnover per Period
- On Time Receipts
- On Time Shipments
- Average Inventory

Across the top of the portlet, four indicators are highlighted with cards. When you click a card, a trend graph appears for that indicator. For more information about trend graphs, see the help topic Trend Graphs.

To change which KPIs appear in the portlet, click Set Up.

Predicted Risks Portlet

The Predicted Risks portlet shows potential risks that should be addressed before they become actual risks. Currently this portlet shows only Late Purchase Orders. This data is sourced from the User Entry Predicted Risks fields on the vendor record. For more information, see Using the Predicted Risks Portlet.

Using the Predicted Risks Portlet

When you click a card on this portlet, the Supply Chain Predicted Risks page appears, showing you more information about the risk and the recommended action. For Late Purchase Orders, this recommendation would help to ensure that the purchase order will not be late. For example, the recommendation might be to schedule the purchase order for five days earlier than the original date.

If you agree with the recommendation, you can click Add recommendation to Snapshot. The simulation appears on the Supply Chain Snapshot as a popup. To view the simulation record that was created, click the link in the popup.

You can return to the snapshot and click Refresh. The newly created simulation appears.

To take an action on the simulation, click Edit in the Simulation column.

On the Supply Chain Snapshot Simulation page, select a status from the Status dropdown list:

- Authorized
- Implemented
- Rejected
- Under Evaluation

If you select Rejected, the simulation row disappears.
You can also add a simulation from the snapshot page.

**To add a simulation from the snapshot page:**

1. In the Simulation column, click **Add**.
2. Select a **Transaction Type**.
3. Enter a **Quantity**.
4. Select a **Status** from the dropdown list. When first creating a simulation, you would probably choose Under Evaluation so that you can assess the effect of the simulation on your inventory before approving it.
5. Under Demand Location, specify a **Demand Date**, **Demand Subsidiary**, and **Demand Location**.
6. Click **Save**.

When the Inventory Status feature is enabled, only quantities of inventory that are committable will appear. You indicate that inventory is committable by assigning an inventory status that has the Make Inventory Available for Commitment box checked. For more information on Inventory Status, go to Inventory Status.

**Setting Vendor-Specific Risk Confidence Settings**

When you set up the Supply Chain Control Tower, you can set default values for how many days late you expect material to arrive from vendors and your confidence level that these materials will arrive. Your preferences are applied globally, but you can override these settings for each vendor.

When you create a new vendor record, these fields will automatically be set from the default values entered on the Control Tower Preferences. The default values on the Control Tower Preferences are 0 days late and 100 percent confidence. When you enable the Supply Chain Control Tower feature, these fields are added to existing vendor records and set to null.

**To set risk confidence settings for a vendor:**

1. Go to Lists > Relationships > Vendors.
2. Click **Edit** beside the vendor you want to change.
3. Under User Entry Predicted Risk, enter:
   - **Predicted Days Late/Early** - The number of days late or early you expect this vendor to provide the required material. To indicate days early, enter a negative number.
   - **Predict Risk Confidence** - The confidence, in percentage, you have that this vendor will provide the required material.
4. Click **Save**.

**Scheduling Supply Chain Snapshots**

A Supply Chain Snapshot is a simulation of a transaction that you use to determine what effect that transaction would have on your inventory if you implemented it.

You can create a supply chain snapshot and refresh it manually. For more information, see Generating a Supply Chain Snapshot.

You can also schedule Snapshots so that they are refreshed regularly.
To schedule a Supply Chain Snapshot:

1. Go to Lists > Supply Chain > Supply Chain Snapshot Schedules.
2. Click New Schedule Supply Chain Snapshots.
3. Enter a Name for the snapshot schedule.
4. Enter a Description for the snapshot schedule.
5. Select an Item Saved Search.
6. Select a Recurrence Frequency, Daily or Weekly.
7. Select how often you want the refresh to occur in the Repeat Every dropdown list.
8. Enter the Next Date and Next Time when you want the snapshot to be generated.
9. Click Save.

Transferring Inventory

When tracking inventory using the Multi-Location Inventory feature, you can record any move of inventory between locations. Choose from the three ways described below to record your inventory transfers.

Basic Inventory Transfers

One Step Item Transfer

An inventory transfer decreases items in the source location and increases them in the receiving location, all in one step. Use the Transfer Inventory form to post information regarding changes in inventory levels for each item in each location.

For details about inventory transfers, read Basic Inventory Transfers.

Transfer Orders

Multiple Step Item Transfer

Use transfer orders to schedule and track the individual steps of your inventory transfer process. Transfer orders are different than basic inventory transfers because you can track each stage of the transfer process and manage items that are moved from one location to another over a period of time.

A transfer order is entered to schedule the movement of items and can go through an approval process. Approved transfers are then fulfilled out of the source location and you know when the items are in transit. Finally, the destination location receives the items and the items are counted in that location's inventory.

For details on transfer orders, read Inventory Transfer Orders.

Intercompany Transfer Orders

Transfer Between Companies

In a NetSuite OneWorld account, use an intercompany transfer order to move inventory between subsidiary locations within your company.
Basic Inventory Transfers

An inventory transfer decreases items in the source location and increases them in the receiving location, all in one step. Use the Transfer Inventory form to post information regarding changes in inventory levels for each item in each location.

**Warning:** You should not delete or change inventory transactions dated prior to an inventory distribution, as this can cause difficulties maintaining accurate inventory data.

To enter a basic inventory transfer:

1. Go to Transactions > Inventory > Transfer Inventory.
2. Complete the steps as described in the sections below.
3. Click **Save**.
4. When you click Save, your inventory is updated for each location.
   
   You can view transfers you create by going to Transactions > Inventory > Transfer Inventory > List.

**Primary Information**

1. The current date autofills the date field. Select or enter a different date if needed.
2. Select or enter a posting period for this transaction.
3. In the **Ref. No.** field, enter a reference number for this transaction. If you have set up auto-numbering, the current number shows in this field.
4. In the **Memo** field, enter information to identify this transaction in a list of other transactions.
   
   For example, when you use the Search Transactions feature, you can search for specific words and phrases in the **Memo** field.
5. In the **From Location** field, select the location you want to take the item out of.
   
   The inventory at this location is reduced.
6. In the **To Location** field, select the location where you want to send the item.
   
   The inventory at this location is increased.

**Classifications**

1. Select a **Department** or **Class** if you track them.
2. When a document type has the Allow Override option enabled, users can unintentionally introduce duplicated document numbers and numbering gaps into your account.
   
   To prevent duplicated document type numbers and numbering gaps, you can customize transaction type records to display the **Generate TranID on Save** box. When this box is checked, the document number is recorded when the user saves the transaction record rather than when the user opens the transaction record. This ensures that the document number is unique for the document type, as if the Allow Override option was not enabled.

**Items subtab**

1. In the **Item** field, select the item you want to transfer.
The description of this item appears in the Description field.
The quantity on hand in the location you are pulling items from appears in the Qty On Hand field.

2. In the Qty to Transfer field, enter the quantity of items you want to transfer to another location.

**Note:** You should not enter an item quantity that exceeds the item’s quantity on hand at the location from which you are moving the items. Review the quantity on hand at that location before entering a value in this field.

3. If the item you are transferring is a serial or lot numbered item, you can enter the serial or lot numbers.
   - Separate each serial number with a space, comma or by pressing Enter after each one.
     You must enter a serial number for each serialized item. For example, if you enter a quantity of 2, then you must enter two serial numbers.
   - Lot numbers must be entered in this format: LOT#(Quantity)
     For example, to enter a quantity of 100 items as Lot number ABC1234, enter ABC1234(100).

4. In the From Bins field, the preferred bin for the From location is selected.

   To enter quantities to transfer from other bins, click the bin number, and click the Bins icon. You can enter quantities that combine to equal the total quantity to transfer for each bin associated with item, and click Done.

   You can also enter bin numbers separated by commas with on-hand quantities in parentheses. For example, you can enter A101(50), A102(43).

5. In the To Bins field, the preferred bin for the To location is selected.

6. Click Add.

   The bottom of the Inventory Transfer page shows a list of items you intend to transfer.
   This list displays the item and the data you entered about the transfer transaction.

7. Repeat the steps above for any other inventory items you want to transfer.

Inventory Transfer Orders

When you need to transfer inventory from one location to another, you can enter inventory transfer orders to schedule and track the movement of items.

Transfer orders are different than basic inventory transfers because you can track each stage of the transfer process and know when items are in transit. A basic inventory transfer changes the item count in both locations in one step. For details about a basic transfer, read Transferring Inventory.

Transfer orders help you manage items that are moved from one location to another over a period of time.

The transfer order workflow is as follows:

1. A transfer order is entered to schedule the movement of items and can go through an approval process.

2. When a transfer order is approved, the following occurs:
   - Items are committed out of the source location’s inventory
   - The On Order quantity of the items at the destination location increases.

3. Transfers are then fulfilled out of the source location and you know when the items are in transit.
   - Fulfilled items are removed from the On Hand count at the source location.
The value of items in transit are removed from the Inventory Asset account and added to the Inventory in Transit account for the source location.

4. Finally, the destination location enters a receipt for the items.
   - The items are added to the destination location’s inventory and increase the On Hand count.
   - The items’ value is added to the Inventory Asset account for the destination location.
   - The On Order quantity of the item in the destination location decreases.

For example, your Location A sells an order for 100 widgets, but only has 20 in stock. It normally takes two weeks to receive an order from your regular widget vendor, but your customer cannot wait that long. After checking stock at all locations, you see that your Location B has 200 widgets in stock. You enter an inventory transfer order to move 80 widgets from Location B to Location A so you can fill the customer’s order quickly.

The shipping manager at Location B sees that a new inventory transfer order has been entered for her location. Turnover of widgets is low at her location recently and she approves the transfer order. After it is approved, the items are committed to the transfer and cannot be sold while in transit.

The warehouse manager at Location A sees that the transfer order was approved and knows the widgets are in transit. He can estimate when the widgets will arrive and when he can fulfill the customer’s order.

The approved inventory transfer order now shows in the queue at Location B to be fulfilled and shipped to Location A. The warehouse at Location B prints a picking ticket and then picks, packs and ships the items out using their preferred shipping company.

When the shipment of widgets arrives at Location A, the manager marks the transfer order as received and the items are added to inventory. The items can then be used to fulfill the order and prepared to ship out to the customer.

Inventory transfer orders can detail the following:
- Items and quantities intended to be transferred
- When items are fulfilled, picked, packed, or shipped out of the source location
- The status of transfers and when items remain in transit
- When items are received in the receiving location
- Outstanding items yet to be transferred
- Transfer price of items

Lines on transfer orders cannot be partially fulfilled or partially received, the entire line must be processed at one time. Only available stock can be committed to transfer orders.

After a transfer order line has been fulfilled, the Quantity, Units, and Serial/Lot Numbers fields are disabled and changes cannot be entered.

Transfer orders you create and process are linked to any related item fulfillments and to item receipts.

Shipping costs can be calculated on the Shipping subtab of a transfer order by selecting a shipping method in the Ship Via field and clicking Calculate in the form header.

Using transfer orders requires that you have enabled the Multi-Location Inventory feature. For details about enabling features, read the help topic Items and Inventory Features.

View Transfer Data on Item Records

You can view transfer information on item records:
On the Inventory subtab, the Quantity on Order for an item includes the quantities on approved transfer orders.

On the Inventory subtab, the Transfer Price field allows entry of a transfer price for declared values when shipping.

- The transfer price is not a charge for the destination location.
- The transfer price is a shipping amount for reference only, such as for insurance or international shipping and does not affect inventory costing.
- The transfer price defaults to show a value of zero.

On the Locations subtab, the Qty in Transit column displays the amount transferred out of a location.

On the Lot Numbers subtab, the Qty in Transit column displays the amount transferred out of a location.

**Item Costing and General Ledger**

Transfer orders do not post to a Cost of Goods Sold (COGS) account. They post to remove the item value from the source location’s asset account and add the value to the Inventory in Transit account. Individual transfer orders include a setting to Use Item Cost as Transfer Cost. When a new transfer order is created, this setting defaults to the accounting preference setting. By putting this setting on the transfer order, users have more flexibility on in managing the inventory GL.

![Note: You can change this setting if the transfer order is not approved. After the transfer order is approved, this setting cannot be changed.](image)

**Preferences**

You can set preferences that determine handling for transfer orders that you enter. Preferences are available for the default order status and handling fulfillments based on commitments.

When you require approval for processing transfer orders, after a transfer order is entered, the order must be approved by someone with permission before it can be fulfilled.

For details on these preferences, read [Transfer Order Preferences](#).

**Serialized and Lot Inventory**

When you enter a transfer order, you may enter the serial numbers for items you are transferring, but you must enter a serial number for each item on the order. You cannot enter serial numbers for only some of the items. After you have entered serial numbers on a transfer order, the Serial/Lot Numbers field is disabled on the fulfillment form.

If you do not enter serial numbers for serialized items when you enter the transfer order, then the Serial/Lot Numbers field is enabled on the fulfillment form and you must enter serial numbers there.

The Serial/Lot Numbers field is always disabled when you receive a transfer order.

**Location Restrictions**

Users who have access that is restricted by location have the following limitations when working with transfer orders.
Transferring Inventory

- **Create/Edit/Copy**: If you are restricted to access only one location, you can create a transfer order, but it will require approval because the source location list shows only one location. The source location will need to be entered to approve the order.
  
  You can only edit or make a copy of a transfer order if you have access to both the source and destination locations.

- **Fulfill**: The Fulfill Orders page and Print Picking Ticket page show only transfer orders for which for which you have access to the source location.

- **Receive**: The Receive Order page shows only transfer orders for which for which you have access to the destination location.

- **Reminders**: The Orders to Fulfill reminder shows only transfer orders for which you have access to the source location. The Orders to Receive reminder shows only transfer orders for which you have access to the destination location.

- **Reports**: The Transfer Order Register report displays only orders for which have access to either the source or destination location on the order.

**Searches, Reports, and Reminders**

You can use searches, reports, and reminders to find information about inventory you are transferring. For details, read *Searches, Reports, and Reminders for Transfer Orders.*

**Customization**

You can specify linked forms to be used when processing transfer orders, or add custom fields to transfer order forms. For details, read *Customizing Transfer Orders.*

**NetSuite OneWorld Accounts**

In NetSuite OneWorld accounts, you can enter an Intercompany Transfer Order to move inventory between locations in two different subsidiaries within your company.

Enter an Intercompany Transfer Order to schedule items to be shipped out of one subsidiary location and received into the inventory at another subsidiary location. Intercompany transfer orders enable you to track items in transit between the two subsidiary locations.

To use intercompany transfer orders, go to Transactions > Inventory > Enter Intercompany Transfer Orders..

This form is available only in NetSuite OneWorld accounts.

Read the *Intercompany Inventory Transfers - Non-Arm's Length* topic.

**Multi-Book and Transfer Orders**

If you use the Multi-Book Accounting feature in a NetSuite OneWorld account, the following applies for transfer orders:

- If a secondary book exists in the source subsidiary but does not exist in the destination subsidiary, then the destination subsidiary does not post a cost at the time of the transfer.

- If a secondary book exists in the destination subsidiary but does not exist in source subsidiary, then the transfer cost in the primary book is used as the transfer cost when posting in the secondary book.
In-Transit Ownership

You can choose when the transfer of ownership occurs for items being transferred between locations. Ownership can transfer either at the time of shipping or the time of receipt.

For example, Location A is transferring 10 widgets to Location B. In some cases, you may want Location B to take ownership when the item is received. In other cases, you may want Location B to take ownership as soon as the item is shipped.

Transfer orders use international commercial terms (incoterms) to define transfer of ownership. Incoterms are a standardized three-letter trade term used on transactions related to international commercial procurement practices that communicate the tasks, costs, and risks associated with the transportation and delivery of goods. Incoterms define where the customer takes ownership of the product.

The following are default incoterms:

- **Ex Work (EXW)** – Inventory ownership is transferred at the shipping point
- **Delivered at Place (DAP)** – Inventory ownership is transferred at the destination point

On a transfer order form under Classifications, choose the appropriate incoterm in the Incoterm field. Be aware that the incoterm you select impacts accounting and inventory information.

**Note:** When creating a transfer order, you can only select EXW or DAP. After the order status is pending approval or pending fulfillment, you can choose another incoterm.

Select your default setting at Setup > Accounting > Accounting Preferences. On the Order Management subtab in the Default Transfer Order Incoterms field, choose your default setting from the following:

- Shipping Point (Ex Works)
- Destination Point (DAP)

The incoterm you choose will populate the incoterm field on transfer orders.

You can create additional incoterms as necessary at Setup > Accounting > Accounting Lists.

**Ex Work (EXW) and Closed Periods**

When you have enabled the preference to Create and Edit Inventory Transactions Dated in Closed Periods, you cannot select the Ex Work (EXW) incoterm. For details about setting this preference, read the help topic General Accounting Preferences.

Additionally, if any transfer order has been entered using the Ex Work (EXW) incoterm then the Create and Edit Inventory Transactions Dated in Closed Periods preference will no longer be available.

**Inventory and Accounting Impact of Incoterms**

The incoterm you select on a transfer order impacts accounting and inventory information. The sections below elaborate the impacts depending on the incoterm you choose for transfer orders and intercompany transfer orders.

- **Destination Point (DAP) for Transfer Orders**
- **Destination Point (DAP) for Intercompany Transfer Orders**
- **Shipping Point (EXW) for Transfer Orders**
- **Shipping Point (EXW) for Intercompany Transfer Orders**
Destination Point (DAP) for Transfer Orders

When Destination Point (DAP) is selected as the transfer order incoterm, the destination location assumes ownership of the goods upon receipt of the item.

In the following example, the unit cost at the source for 7 shipped units is $5 dollars each.

<table>
<thead>
<tr>
<th>Fulfillment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CR Asset (Source Location)</td>
<td>$35</td>
</tr>
<tr>
<td>DR Intransit (Source Location)</td>
<td>$35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Receipt</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DR Asset (Destination)</td>
<td>$35</td>
</tr>
<tr>
<td>CR Intransit (Source Location)</td>
<td>$35</td>
</tr>
</tbody>
</table>

At the time of item fulfillment, the inventory is still owned by the source location, but it is out of the warehouse.

- Source Location: On-hand quantity is decreased.
Source Location: In-transit quantity is increased. (Inventory is owned by source location.)
Destination Location: On-order quantity is increased.

At the time of item receipt, ownership is transferred to the destination location.

Source Location: In-transit quantity is decreased.
Destination Location: On-hand quantity is increased.
Destination Location: On-order quantity is decreased.

Destination Point (DAP) for Intercompany Transfer Orders

When Destination Point (DAP) is selected as the intercompany transfer order incoterm, the destination location assumes ownership of the goods upon receipt of items.

In the following example, items are transferred from the US (USD) to Canada (CAD) and the incoterm is set to Destination Point (DAP).

The unit cost at the source is $35 USD.
At the time of item fulfillment, the inventory is still owned by the source location, but it is out of the warehouse.

- Source Location: On-hand quantity is decreased.
- Source Location: In-transit quantity is increased. (Inventory is owned by source location.)
- Destination Location: On-order quantity is increased.

At the time of item receipt, ownership is transferred.

- Destination Location: On-hand quantity is increased.
- Source Location: In-transit quantity is decreased.
- Destination Location: On-order quantity is decreased.

**Shipping Point (EXW) for Transfer Orders**

When Shipping Point (EXW) is selected as the transfer order incoterm, the destination location assumes ownership of goods upon item fulfillment.
As in the example below, you may ship items from your East Coast location to your West Coast location.

### Fulfillment

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR Asset (Source Location)</td>
<td>$35</td>
</tr>
<tr>
<td>DR Intransit (Destination Location)</td>
<td>$35</td>
</tr>
</tbody>
</table>

### Receipt

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>DR Asset (Destination Location)</td>
<td>$35</td>
</tr>
<tr>
<td>CR Intransit (Destination Location)</td>
<td>$35</td>
</tr>
</tbody>
</table>

At the time of item fulfillment, the inventory is still owned by the source location, but it is out of the warehouse. Ownership is transferred at the shipping point.

- **Source Location**: On-hand quantity is decreased.
- **Destination Location**: In-transit quantity is increased. (Inventory is owned by the destination location)
- **Destination Location**: On-order quantity is increased.

At the time of item receipt, the in-transit quantity is reduced and on-hand quantity is increased.
- Destination Location: On-hand quantity is increased.
- Destination Location: In-transit quantity is decreased.
- Destination Location: On-order quantity is decreased.

**Shipping Point (EXW) for Intercompany Transfer Orders**

When Shipping Point (EXW) is selected as the transfer order incoterm, the destination location assumes ownership of goods upon item fulfillment.

In the following example, items are transferred from the US ($USD) to Canada ($CAD) and the incoterm is set to Shipping Point (EXW)

<table>
<thead>
<tr>
<th>Item Fulfillment (Note: The exchange rate is based on the spot rate)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source Subsidiary</strong></td>
</tr>
<tr>
<td>CR Asset</td>
</tr>
<tr>
<td>DR Intercompany AP</td>
</tr>
<tr>
<td><strong>Destination Subsidiary</strong></td>
</tr>
</tbody>
</table>

**Debit**

- Inventory [Warehouse] Subsidiary A
- Intercompany AP Subsidiary A

**Credit**

- Asset [CR] Subsidiary A
- Intercompany AP Subsidiary A
CR Intercompany AR $40.45 CAD ($35 USD)
DR Intransit $40.45 CAD ($35 USD)

The unit cost at the source location is $35 USD.

Searches, Reports, and Reminders for Transfer Orders

You can use searches, reports, and reminders to find information about inventory you are transferring.

Reminders

The Transfer Orders to Approve reminder shows you transfer orders due to be processed. All transfer orders that are pending approval or pending fulfillment show in the reminder.

To set up the reminder, click the Home tab and in the Settings portlet, click Customize this Page. In the Reminders portlet, click Set Up. Check the Transfer Orders to Approve box and click Save.

Search

Transaction searches show the status, source and destination locations, quantities in-transit, quantities shipped, and quantities received for a transfer order.

If you customize an item search to show the Location in Transit column in results, the list shows the in-transit quantity for each location. For any quantity of items that is in transit, that quantity is reduced from the On Hand count for the item at the source location. The quantity is not added to the receiving location until the transfer order is marked received.
To customize a search:

1. Go to Reports > New Search.
2. Click Item.

When you run a transaction search, you can set the following criteria to search for transfer orders:

- Transfer Location (To Location)
- Location (where the transaction is processed)
- Order Status
- Order Number

Saved Searches

You can create a Saved Transaction Search to find detailed information about transfer orders.

To create a saved search:

1. Go to Reports > Saved Searches > All Saved Searches.
2. Click New.
3. Click Transaction.
4. On the Saved Transaction Search page, Criteria subtab in the Filter field, you can choose to add the following:
   - Transfer Order Line Type
   - Transfer Order Quantity Committed
   - Transfer Order Quantity Fulfilled
   - Transfer Order Quantity Packed
   - Transfer Order Quantity Picked
   - Transfer Order Quantity Received
5. On the Results subtab on the Columns subtab, you can choose to add the following:
   - Transfer Location
   - Transfer Order Item Line ID
Transferring Inventory

- Transfer Order Line Type
- Transfer Order Quantity Committed
- Transfer Order Quantity Packed
- Transfer Order Quantity Picked
- Transfer Order Quantity Received
- Transfer Order Quantity Shipped

For example, you can select as a search criterion a Transfer Order Line Type that is Any Of Item, Shipping and Receiving. Select in Results to show the Transfer Order Item Line ID and Transfer Order Line Type. Then, when you run the search, for each transfer order line, Item Shipping and Receiving data is displayed for each line on each order.

Reporting

The Transfer Order Register shows all transfer orders with their number, status, and amount.

To view the Transfer Order Register, go to Reports > Inventory/Items > Transfer Order Register.

The following reports also include transfer order data:

- Inventory Backorder Report
- Inventory Pending Fulfillment Report
- Shipping Report

Also, when viewing the Current Inventory Snapshot Report, the In Transit column displays quantities in transit.

Transfer Order Preferences

You can set preferences that determine handling for transfer orders that you enter, including the default order status and approval requirements.

To set transfer order preferences:

1. Go to Setup > Accounting > Accounting Preferences.
2. Click the Order Management subtab.
3. Complete the steps below as needed, then click Save.

1. In the Default Transfer Order Status field, select one of the following to default on manual orders:
   - Pending Approval Firm – By default, require that someone with permission approves the order before it is processed. Firmed transfer orders are not available to be rescheduled or cancelled.
   - Pending Approval Open – By default, require that someone with permission approves the order before it is processed. Transfer orders that are Open, not Firmed, are available to be rescheduled or cancelled. Recommendations for Open transfer orders are removed for each demand planning run.
   - Pending Fulfillment – By default, send transfer orders directly to the fulfillment queue without requiring further approval.
2. In the **Generate Transfer Orders in Supply Planning** field, select one of the following to default on auto-generated transfer orders:

- **Generate in Pending Approval Firm Status** – By default, require that someone with permission approves the order before it is processed. Firmed transfer orders are not available to be rescheduled or cancelled.

- **Generate in Pending Approval Open Status** – By default, require that someone with permission approves the order before it is processed. Transfer orders that are Open, not Firmed, are available to be rescheduled or cancelled. Recommendations for Open transfer orders are removed for each demand planning run.

- **Generate in Pending Fulfillment Status** – By default, send transfer orders directly to the fulfillment queue without requiring further approval.

3. In the **Fulfill Based on Commitment** field, choose one of the following to determine how the fulfillment form works:

- **Ignore Commitment** – The quantity field is disabled on the fulfillment.

- **Allow Uncommitted** – The partially committed lines are displayed on the fulfillment form with the committed quantities. To fulfill the partially committed lines, you must manually adjust the quantity being fulfilled to be equal to the order line quantity.

- **Limit to Committed** – The Fulfill button does not show on an order if it has no lines that are fully committed. When you click Fulfill on a transfer order, only fully committed lines show on the fulfillment form.

4. In the **Use Item Cost as Transfer Cost** field, choose one of the below. Note that your selection applies to transfer orders and to intercompany transfer orders.

- Check the **Use Item Cost as Transfer Cost** box to use the transfer price as a declared shipping value for reference only, such as for insurance or international shipping.
  - The transfer price is not a charge for the destination location.
  - The transfer price does not affect inventory costing on transactions.
  - The transfer price defaults to show the value in the **Transfer Price** field of item records. This value can be changed on individual transfer orders.
  - Partial fulfillment and receipt of transfer orders is allowed, but you cannot receive more than you have fulfilled as of any date. For example, if you have fulfilled 10 widgets out of 20 on a transfer order, you cannot receive 12 widgets on that order.

  **Note:** If you enable this preference, items that use Standard costing are not available to be transferred.

- Clear the **Use Item Cost as Transfer Cost** box to use the transfer price shown on the transfer order as the item cost on the item receipt.

  **Important:** If no transfer price is entered on the transfer order, no cost is recorded on the item receipt.

  - Any difference between the actual cost and the transfer price posts to a Gain/Loss account when the item is shipped.
  - The transfer price and the Gain/Loss account are defined on each item record.
  - The transfer price defaults to show the value in the **Transfer Price** field of item records. This value can be changed on individual transfer orders.
    - For example, for an order you are transferring, the transfer price and actual cost are as follows:
      - Transfer Price $120
Transferring Inventory

Item Cost $100

This table shows the posting amounts at the time of shipment:

<table>
<thead>
<tr>
<th>DR</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-Transit</td>
<td>$120 (transfer price)</td>
</tr>
<tr>
<td>Inventory Asset</td>
<td>$100 (item cost)</td>
</tr>
<tr>
<td>Gain/Loss</td>
<td>$20 transfer price - item cost</td>
</tr>
</tbody>
</table>

This table shows the posting amounts at the time of receipt:

<table>
<thead>
<tr>
<th>DR</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory Asset</td>
<td>$120 (transfer price)</td>
</tr>
<tr>
<td>In-Transit</td>
<td>$120 (item cost)</td>
</tr>
</tbody>
</table>

Note: This preference can also be set on individual transfer orders when they are created. Individual orders default to show the setting chosen in this field. The setting cannot be changed and is permanent after the order is saved (or after approval if you use approval routing.)

Entering a Transfer Order

Enter a transfer order to schedule items to be shipped out of one location and received into another location’s inventory. Transfer orders enable you to track items in transit between two locations.

Note: If you are restricted to access only one location, you can create a transfer order, but it will require approval because the source location list shows only one location. The source location will need to be entered to approve the order.

To enter a transfer order:

1. Go to Transactions > Inventory > Enter Transfer Orders.
2. Complete the fields in each section as indicated below.
3. Click Save.

Primary Information

1. The Order # field shows the correct number if autonumbering is activated. Otherwise, enter the order number in this field.
2. On the Transfer Order form, the Date defaults to the current date. You can select or enter another date if necessary.
3. For NetSuite OneWorld accounts, select a Subsidiary.

Note: After selecting a subsidiary on a transfer order, the order must use the base currency designated for that subsidiary.

4. In the From Location field, select the originating location for the transfer. Items are taken out of this location and the inventory count for the item is decreased at the location when the order is fulfilled.
You are not required to enter a source location to enter a transfer order, but you must choose a source location to approve and fulfill the transfer order.

5. Optionally choose an Employee to associate with this transfer order.

6. In the To Location field, select the receiving location for the transfer. The inventory count and asset value for the item is increased at this location when the items are received.

   You are required to enter a destination location to enter or approve a transfer order.

   The Ship To Address of the transfer order defaults to the address of the destination location.

7. The Status field shows the current status of the transfer. The default status shown may be pending Approval or Pending Fulfillment, depending on the preference setting. For details on setting this default, read Transfer Order Preferences.

8. When the Firmed box is checked, the line items are no longer eligible for reallocation to another order. The items must remain committed to the firmed order. Firmed transfer orders are not available to be rescheduled or cancelled.

9. In the Memo field, optionally enter information to identify this transaction in a list of other transactions. When you use the Search Transactions feature, you can search for specific words and phrases in the Memo field.

10. Choose a setting for the Use Item Cost as Transfer Cost preference to apply to this transaction. This field defaults to use the setting chosen under Accounting Preferences.

   If you use approval routing, this setting can be changed on a transfer order as long as the transfer order is not yet approved. Once the transfer order is approved, this setting cannot be changed.

   **Note:** If you enable this preference, items that use Standard costing are not available to be transferred.

   For details about this preference, read Transfer Order Preferences.

11. Use Incoterm to define when the transfer of ownership occurs for items being transferred between locations:

    - Ex Work (EXW) – inventory ownership is transferred at the shipping point
    - Delivered at Place (DAP) – inventory ownership is transferred at the destination point

   Be aware that the incoterm you select impacts accounting and inventory information.

**Classification**

1. If you track Departments or Classes, select them.

**Items**

1. In the Item field, select the item you want to transfer. Only inventory and assembly items can be added to a transfer order. You can also click the Add Multiple button to enter more than one item at a time.

   The description of this item shows in the Description field.

   Only available stock can be committed to transfer orders.

2. In the Quantity field, enter the quantity of items you want to transfer to another location.

   **Note:** You should not enter an item quantity that exceeds the item’s quantity on hand at the location you are pulling items from inventory. Please review the quantity on hand at that location before entering a value in this field.

3. The Transfer Price field defaults to show the value in the Transfer Price field on the item record. You can accept the default value or enter a new one for this order.
The use of the value entered in the Transfer Price field depends on your setting for the Use Item Cost as Transfer Cost preference. This field defaults to show a value of zero if the field is blank or shows zero on the item record.

- When the Use Item Cost as Transfer Cost preference is enabled, the transfer price is not considered for posting cost accounting of line items. In the Transfer Price field, enter a declared value for the item to be used for shipping purposes only.
- When the Use Item Cost as Transfer Cost preference is disabled, the transfer price is considered during the posting of cost accounting lines. Items that do not have a transfer price set on the transfer order use a zero value for cost accounting calculations when the item is received.

4. The unit of measure for the item is displayed in the Units field. You can select another unit of necessary.

5. If the item you are transferring is a serial or lot numbered item, enter the serial or lot numbers.

   **Note:** By entering a specific serial or lot number, you are designating a specific item and NetSuite attempts to allocate the specific item for this order. If you do not enter a specific serial or lot number, NetSuite allocates only the specified quantity of this item to the order. Then, you can designate the specific serial or lot number for the item at a later time.

   - Separate each serial number with a space, comma or by pressing Enter after each one.
   - You must enter a serial number for each serialized item. For example, if you enter a quantity of 2, then you must enter two serial numbers.
   - Lot numbers must be entered in this format: LOT#(Quantity)
     For example, to enter a quantity of 100 items as Lot number ABC1234, enter ABC1234(100).

   When you enter a transfer order, you can enter the serial numbers for items you are transferring, but you must enter a serial number for each item on the order. You cannot enter serial numbers for only some of the items. After you have entered serial numbers on a transfer order, the Serial/Lot Numbers field is disabled on the fulfillment form.

   If you do not enter serial numbers for serialized items when you enter the transfer order, then the Serial/Lot Numbers field is enabled on the fulfillment form and you must enter serial numbers there.

6. In the Expected Ship Date field, enter the date you expect this item to be shipped from the vendor. This defaults to show the transaction date.

7. In the Expected Receipt Date field, enter the date you expect this item to arrive in your warehouse. This defaults to show the transaction date.

8. In the Commit column select one of the following:
   - Available Qty - Items for this line item are committed as available. Available items are shipped, and items that are not available are placed on backorder.
   - Complete Qty - This line item only ships when all items are committed.
   - Do Not Commit - Items are not committed to this line item until this setting is changed.

9. Set any options that apply to this item.

10. Click Add.

11. Repeat the steps above for each item you want to transfer between these locations.

**Shipping**

1. The Ship Date field defaults to show the current date. You can type or pick another shipping date for this order.
2. The **Shipping Carrier** field displays the carrier associated with the customer, if available, or your default shipping carrier. You can select a different carrier.

3. In the **Shipping Method** field, select a shipping method for this order.

   Select a shipping method for this order.

   If you automatically charge for shipping, the shipping amount is entered in the shipping costs field. To automatically charge for shipping, go to Setup > Accounting > Shipping and check the **Charge for Shipping** box, then click Submit. You must also set up the charge details of your shipping items.

   To add or edit shipping items, go to Lists > Accounting > Shipping Items.

4. The **Shipping Cost** calculates automatically depending on the shipping method you select above.

   To change the cost of a shipping method, go to Lists > Accounting > Shipping Items and select the shipping method you want to change. If you use UPS Real-Time rates and a package is over 150 lbs, the package is charged as multiple packages equal to or less than 150lbs.

   To calculate shipping for the transfer items, click the **Calculate** button.

5. In the **Handling Cost** field, enter the price you want to charge for this item's handling.

6. The **Ship To Address** of the transfer order defaults to the address of the destination location.

   To enter an address manually, select **Custom** in the **Ship To Select** field and enter the address.

**Communication**

1. Click the **Communication** subtab to associate activities, notes or files with this transaction.

   - Use the **Events, Tasks**, and **Phone Calls** subtabs to attach activities to this transaction. For more information, see the help topic **Attaching Events, Tasks, and Calls to Records and Transactions**.

   - On the **Files** subtab, you can select and attach files from the File Cabinet related to this transaction. Select **New** to upload a new file to File Cabinet.

   - On the **User Notes** subtab, you can enter a title and note for any comments you want to add to this transaction. Click **Add** after each note.

   Now, this transfer order can be processed.

   - If you require approval for transfer orders, approve the appropriate transfers at Transactions > Inventory > Approve Transfer Orders.
   - If you do not require approval for transfer orders, go to Transactions > Sales > Fulfill Orders.

**Approving Transfer Orders**

After you enter transfer orders, if an order has a status of Pending Approval, the order must be approved by someone with authorization before it can be processed.

You can choose to require approval by default. For details about approval preferences, read **Transfer Order Preferences**.

**To approve transfer orders:**

1. Go to Transactions > Inventory > Approve Transfer Orders.

   - In the **Supervisor** field, select a name to filter the sales order list by supervisor.

   Clear this field to show all transfer orders pending approval.
3. To approve a specific order, enter an order number in the Select Order number field, either manually or by scanning a bar code.

4. In the Date field, select the date range for the transactions you want to show in the list. The date range you select is reflected in the From and To fields. If you enter a different range in the From and To fields, the Date field automatically shows Custom.

5. Check the box in the Approve column for each transfer order you want to approve.

6. The Amount field displays the total amount of orders you have checked for approval.

7. If a source location has not yet been selected, choose a source location.

8. Click Submit.

After a transfer order is approved, the items are committed to the transfer and cannot be sold while in transit. Approved transfer items also show as on order at the destination location.

You can now fulfill your transfer orders. To do this, go to Transactions > Sales > Fulfill Orders.

### Resetting Approval Status

The status of an order that is approved and pending fulfillment can be reset to Pending Approval. If you have permission to approve and edit transfer orders, the Status field appears when you edit a transfer order that has not been fulfilled.

To reset the status, select Pending Approval in the Status field, then click Save. To edit an existing transfer order, go to Transactions > Inventory > Enter Transfer Orders > List. Click Edit next to the order.

### Fulfilling Transfer Orders

After a transfer order is entered, and approved if necessary, the order can be fulfilled. Fulfillment is the process of taking items out of inventory in one location and shipping the items to a second location.

For example, an approved transfer order for 50 widgets shows in the fulfillment queue for the warehouse at Location A. The transfer order shows that the widgets must be shipped to Location B. The warehouse supervisor pulls 50 widgets from inventory, packages them to be shipped and ships them out. Then, the manager marks the transfer order as fulfilled.

The fulfillment form defaults to show the department and class values entered on the transfer order.

After a transfer order is fulfilled, it has a status of Pending Receipt while the items are in transit between locations. This means the items have shipped out of the source location, but not yet been received into the receiving location.

When items are in transit, changes cannot be made to the transfer order for values in the item, quantity, or location fields.

If a transfer order includes a serialized or lot numbered item and the serial/lot numbers were not added when the transfer order was first entered, you must enter serial numbers in the Serial/Lot Numbers field on the fulfillment form.

You can fulfill a transfer order in the following ways:

- Fulfill multiple transfer orders by going to Transactions > Sales > Fulfill Orders. In the Transaction Type field, select Transfer Order.
- Fulfill a single transfer order by going to Transactions > Inventory > Enter Transfer Orders > List and clicking View next to the order. Then, click the Fulfill button.

For more details, read the help topic Fulfilling Orders.
Transfer Order Fulfillment Quantities

You cannot fulfill more than the quantity on the transfer order.

Lines on transfer orders cannot be partially fulfilled unless the Use Item Cost as Transfer Cost preference is enabled for that transfer order. For details about this preference, read Entering a Transfer Order and Transfer Order Preferences.

When you partially fulfill a transfer order quantity, you are required to match the fulfillment when it is received in order to process item costing accurately.

Transfer Order Fulfillment Status

As the order is processed, this field is updated to show the status, which can be one of the following:

- **Pending Approval** – The transfer order is entered but not yet approved. Items on the order are not yet committed to be transferred.
- **Pending Fulfillment** – The order is approved and ready to be fulfilled for transfer. Items on the order are now committed to be transferred.
- **Pending Receipt** – Items are in transit between locations. They have shipped out of the source location, but not yet been received into the receiving location.

**Note:** Items in this state are counted with the inventory of the source location.

- **Received** – Items have been received into the destination location. These items are now counted with the on-hand inventory for the destination location.
- **Rejected** – This transfer order has not been approved and is cancelled.

For more details on fulfilling orders, read the help topic Fulfilling Orders.

Transfer Order Fulfillment and Commitment

You can choose how to process transfer order fulfillments based on item commitment. On the preference Fulfill Based on Commitment, your selection determines how the fulfillment form works:

- **Ignore Commitment** – The quantity field is disabled on the fulfillment.
- **Allow Uncommitted** – The partially committed lines are displayed on the fulfillment form with the committed quantities. To fulfill the partially committed lines, you must manually adjust the quantity being fulfilled to be equal to the order line quantity.
- **Limit to Committed** – The Fulfill button does not show on an order if it has no lines that are fully committed. When you click Fulfill on a transfer order, only fully committed lines show on the fulfillment form.

For details about setting preferences, read Transfer Order Preferences.

Pick, Pack, and Ship with Transfer Orders

You can also use the Pick, Pack, and Ship feature to assist with processing transfer orders.

The Pick, Pack, and Ship feature gives your warehouse and shipping departments separate processes for each step to fulfill orders. This enables greater flexibility in processing and tracking the status of orders through the fulfillment and shipment processes.
For example, a warehouse manager uses individual steps to process each fulfillment. One employee picks the items off the shelves and another employee boxes them up and ships them. To know which orders are at which stage, he needs to mark each order for each step in the process.

The Pick, Pack, and Ship feature enables him to show each step separately for each order. The first employee pulls the items and marks them as fulfilled (picked). The second employee boxes the items and marks them as packed. He then ships the package and marks the order as shipped.

You use separate transactions for each step:
- to pick the items from inventory (Fulfill Orders)
- to pack the items to prepare them to be shipped (Mark Orders Packed)
- to ship the items to the receiver (Mark Orders Shipped)

For more information on enabling and using this feature, read the help topic Pick, Pack, and Ship.

Note: Lines on transfer orders cannot be partially picked, packed or shipped. The entire line must be processed at one time. Also, you cannot pick, pack or ship more than the quantity on the transfer order.

### Transfer Order Pick, Pack or Ship Quantities

You cannot pick, pack or ship more than the quantity on the transfer order.

Lines on transfer orders cannot be partially picked, packed or shipped unless the Use Item Cost as Transfer Cost preference is enabled for that transfer order. For details about this preference, read Entering a Transfer Order and Transfer Order Preferences.

When you partially pick, pack or ship a transfer order quantity, you are required to match the fulfillment when it is received in order to process item costing accurately.

### Receiving Transfer Orders

When items being transferred between locations are received by a warehouse, the transfer order must be marked as received. Receiving a transfer order does the following:
- Adds the quantities received into the inventory at the receiving location.
- Removes the value of the items from the Inventory In Transit account of source location.
- Adds the value of the items to the inventory asset account of the destination location.

For example, the warehouse manager at Location A shipped 50 widgets to you at Location B. While the items are in transit between locations, the 50 widgets continue to be counted with the inventory for Location A. When you receive the package of 50 widgets from your shipper, you mark the transfer order as received. Then, the 50 widgets are added to your inventory in Location B and removed from the inventory count at Location A.

You cannot receive more than the quantity on the transfer order.

Note: When you enter a receipt for a transfer order, the receipt cannot be dated prior to the shipment date of the order.

When you receive an intercompany transfer order, credits and debits are recorded in the general ledger in an intercompany clearing account for each subsidiary. These are standard accounts and cannot be deleted. For more information, see the help topic Intercompany Clearing Account.
For details on steps to receive orders, read the help topic Receiving Orders.

**Receiving Transfer Orders and Transfer Cost**

If the Use Item Cost as Transfer Cost preference is enabled for an order that is partially fulfilled, you must match the received quantity to a fulfillment when you receive lines on a transfer order. This ensures accuracy when tracking item costing.

To partially receive a transfer order, click Receive on the transfer order.

- If there is only one open item fulfillment, the item receipt page for that fulfillment opens.
- If there are multiple fulfillments open, a page displays the open fulfillments. Click Receive next to the fulfillment that corresponds to the transfer order you want to receive against. This enables NetSuite to link the item fulfillment cost to the item receipt cost.

**Note:** The item receipt quantity must match the item fulfillment quantity.

Alternatively, you can receive items by going to Transactions > Purchases > Receive Order and clicking the Receive link next to the order.

For details on steps to receive orders, read the help topic Receiving Orders.

**Transfer Orders and Landed Cost**

If you use the Landed Cost feature, you should be aware of the way NetSuite handles transfer order receipts when you use the Cost method for landed cost allocation. If the inventory costing is recalculated on an item receipt for some line items, the landed cost of the items is not updated.

For example, an order includes two lines that have a cost of $40 for line one and $60 for line two. The landed cost is $200, so $80 applies to line one and $120 applies to line two. Later, if the cost on the transfer order fulfillment gets updated by inventory costing calculations, that cost is propagated to the item receipt. If inventory costing updates the cost of the items on the receipt to be $50 for line one and $50 for line two (instead of $40 and $60), the landed cost on the receipt is NOT updated to $100 for each line. It remains at $80 and $120.

**Departments and Classes**

The receipt form defaults to show the department and class values entered on the transfer order for the destination, unless the department or class is not available at the destination subsidiary. If a department or class is required on a transaction, then you must enter an available department or class on the receipt.

**Item Value and Currency Calculations**

Upon receiving the item, the value of the transferred item used on the item receipt is based on the transfer price on the transfer order.

If you use the Multiple Currencies feature, the item receipt uses an exchange rate which is the currency conversion between the source and destination locations. These can be set in the Currency field on the receipt.

For intercompany transfers between subsidiaries that use different currencies, the transfer price at the destination is equal to the transfer price at the source multiplied by the currency exchange rate at the time of product receipt.
Customizing Transfer Orders

You can use customization to tailor your use of transfer orders.

Linked Forms

You can specify which forms are used when processing transfer orders. For example, if you have created a custom pickling ticket, you can specify that transfer orders use that custom picking ticket by default when the order is being fulfilled.

To specify linked forms for transfer orders:

1. Go to Transactions > Inventory > Enter Transfer Orders.
2. In the Customize list, click Customize Form.
3. Enter a name for the new custom form.
4. Click the Linked Forms subtab.
   A list of the transactions that you can specify forms for are shown.
5. Next to each form, select the appropriate form to be used by default in the Custom Form field.
   For example, select a custom picking ticket form you prefer to use in the Custom Form field next to Picking Ticket. Then, when transfer orders are being picked, that is the form used by default.
6. Click Save.

Body Fields, Column Fields, and Item Options

To create new body fields, column fields, or item options:

1. Go to Customization > Lists, Records, & Fields.
2. Select one of the following:
   - Transaction Body Fields
   - Transaction Column Fields
   - Transaction Item Options
3. Click New.
4. On the Applies To subtab of the new record, check the Transfer Order box.
5. Click Save.

After you save the record, the new field or option shows on your transfer order forms.

Intercompany Inventory Transfers - Non-Arm's Length

In NetSuite OneWorld accounts, you can enter an Intercompany Transfer Order to move and track inventory between subsidiary locations within your company.

Use Intercompany Transfer Orders for non-arm's length transactions.

- For arm's length intercompany inventory transfers, see the help topic Managing Intercompany Inventory Transfers - Arm's Length.
- For intercompany drop ship orders, see the help topic Intercompany Inventory Drop Ship.
Transferring Inventory

Enter an Intercompany Transfer Order to schedule items to be shipped out of one subsidiary location and received into the inventory at another subsidiary location. Intercompany transfer orders enable you to track items in transit between the two subsidiary locations.

For example, you have a surplus of widgets in Japan Subsidiary: Location A, but not enough stock of widgets in US Subsidiary: Location A. You can enter an Intercompany Transfer Order to move the widgets from Japan Subsidiary: Location A to US Subsidiary: Location A, where they are needed.

**Important:** In NetSuite OneWorld accounts, whether the Use Item Cost as Transfer Cost preference is enabled or disabled, an intercompany transfer order uses the transfer cost instead of the item cost for costing calculations. For details about this preference, read Transfer Order Preferences.

**Permissions**

To enter an intercompany transfer, you must have permission to access to the following:

- the source subsidiary
- the source location
- the common parent of the source subsidiary and destination subsidiary

To enter an intercompany transfer that is set to pending approval, you must have permission to access the destination subsidiary in addition to the above.

To fulfill an intercompany transfer or set it to pending fulfillment, you must also have permission to access the destination location in addition to the above.

If your access to subsidiaries or locations is restricted, and you may only process intercompany transfers between locations you are able to access. For details about restricted access, read the help topic Restricting Access to Records by Location.

**To enter an intercompany transfer order:**

1. Go to Transactions > Inventory > Enter Intercompany Transfer Orders.
2. Complete the steps as described in the sections below.
3. Click Save.

After being saved, an intercompany transfer order can be processed.

The Transfer Order Register report shows details for the source subsidiary and destination subsidiary.

**Primary Information**

1. The Order # field shows the correct number if autonumbering is activated. Otherwise, enter the order number in this field.
2. The current Date autofills. You can select or enter a different date.
3. In the Subsidiary field, select the source subsidiary. The selection you make in this field determines which locations are available to be selected in the From Location field.
   
   For example, if you select Subsidiary A here, you can choose a source location from a list of locations limited to only those associated with Subsidiary A.

4. In the To Subsidiary field, select the subsidiary where the items are to be received. The selection you make in this field determines which locations are available to be selected in the To Location field.
   
   For example, if you select Subsidiary B here, you can choose a destination location from a list of locations limited to only those associated with Subsidiary B.
5. In the **From Location** field, select the originating location for the transfer. Items are taken out of this location and the inventory count for the item is decreased at the location when the order is fulfilled.

   **Note:** When you enter an Intercompany Transfer, you must make a selection in the From Location field. The transfer cannot be approved without a source location identified.

6. In the **To Location** field, select the receiving location for the transfer. The inventory count and asset value for the item is increased at this location when the items are received.

   You are required to make a selection in the **To Location** field to enter or approve a transfer order. The **Ship To Address** of the transfer order defaults to the address of the destination location.

7. Optionally choose an **Employee** to associate with this transfer order.

8. The **Status** field shows the current status of the transfer. The default status shown may be pending Approval or Pending Fulfillment, depending on the preference setting. For details on setting this default, read Transfer Order Preferences.

9. When the **Firmed** box is checked, the line items are no longer eligible for reallocation to another order. The items must remain committed to the firmed order. Firmed transfer orders are not available to be rescheduled or cancelled.

10. In the **Memo** field, optionally enter information to identify this transaction in a list of other transactions. When you use the Search Transactions feature, you can search for specific words and phrases in the **Memo** field.

11. Choose a setting for the **Use Item Cost as Transfer Cost** preference to apply to this transaction. This field defaults to use the setting chosen under Accounting Preferences.

   If you use approval routing, this setting can be changed on a transfer order as long as the transfer order is not yet approved. Once the transfer order is approved, this setting cannot be changed.

   **Note:** If you enable this preference, items that use Standard costing are not available to be transferred.

   For details about this preference, read Transfer Order Preferences.

12. Use **Incoterms** to define when the transfer of ownership occurs for items being transferred between locations:

   - **Ex Work (EXW)** – inventory ownership is transferred at the shipping point
   - **Delivered at Place (DAP)** – inventory ownership is transferred at the destination point

   Be aware that the incoterm you select impacts accounting and inventory information.

   When creating a transfer order, you can only select **EXW** or **DAP**. After the order status is pending approval or pending fulfillment, you can choose another incoterm.

**Classifications**

1. If you track **Departments** or **Classes**, the form defaults to show the department or class associated with the source subsidiary.

   You can select another department or class if necessary.

**Items subtab**

1. In the **Item** field, select the item you want to transfer. Only inventory and assembly items can be added to a transfer order. You can also click the **Add Multiple** button to enter more than one item at a time.
Transferring Inventory

The description of this item shows in the **Description** field.

Only available stock can be committed to transfer orders. The item to transfer must be available for both the source and destination subsidiaries.

1. **In the Quantity field**, enter the quantity of items you want to transfer to another location.

   **Note:** You should not enter an item quantity that exceeds the item's quantity on hand at the location you are pulling items from inventory. Please review the quantity on hand at that location before entering a value in this field.

2. The **Transfer Price** field defaults to show the value in the **Transfer Price** field on the item record, which is based on the currency of the root parent subsidiary. After you enter an intercompany transfer order, the transfer price is converted from the currency of the root parent subsidiary to the currency of the source subsidiary.

   You can accept the default value or enter a new one for this order.

3. The unit of measure for the item is displayed in the **Units** field. You can select another unit of necessary.

4. **If the item you are transferring is a serial or lot numbered item, enter the serial or lot numbers.**

   **Note:** By entering a specific serial or lot number, you are designating a specific item and NetSuite attempts to allocate the specific item for this order.

   If you do not enter a specific serial or lot number, NetSuite allocates only the specified quantity of this item to the order. Then, you can designate the specific serial or lot number for the item at a later time.

   - Separate each serial number with a space, comma or by pressing Enter after each one.
     - You must enter a serial number for each serialized item. For example, if you enter a quantity of 2, then you must enter two serial numbers.
   - Lot numbers must be entered in this format: **LOT#(Quantity)**
     - For example, to enter a quantity of 100 items as Lot number ABC1234, enter **ABC1234(100)**.

   When you enter a transfer order, you can enter the serial numbers for items you are transferring, but you must enter a serial number for each item on the order. You cannot enter serial numbers for only some of the items. After you have entered serial numbers on a transfer order, the **Serial/Lot Numbers** field is disabled on the fulfillment form.

   If you do not enter serial numbers for serialized items when you enter the transfer order, then the **Serial/Lot Numbers** field is enabled on the fulfillment form and you must enter serial numbers there.

5. **In the Commit column select one of the following:**
   - **Available Qty** - Items for this line item are committed as available. Available items are shipped, and items that are not available are placed on backorder.
   - **Complete Qty** - This line item only ships when all items are committed.
   - **Do Not Commit** - Items are not committed to this line item until this setting is changed.

6. **Set any options that apply to this item.**

7. **Click Add.**

8. **Repeat the steps above for each item you want to transfer between these locations.**

### Address subtab

1. The **Ship To Address** of the transfer order defaults to the address of the destination location.
To enter an address manually, select **Custom** in the **Ship To Select** field and enter the address.

**Shipping subtab**

1. To calculate shipping for the transfer items:
   1. In the **Ship Via** field, select a shipping method.
   2. Click the **Calculate** button next to the **Shipping Cost** field.

- If you require approval for transfer orders, approve the appropriate transfers at Transactions > Inventory > Approve Transfer Orders.
- If you do not require approval for transfer orders, go to Transactions > Sales > Fulfill Orders.

**Closing Transfer Orders**

On transfer orders, you are able to close line items manually when you do not intend to transfer open items on the order.

For example, you enter a transfer order for ten widgets and have already transferred five of them. The warehouse manager informs you that the remaining five cannot be located to be transferred. If you close the line manually instead of changing the quantity, you retain a record of how many you originally planned to transfer.

**Note:** A line on a transfer order can be closed only if the in-transit quantity is zero.

Transfer order lines can be closed in two ways:

- **To close individual lines on an order:**
- **To close all lines on an order at one time:**

**To close individual lines on an order:**

1. Go to Transactions > Inventory > Enter Transfer Orders > List.
2. Click **Edit** next to the order.
3. On the **Items** subtab, each item line shows a box in the **Closed** column. Check the **Closed** box to close that line without transferring the item.
4. Click **Save**.

**To close all lines on an order at one time:**

1. Go to Transactions > Inventory > Enter Transfer Orders > List.
2. Click **View** next to the order.
3. Click **Close Order**.
   
   This button shows only if the in-transit quantity is zero for all lines.

The order now shows the quantities that have been closed and has a transaction status of Closed.

After a line on a transfer order is closed, you cannot do the following:

- change the item receipt quantity
Transferring Inventory

- create a new item receipt that links to the transfer order
- delete an existing item receipt that links to the transfer order

Inventory Replenishment and Withdrawal

When you stock and sell inventory in multiple warehouses and locations, it is important to be sure that your inventory is in the optimal location.

Moving items between retail locations or between storage and retail locations can help you have the right items in the right place at the right time. Merchandise planners can increase efficiency by reviewing the current inventory levels at each store and warehouse location to plan the right quantity to move at the right time, then moving merchandise where it is needed most.

For example, during peak season for an item, you can transfer inventory in order to have stock where it is needed. In the Spring season, you can move swimsuits out of warehouse storage and into retail locations, because swimsuit stock is in higher demand during that time of year.

Later, at the end of the Summer season to sell swimsuits, a retailer can withdraw swimsuit stock from the retail location to store them in a centralized warehouse, freeing up shelf space for product more appropriate to the season. Keeping an item stocked at a retail location has a high holding cost compared to storing the item in a warehouse, so withdrawing inventory can help keep costs down.

Use the following forms to move items between retail locations or between storage and retail locations:

Replenish Inventory

Move inventory between locations by creating inventory transfers or transfer orders.

- Replenish Location by Inventory Transfer
- Replenish Location by Transfer Order

Withdraw Inventory

Pull inventory out of a location by creating an inventory withdrawal.

To learn more, see Withdrawing Inventory.

Replenish Location by Inventory Transfer

Use the Replenish Location worksheet to transfer inventory items between locations.

The replenish location worksheet is ideal for transferring inventory because it helps you determine your replenishment needs. It shows the following amounts for each item:

- quantity available in each location
- quantity on order
- quantity backordered
- reorder point (quantity must be zero or greater)
- preferred stock level
Based on this information, a quantity to transfer is suggested.

The replenish location worksheet creates a basic inventory transfer, not a transfer order. For details about transfers and transfer orders, read Inventory Replenishment and Withdrawal and Replenish Location by Transfer Order.

To transfer inventory by inventory transfer:

1. Go to Transactions > Inventory > Replenish Location.
2. The current date autofills the Date field. Enter a different date if needed.
3. The current period autofills the Period field. Enter a different posting period if needed.
4. In the Ref. No. field, enter a reference number for this transaction.
5. In the Memo field, enter information to help you identify this transaction in a list of other transactions.
   For example, when you use the Search Transactions feature, you can search for specific words and phrases in the Memo field.
6. In the From Subsidiary field, select the subsidiary where the items will be taken from. The selection you make in this field determines which locations are available to be selected in the From Location field.
   For example, if you select Subsidiary B here, you can choose a source location from a list of locations limited to only those associated with Subsidiary B.
   
   **Note:** This field shows only in OneWorld accounts.

7. In the From Location field, select the location where you want to remove items.
   The location you choose will have its inventory reduced.
8. In the To Location field, select the location where you want to send the items.
   The location you choose will have its inventory increased.
9. Select a Department or Class to associate with this transfer as needed.
10. Check the box next to each item quantity you want to transfer.
11. For each item listed, a quantity to transfer is suggested in the Quantity column. You can accept this amount or enter a new amount.
    You cannot transfer a quantity greater than the From Available quantity.
12. Click Save.
    An inventory transfer is created and your inventory is updated for each location.

You can view and edit transfers you create by going to Transactions > Inventory > Transfer Inventory > List.

To maximize the efficiency of the Replenish Location worksheet, your item records need to contain reorder point and preferred stock level quantities. For more information on setting up item records, read the help topic Creating Item Records.

Replenish Location by Transfer Order

When you need to replenish stock at multiple locations, you need to know the best way to divide the available quantity of stock. The Replenish Location by Transfer Order page enables you distribute inventory across locations to allocate the right quantity for each store at the right time.
Transferring Inventory

For items that have designated reorder points and preferred stock levels, distribution managers can review inventory shortages across multiple locations and create transfer orders that move items from one location to any locations where shortages are found.

Replenishing a location by transfer order enables you to quickly create a large number of transfer orders to distribute goods out of a source warehouse into multiple stores or warehouses.

The Replenish Location by Transfer Order page creates a transfer order, not a basic inventory transfer. For details about transfers and transfer orders, read Inventory Replenishment and Withdrawal and Replenish Location by Inventory Transfer.

To use the Replenish Location by Transfer Order form, you must have these features enabled in your account:

- Multi-Location Inventory
- Advanced Inventory Management

For NetSuite OneWorld accounts, intercompany transfer orders are supported, so you can replenish a location by transfer order when there is a need for transfers across subsidiaries.

You must first setup reorder points and a preferred stock level for items that will need replenishment. Set up items at Lists > Accounting > Items. Read more details in Entering Purchasing/Inventory Information on Items.

To replenish a location by transfer order:

1. Go to Transactions > Inventory > Replenish Location by Transfer Order.
2. The current date autofills the Date field. Enter a different date if needed. This date populates in the header on the transfer orders created.
3. In the From Subsidiary field, select the subsidiary where the items will be taken from. The selection you make in this field determines which locations are available to be selected in the From Location field.

   For example, if you select Subsidiary B here, you can choose a source location from a list of locations limited to only those associated with Subsidiary B.

   **Note:** This field is required. This field shows only in OneWorld accounts.

4. In the To Subsidiary field, select the subsidiary where the items are to be received. The selection you make in this field determines which locations are available to be selected in the To Location field.

   For example, if you select Subsidiary B here, you can choose a destination location from a list of locations limited to only those associated with Subsidiary B.

   This field is optional. This field shows only in OneWorld accounts.

5. In the From Location field, select the location where you want to remove items. The location you choose will have its inventory reduced.

6. In the To Location field, select the location where you want to send the items. The location you choose will have its inventory increased.

7. Select a Department or Class to associate with this transfer as needed. These classifications populate in the header on the transfer orders created.

8. Check the Use Distribution Network box if you use the Distribution Resource Planning feature and want to use a distribution network that you have set up.

   After you have set up the Distribution Resource Planning feature, NetSuite can transfer inventory based on the established relationships between the source and destination location. If an item is associated with a distribution category and a distribution network, NetSuite can use the bill of distribution to replenish the location by transfer order. When you check the Use Distribution Network box, you can specify the distribution network to use for the transfer.

   **Note:** This field is optional. This field shows only in OneWorld accounts.

9. Click the Create button to create the transfer order.

   The transfer order will be created, and you can view it in the list of transfer orders.

**Example:** Suppose you have a subsidiary in New York and a subsidiary in Los Angeles. You need to transfer inventory from New York to Los Angeles. You would select New York in the From Subsidiary field and Los Angeles in the To Subsidiary field. Then, you would select the specific locations in New York and Los Angeles where the inventory is located. Finally, you would specify the items to be transferred and the quantities, and create the transfer order.

For more information about transferring inventory, see the NetSuite documentation on Inventory Replenishment and Withdrawal.
Network box on the Replenish Location by Transfer Order form and the From Location is selected, NetSuite displays in the To Location field only locations that are associated by the preset bill of distribution and that require inventory based on preset reorder parameters.


9. If you use the Multiple Units of Measure feature, in the Unit field, choose to display item quantities in the Base Unit or Stock Unit of measure.

10. Use the Create Transfer Order Based on Available Quantity preference to determine the method for calculating the quantity to transfer.

For example, your Atlanta warehouse periodically receives a shipment from overseas of 50 purple swimsuits. Then, the warehouse needs to distribute inventory out of the warehouse and into the retail locations. Retail store space is limited and each location has different needs:

- Store 1 requested 50 purple swimsuits
- Store 2 requested 20 purple swimsuits
- Store 3 requested 30 purple swimsuits
- Clear this box to create a transfer order showing a quantity based on demand at the receiving location.
- Check this box to create a transfer order showing a quantity based only on supply at the source location. This option does not transfer more than the amount currently available in the source location. When this box is checked, the Shortage Calculation Method field is available.

For example, the warehouse has a fixed amount of stock to cover the shortages at all retail locations.

- If the total amount of warehouse stock is more than the total amount requested by retail stores, the needed items can be transferred immediately.
- If the total amount of warehouse stock is less than the total amount requested by retail stores, NetSuite uses a shortage handler. See the Shortage Calculation Method description below for details.

11. When the Create Transfer Order Based on Available Quantity box is checked, you can make a selection in the Shortage Calculation Method field. A shortage means the source location does not have enough stock to cover the total quantity requested by all locations and you must decide the best method to distribute the amount available. The following shortage distribution options are available:

- **Distribute Manually** – NetSuite does not calculate an amount to transfer. The transfer quantity defaults to zero and you manually enter the appropriate quantity to transfer.

- **Distribute Evenly Across Locations** – NetSuite divides the quantity available at the From Location evenly across all locations that need this item.
  - Based on the previous example when the warehouse has a total quantity of 50, then Store 1, Store 2, and Store 3 each receive a quantity of 16.

- **Distribute By Percentage of Total Requested** – NetSuite distributes items based on the quantity each location has requested.
  - Based on the previous example when the warehouse has a total quantity of 50, then stores receive the following quantities:
    - Store 1 requested 50. It receives a quantity of 25.
    - Store 2 requested 20. It receives a quantity of 10.
    - Store 3 requested 30. It receives a quantity of 15
Note: The Shortage Calculation Method column displays an icon only when a shortage exists.

When there is no shortage, the transfer quantity is automatically set to the quantity required for the To Location, even if the shortage calculation method is set to Distribute Manually.

12. Check the box next to each item you want to transfer. An item shows in the list when the stock level is at or below the reorder point per location.

13. In the Shortage column, an icon displays a warning if the source location cannot fill the full amount requested by the location. In the View field, you can select View Shortages Only to filter the list for items that have a shortage warning.

14. The Lead Time column displays the default lead time for this item. NetSuite sources the lead time from the following in this order:
   1. Lead Time set on the Bill of Distribution (when Distribution Resource planning is used)
   2. Lead Time set on the Item Record
   3. Lead Time set at Inventory Management Preferences

15. The following columns display the current item quantity at the location requesting items: Available, On Order, Back Ordered, Reorder Point, Preferred Stock Level. This information can be used to make decisions about transferring inventory. For example, you can compare the Available quantity with the Preferred Stock Level for an item to determine if you need additional stock.

16. For each item listed, NetSuite suggests a quantity to transfer in the Transfer Quantity column. The suggested amount is based on your preference settings. You can accept this amount or enter a new amount.

Note: You cannot transfer a quantity greater than the Available quantity.

17. Optionally click the Calculator icon to display the information used to calculate the suggested transfer quantity.

18. The Transfer Price column displays the transfer price indicated on the item record.

19. Click Submit.

The transfer orders created are consolidated if the From Location and To Location are the same.

The following applies for transfer orders created in NetSuite OneWorld accounts:

- When the parent subsidiary is same, a transfer order is created.
- When parent subsidiary is not the same, an intercompany transfer order is created.

If you use approval routing, the Replenish Location by Transfer Order page will continue to indicate that items are needed until the transfer orders created upon submission are approved. After approval, the item quantities show as On Order.

Status

After submitting the form, you can view the status of order creation at Transactions > Inventory > Replenish Location by Transfer Order > Status.

The status list displays the following about each transfer order created:
Transferring Inventory

- From Subsidiary (for NetSuite OneWorld accounts)
- To Subsidiary (for NetSuite OneWorld accounts)
- From Location
- To Location
- Status
- Transfer Order number
  - You can click this link to open the order.

**Reorder Multiples**

The recommended transfer order quantity does respect the reorder multiple setting on the item record.

When there is a supply shortage at the source location, the reorder multiple may not be satisfied. If the transfer quantity cannot reach the reorder multiple, NetSuite will recommend a zero transfer quantity.

For example, the following is true:

- Available Quantity (From Location) : 100
- Reorder Multiple : 40
- Quantity Required (To Location)
  - without reorder multiple: 90
  - with reorder multiple: 120

In this case, NetSuite recommends a quantity to transfer of zero because the requirement of 120 using the reorder multiple cannot be met.

For more information on reorder multiples, read the help topic Entering Purchasing/Inventory Information on Items.

**Withdrawing Inventory**

Use the Withdraw by Transfer Order form to withdraw inventory out of multiple locations into one location. This is useful at the end of a season when individual stores need to remove inventory that did not sell during the intended season.

For example, at the end of the season to sell swimsuits, a retailer can withdraw swimsuit stock from the retail location to store the items in a centralized warehouse. Keeping an item stocked at a retail location has a high holding cost. Warehouse storage has a lower holding cost and also makes retail shelf space available for other products more appropriate to the current season. The transfer withdrawal identifies all stock of the item at one or more retail store locations and transfers it to the warehouse.

Merchandise planners can also assess slow moving inventory and use the Transfer Order Withdrawal to optimize inventory distribution over locations.

**To withdraw inventory by transfer order:**

1. Go to Transactions > Inventory > Withdraw by Transfer Order.
2. The current date autofills the Date field. Enter a different date if needed. This date populates in the header on the transfer orders created.
3. In the **From Subsidiary** field, select the subsidiary where the items will be taken from. The selection you make in this field determines which locations are available to be selected in the From Location field.

For example, if you select Subsidiary B here, you can choose a source location from a list of locations limited to only those associated with Subsidiary B.

**Note:** This field is required. This field shows only in OneWorld accounts.

4. In the **To Subsidiary** field, select the subsidiary where the items are to be received. The selection you make in this field determines which locations are available to be selected in the To Location field.

For example, if you select Subsidiary B here, you can choose a destination location from a list of locations limited to only those associated with Subsidiary B.

This field shows only in OneWorld accounts.

5. In the **From Location** field, select the location where you want to remove items. The location you choose will have its inventory reduced.

6. In the **To Location** field, select the location where you want to send the items. The location you choose will have its inventory increased.

7. Select a **Department** or **Class** to associate with this transfer as needed. These classifications populate in the header on the transfer orders created.

8. Check the **Use Distribution Network** box if you use the Distribution Resource Planning feature and want to use a distribution network that you have set up.

After you have set up the Distribution Resource Planning feature, NetSuite can transfer inventory based on the established relationships between the source and destination location. If an item is associated with a distribution category and a distribution network, NetSuite can use the bill of distribution to withdraw inventory by transfer order. When you check the **Use Distribution Network** box on the Withdraw by Transfer Order form and the To Location is selected, NetSuite displays in the From Location field only locations that are associated by the preset bill of distribution.

For more details about the Distribution Resource Planning feature, read [Distribution Resource Planning](#).

9. If you use the Multiple Units of Measure feature, in the **Unit** field, choose to display item quantities in the Base Unit or Stock Unit of measure.

10. Check the box next to each item you want to transfer.
   
   a. **Lead Time** is the average number of days between ordering an item from a vendor and receiving it.
      
      - If you use the Distribution Resource Planning feature, then the lead time shown is based on the bill of distribution.
      - If the bill of distribution does not specify a lead time, then the lead time shown is based on the item record.
      - If lead time is not specified on either the bill of distribution or the item record, then the lead time shown is based on set inventory management preferences. For details, read [Setting Up Advanced Inventory Management](#).

      You can change the default as necessary.

   b. The **Transfer Quantity** field displays recommended quantity to transfer. NetSuite recommends by default to withdraw the entire available quantity in the From Location.

   c. The **Transfer Price** column displays the transfer price indicated on the item record.

11. Click **Submit**.
The transfer orders created are consolidated if the From Location and To Location are the same.

**Status**

After submitting the form, you can view the status of order creation at Transactions > Inventory > Withdraw Transfer Order > Status.

**Intercompany Cross-Subsidiary Fulfillment**

Use the Intercompany Cross-Subsidiary Fulfillment feature in your NetSuite OneWorld account to fulfill orders and receive returns across multiple subsidiaries.

This means that orders are not limited to be fulfilled from locations within the originating sales subsidiary. Rather, you can fulfill a single sales order from locations in multiple subsidiaries.

For example, your process may include having a central order administration in your U.S. subsidiary that manages order placement and sales for the entire company. Because you have distribution centers in many subsidiaries, an order placed in the sales subsidiary might best be fulfilled using inventory from one or more locations in other subsidiaries to reduce shipping costs. When each sales order is entered, individual lines on the order can be assigned to a specified subsidiary for fulfillment. Then, each line—item on the order can be fulfilled and shipped from individual subsidiaries. Finally, an invoice for the order is generated from the originating central order subsidiary to send to the customer.

In this way, using the Intercompany Cross-Subsidiary Fulfillment feature can reduce maintenance associated with intercompany inventory transaction processing. There is less need to enter and process drop ship orders or intercompany transfer orders to get inventory where it needs to be. This also means reduced accounting steps to process intercompany fulfillment and receipt transactions.

Additionally, using this feature, you can do the following:

- Create a return material authorization (RMA) associated with one subsidiary and receive the RMA line-items in one or more locations in other subsidiaries.
- Enter sales orders from multiple sales locations and then fulfill the orders from a centralized location.
Do the following to use the Intercompany Cross-Subsidiary Fulfillment feature:

- Enable the Intercompany Cross-Subsidiary Fulfillment feature.
  
  Read Enabling Intercompany Cross-Subsidiary Fulfillment.

- Create Global Inventory Relationship records that define which places inventory to fulfill orders can be sourced from.
  
  Read Creating a Global Inventory Relationship Record.

- Process Intercompany Cross-Subsidiary transactions.
  
  Read Processing Sales and Returns Using Intercompany Cross-Subsidiary Fulfillment.

- Set up Cross-Subsidiary Rules on shipping item records.
  
  Read the help topic Creating Shipping Items.

Enabling Intercompany Cross-Subsidiary Fulfillment

In order to use Intercompany Cross-Subsidiary Fulfillment, you must enable the feature in your account.

**To enable Intercompany Cross-Subsidiary Fulfillment:**

1. Go to Setup > Company > Enable Features.
2. Click the **Items & Inventory** subtab.
3. Check the **Intercompany Cross-Subsidiary Fulfillment** box.
4. Verify that you have also enabled the Multi-Location Inventory feature.
5. Click the **Transactions** subtab.
6. Verify that you have also enabled the Advanced Shipping feature and Multiple Shipping Routes feature.
Creating a Global Inventory Relationship Record

To use the Intercompany Cross-Subsidiary Fulfillment feature to fulfill or receive inventory, create Global Inventory Relationship (GIR) records. These define which places inventory can be sourced from to fulfill orders and where orders can be received.

Note that, when using the Intercompany Cross-Subsidiary Fulfillment feature, a subsidiary can still ship to their own customers from any of their own locations without setting up a GIR.

Global Inventory Relationship records define the relationship between subsidiaries and their associated locations.

**To create a Global Inventory Relationship Record:**

1. Go to Setup > Company > Enable Features.
2. Complete information in the sections described below.
3. Click **Save**.

**Primary Information**

1. Select an *Originating Subsidiary*. This is the subsidiary to be associated with the originating sales order or return materials authorization (RMA).
2. Select an *Inventory Subsidiary*. This is the subsidiary whose locations can fulfill a sales order or receive an RMA from customers in the Originating Subsidiary.
3. Check the *Inactive* box to prevent this GIR record from displaying in lists on records and transactions.

A Global Inventory Relationship record cannot be inactivated in these cases:

- After the record is used on a sales order that enables the preference to Allow Cross-Subsidiary Fulfillment
- After the record is used on a customer return authorization that enables the preference to Allow Cross-Subsidiary Customer Returns

On each subtab below, define the locations to associate with this GIR for processing fulfillments and customer returns. The locations you select on these subtabs determine the locations you can fulfill from or receive to on transactions set to Allow Cross-Subsidiary Fulfillment or Returns. The list of fulfillment locations can be different than the list of locations for returns.

**Fulfillment**

1. Click the **Fulfillment** subtab.
2. In the **Location** list, select one or more locations to define where you want to allow fulfillment from. Then, when a subsidiary is selected a transaction, orders entered and set to Allow Cross-Subsidiary Fulfillment can be fulfilled only from the locations defined on this GIR record.

Only these locations are available for selection in the Inventory Location list on the sales order line.
3. Check the **All Fulfillment Locations** box to add all locations associated with the selected Inventory Subsidiary.

   Because this box is checked by default, all locations are included by default.

   When this box is checked, this GIR record is linked to the Inventory Subsidiary record and the location list automatically syncs to stay updated. As locations are added or deleted from the subsidiary record, those locations are also added to or removed from this location list. For example, if this GIR is associated with Subsidiary A and you add three new locations to the Subsidiary A record, this GIR record updates to be associated with the three new locations.

4. Click **Add Multiple Locations** to add individual locations that are associated with the selected Inventory Subsidiary one at a time.

5. Click **Remove All Locations** to clear the list of associated locations.

### Customer Return

1. Click the **Customer Return** subtab.

2. In the **Location** list, select one or more locations to define where you want to allow receipt of returns. Then, when a subsidiary is selected a transaction, returns entered and set to Allow Cross-Subsidiary Fulfillment can be received only in the locations defined on this GIR record.

   Only these locations are available for selection in the Inventory Location list on the return.

   **Note:** After you save the Global Inventory Relationship record, you can change which locations are listed here. Changes will affect only future sales orders you enter.

3. Check the **All Customer Return Locations** box to add all locations associated with the selected Inventory Subsidiary.

   Because this box is checked by default, all locations are included by default.

   When this box is checked, this GIR record is linked to the Inventory Subsidiary record and the location list automatically syncs to stay updated. As locations are added or deleted from the subsidiary record, those locations are also added to or removed from this location list. For example, if this GIR is associated with Subsidiary A and you add three new locations to the Subsidiary A record, this GIR record updates to be associated with the three new locations.

### Deleting a Global Inventory Relationship Record

A Global Inventory Relationship record cannot be deleted in these cases:

- After the record is used on a sales order that enables the preference to Allow Cross-Subsidiary Fulfillment
- After the record is used on a customer return authorization that enables the preference to Allow Cross-Subsidiary Customer Returns

### Processing Sales and Returns Using Intercompany Cross-Subsidiary Fulfillment

When using the Intercompany Cross-Subsidiary Fulfillment feature, sales and returns can be processed across more than one subsidiary.
- Enable the Allow Cross-Subsidiary Fulfillment preference on a sales order. See Intercompany Sales and Fulfillment.

Note the following about these preferences:

- These preference boxes are hidden and checked by default. You must customize transaction forms to show the boxes on Items subtab of a sales order or RMA form. To do so, click Customize on the form.
- To check these boxes, you must also check the Multiple Shipping Routes box, which is also located on the Items subtab of the forms.
- You cannot disable the Allow Cross-Subsidiary Fulfillment preference when the Global Inventory Relationship record is linked to a sales order.
- You cannot disable the Allow Cross-Subsidiary Customer Return preference when the Global Inventory Relationship record is linked to a sales order.

Also, using Intercompany Cross-Subsidiary Fulfillment, the Location field is replaced by the Inventory Location field on line items of a sales order or RMA. Then, the Location field in the Classification section on the form is used to associate the transaction with a location for accounting purposes. The Inventory Location field on each transaction line is used for inventory management.

Note: You cannot create, edit, or delete an Intercompany Sales Order Fulfillment or Intercompany Receipt when the quantity shipped is fewer than the quantity received on the linked Intercompany Purchase Order.

Intercompany Sales and Fulfillment

On a sales order, choose a setting for the Allow Cross-Subsidiary Fulfillment preference on the Items subtab of the form. Your selection here determines which locations show in the Inventory Location field as available to fulfill from.

- Clear the Allow Cross-Subsidiary Fulfillment box to allow fulfillment only from locations directly associated with the transaction subsidiary.
- Check the Allow Cross-Subsidiary Fulfillment box to allow fulfillment from locations listed on GIR records associated with the transaction subsidiary.

This box is checked and all locations are included by default.

The Inventory Location column and Inventory Subsidiary column show for line items only after the Allow Cross-Subsidiary Fulfillment feature is enabled. For each line item, use the Inventory Location field to select the fulfillment location. This field shows these locations:

- Locations directly associated with the transaction subsidiary
- Locations listed on the Fulfillment subtab of related GIR records

Intercompany Return Materials Authorization (RMA)

On a return materials authorization (RMA), choose a setting for the Allow Cross-Subsidiary Returns preference. Your selection here determines which locations are available to receive the order in the Inventory Location field.

- Clear the Allow Cross-Subsidiary Returns box to allow returns to be received only from locations directly associated with the transaction subsidiary.
- Check the Allow Cross-Subsidiary Returns box to allow receipt of returns to locations listed on GIR records associated with the transaction subsidiary.
This box is checked with all locations included by default.
The Inventory Location column and Inventory Subsidiary column show when the Allow Cross-Subsidiary Fulfillment feature is enabled. For each line item, use the To Location field to select the receiving location. This field shows these locations:
- Locations directly associated with the transaction subsidiary
- Locations listed on the Customer Return subtab of related GIR records

**Intercompany Receipt**

For receipts set to Allow Cross-Subsidiary Returns, select a receiving location on each transaction line in the To Location field. This field shows these locations:
- Locations directly associated with the transaction subsidiary
- Locations listed on the Customer Return subtab of related GIR records

**Role and Permission Considerations**

Depending on the role you use, you may have restricted access to create, edit, or view forms and data associated with subsidiaries and locations. However, when the Intercompany Cross-Subsidiary Fulfillment feature is enabled, restrictions are lifted for processing cross-subsidiary transactions in the following cases:

- **Fulfillments**
  - You can enter a sales order in your subsidiary and select any of your subsidiary's GIR fulfillment inventory locations on the lines of that sales order, regardless of your authorized access to other subsidiaries.
  - You can fulfill a sales order line for your inventory location on a sales order that originated in a subsidiary you are not authorized to access.

- **Customer Returns**
  - You can create an RMA in your subsidiary and select any of their subsidiary's GIR customer return inventory locations on the lines of that RMA, regardless of your authorized access to other subsidiaries.
  - You can receive an RMA line for your inventory location on an RMA that originated in a subsidiary you are not authorized to access.
Inventory Reporting

NetSuite reports are a powerful tool you can use to assess inventory at all stages of your inventory workflow.

You can view reports with inventory costs, stock levels, activity, valuation, revenue generated and profitability. Then, use the information from reports to identify successes and problems within each workflow process, as well as within the workflow as a whole.

For example, you can view reports that return this inventory data for the previous quarter:

- inventory valuation rises each week
- item sales revenue decreases each week
- gross profitability of your top seller remains level

With this information, you can take action as necessary -- changing processes that have created problems and maintaining processes that are successful:

- High inventory values increase overhead and may cut your profitability.
  You can investigate items that have a high percentage of total inventory value. Based on their costs and turnover rates, you may need to change your purchasing practices.
- Sales revenue decreases can result from customer dissatisfaction caused by difficulties and delays during fulfillment.
  You can investigate items that are frequently backordered and adjust their set reorder points and preferred stock levels.
- A steady profitability on a popular item is a positive indication.
  You can maintain the appropriate stock level and price point currently set on the item record. Because it is not problematic, you can focus your attention elsewhere.

When you can take action to make improvements as needed, you can execute more efficient management of your inventory.

It is important to track your inventory so you know what stock you have and what stock you need. Keeping the appropriate levels of stock on hand enables you to maintain a streamlined stock level, which results in reduced overhead. It also enables you to fulfill orders in a timely manner, which results in customer satisfaction.

You can use inventory reports to make regular assessments of stock quantities and identify your replenishment needs to maintain a streamlined inventory, as well as evaluate your overall inventory workflow.

First, determine the status of your inventory and identify your replenishment needs. Then, you can maintain optimum stock levels by purchasing or redistributing inventory as needed to maintain the ideal quantities.

You can use reports to assess your inventory and workflow. Reports can help you identify:

- current stock status
- items that are profitable or problematic
- areas of the inventory workflow that are beneficial or detrimental

Then, you can respond to information in the reports by:

- modifying replenishment to streamline stock levels
- making changes to correct problems in the workflow
To view reports, go to the Reports tab. Inventory reports can be accessed under the Inventory/Items heading.

**Note:** Links to all reports may not show on the Reports tab. The reports that are available depend on the role assigned to you. For example, an Administrator has access to more reports than a Sales Manager.

Reports can show current status of inventory items and backorders to help you find out what you need.

Inventory assessment can have two main goals: to determine your inventory level or to determine your inventory values. Assessing the level of your inventory tells you how much inventory you have. Assessing the value tells you how much your inventory is worth.

One report can help you make both assessments: **Stock Ledger**.

Other inventory reports can be categorized by two main functions—inventory level assessment and inventory value assessment.

### Inventory Levels

You can make an **Inventory Level Assessments with Reports** to determine if the quantities you are stocking on hand are the appropriate amounts.

- The **Stock Ledger** shows activity for items across a period. It is a tool for better understanding inventory SKU activity across classes, departments, and subsidiaries for multiple locations. For example, it can help identify inventory items that are slow-moving, fast-moving, or overstocked. It can help identify inventory investment strategies for planning.
- The **Physical Inventory Worksheet** helps you take a physical count of your stock to be sure it matches the quantity in NetSuite.
- Use the **Current Inventory Snapshot Report** to monitor inventory levels and determine ordering schedules. Determine a reorder point and preferred stock level, or identify overstocking on items.
- Use the **Inventory Back Order Report** to find items that are committed on sales orders, but are not in stock, as well as analyze the replenishment process of your workflow. For items repeatedly on backorder, you may consider increasing the reorder point for that item.
- The **Inventory Activity Detail Report** shows the quantity per transaction of inventory items. You can use this report to identify trends in sales for items and make informed decisions about stocking your items.
- Items that are pending fulfillment are committed to be sold, are in stock and are ready to ship to the customer. The **Items Pending Fulfillment Report** shows all open transaction lines on sales orders and can help you to process items to fulfill orders.
- You need to know how quickly each product moves through inventory because it is not efficient to have large quantities of inventory sitting idle on your shelves. Inventory turnover measures item efficiency by examining how quickly you sell a product. The **Inventory Turnover Report** helps you assess stock level changes over time. This report lists the cost of sales, average value, turnover rate (or turn rate) and average days on hand for each inventory item.

### Inventory Values

**Inventory Value Assessments with Reports** help you identify inventory value and profitability, as well as revenue generated by items.

- The **Stock Ledger** shows activity for items across a period. It is a tool for better understanding inventory SKU activity across classes, departments, and subsidiaries for multiple locations. For
example, it can help identify inventory items that are slow-moving, fast-moving, or overstocked. It can help identify inventory investment strategies for planning.

- **The Inventory Profitability Report** shows cost, revenue, and profitability information about your inventory. You can view this report to determine margins on your items and identify items that are most and least profitable. If you operate an online store with NetSuite, this report includes sales from your online store.

- **The Inventory Valuation Report** summarizes the value of your inventory at a specific point in time and can help you identify areas you can potentially use to streamline your inventory. For each inventory item, this report details item name, description, inventory value (in dollars), percentage of total inventory value and quantity on hand.

- **An Inventory Valuation Detail Report** shows the transactions affecting the value of your inventory. This report is useful for troubleshooting costing problems with your items because it lists transactions that affect inventory assets.

- **Inventory Revenue Report** An Inventory Revenue report shows the total sales amounts for inventory items and overall revenue from your inventory items. You can identify an item that has low sales and is a poor contributor to your revenue total and may need to be discontinued. Pinpoint items that have high sales and are good contributors to your revenue total so you can maintain the stock, marketing, and pricing of these items.

If you operate an online store with NetSuite, these reports will include any sales from your store.

- **An Inventory Revenue Detail Report** shows the revenue generated by your inventory items for a particular period by sales transaction. You can use this information to determine which items are successful items by finding items that generate high revenue and have a high gross profit percentage.

If you operate an online store with NetSuite, these reports include sales from your store.

### Stock Ledger

The Stock Ledger report helps you manage inventory by showing activity for items over a period. It is a tool you can use to better understand inventory activity across classes, departments, and subsidiaries for multiple locations such as stockrooms, warehouses, and retail stores. For example, it can help identify inventory items that are slow-moving, fast-moving, or overstocked. It can help identify inventory investment strategies and planning, as well as improve the effectiveness of item promotions.

For example, on the report, you can define a time period from November 1st to November 30th. The report displays the following item data for the defined period:

- What was the beginning count of inventory on hand at the start?
- What were all inputs that came in?
- What were all outputs that went out?
- What was the final count of inventory on hand at the end?

**Note:** In accounts that use the Multiple Units of Measure feature, quantities displayed on the Stock Ledger report are in stock units.

The Stock Ledger report returns data on inventory items and assembly items.

To use the Stock Ledger report, you must have the Inventory feature enabled in your account.

If you use the Multiple Units of Measure feature, quantities are displayed in stock units.

If the Multi-Currency feature is enabled in your account, values on this report are displayed in the primary currency of your account.
To see the stock ledger:

1. Go to Reports > Inventory/Items > Stock Ledger.
   A message appears indicating that your report is loading. The status bar indicates the progress as your report loads. You can click Cancel Report to stop the report from loading.
2. Make selections in the following fields in the footer of the report to define the data returned by the report:
3. Define a date range using one of the following:
   ▪ Make a selection in the Date field.
   ▪ Make selections in the From field and the To field.
4. If you use NetSuite OneWorld, the Subsidiary Context field enables you to filter the report data by subsidiary.
   a. Make a selection to display data for a different subsidiary.
      By default, the report displays data for the top-level, or root-parent, subsidiary.
   b. Select an option appended with (Consolidated) to display data for all child subsidiaries of the consolidated parent subsidiary.
      After you have selected a subsidiary context, this selection is maintained each time you rerun the report, until you change the subsidiary context again.
5. If you use the Multi-Book Accounting feature, make a selection in the Accounting Book field.
6. Click Refresh to apply your selections and reload the report.

The Stock Ledger report can also be customized. If your account includes many combinations of items and locations, you can customize the report to filter the results and reduce the time required to generate the report. For details, read the help topic Report Customization.

Data is displayed using the following columns:

- Location
- Description
- Class
- Department
- Subsidiary
- Beginning Inv Qty On-Hand – Inventory quantity as of the From date
- Beginning Average Cost – Average cost calculated as (Beginning Inv On-Hand Value / Beginning Inv Qty On-Hand).

This calculated average can be different than the item cost recorded for the item because the cost displayed here is determined by the period dates specified and can change across the time horizon. NetSuite provides an average cost for a point of reference.

**Note:** If the item uses Group Average costing, then the As Of date on at least one Balance Location Costing Groups Accounts bulk process must equal the From date of the Stock Ledger for the location account values to be accurate for the report. For details about the Balance Location Costing Groups Accounts bulk process, read the help topic Balance Location Costing Group Accounts.

- Beginning Inv On-Hand Value – Inventory Asset Account balance as of the From date
Stock Ledger

- **Receipts** – Sum of quantities on all item receipts, standalone bills, assembly builds, and work order completions that are dated between the From date and To date, inclusive. This value represents all inputs received into inventory.

- **Other Inv Inputs** – Sum of quantities on all customer returns, positive inventory adjustments, positive inventory transfers, and positive inventory worksheet adjustments that are dated between the From date and To date, inclusive. This value represents all non-receipt inputs that added inventory.

- **Total Input Quantity** – Sum of Receipts quantity and Other Inv Inputs quantity

- **Value of Inputs** – Sum value of inventory account transactions associated with the Total Input Quantity

- **Last Receipt Date** – Date of the most current receipt transaction that is dated between the From date and To date, inclusive. This is the date of the most recent receipt input. If the most recent receipt is outside the selected period, the column is blank. Assessing this date can help you determine how active an item is for the duration of the selected time period.

- **Sales** – Sum of quantities of all cash sales, standalone invoices, and item fulfillments that are dated between the From date and To date, inclusive. This value represents all sale outputs from inventory.

- **Other Inv Outputs** – Sum of quantities of all assembly unbuilds, work order issues, negative inventory adjustments, negative inventory transfers, and negative inventory worksheet adjustments that are dated between the From date and To date, inclusive. This value represents all non-sale outputs from inventory.

- **Total Output Quantity** – Sum of Sales and Other Inv Outputs quantities

- **Value of Outputs** – Sum of inventory account transactions associated with the Total Output Quantity

- **Last Sales Date** – Date of the most current sales transaction that is dated between the From date and To date, inclusive. This is the date of the most recent sale output. If the most recent sale is outside the selected period, the column is blank. Assessing this date can help you determine how active the item is for the duration of the selected period.

- **Ending Inv Qty On-Hand** – The total ending quantity calculated as [(Beginning Inventory Quantity On Hand + (Total Input Quantity – Total Output Quantity)].

- **Ending Average Cost** – The total ending average cost calculated as (Ending Inv On-Hand Value / Ending Inv Qty On-Hand).

**Note:** If an item uses Group Average costing, in order for the location account values to be accurate for the report, at least one Balance Locations Costing Group Accounts bulk process must have an As Of date equal to the beginning date of the Stock Ledger report. For details, read the help topic Balance Location Costing Group Accounts.

- **Ending Inv On-Hand Value** – The total ending average value calculated as [Beginning Inv On-Hand Value + (Value of Inputs – Value of Outputs)] .

### Inventory Level Assessments with Reports

The following reports can help you identify current stock levels and determine replenishment needs.

- Stock Ledger
- Physical Inventory Worksheet
- Current Inventory Snapshot Report
- Inventory Back Order Report
Inventory Level Assessments with Reports

■ Inventory Activity Detail Report
■ Items Pending Fulfillment Report
■ Inventory Turnover Report
■ Demand History by Item Report
■ Item Demand Plan by Item Report
■ Item Demand Forecast vs. Actual Report

How Kits and Kit Parts Affect Quantities Displayed in Reports

When using reports that display inventory item quantities, it is useful to familiarize yourself with how kits and ‘kit part’ quantities are displayed. Some items can be listed both as parts of kits and as individual items, so quantities may appear larger than they are. This is especially relevant for the following reports:

■ Items Pending Fulfillment Report
■ Inventory Back Order Report
■ Sales Back Order Report
■ Sales Orders Pending Fulfillment Report

These standard reports show quantities for individual items which can include quantities attributed to kits. Using the Sold as a Kit/Assembly Member filter, you can modify the way that standard reports display quantities.

Example using the Sold as a Kit/Assembly Member filter

A Custom Items Pending Fulfillment Report might have the following two items of inventory:

■ DVD-R
■ DVD-R 5 Pack

The second item DVD-R 5 pack is a kit which consists of 5 DVD-R items. You have 4 kits of DVD-R 5 pack committed items and 3 DVD-R committed items. On the standard report those 2 line items will be displayed with the following quantities:

■ DVD-R: 23
■ DVD-R 5 Pack: 4

This report correctly displays that you have a total of 23 DVD-Rs committed, but it does not highlight that 20 of the 23 are part of the kit listed as the next line item. This may in some cases give the illusion that 43 DVD-Rs have been committed, whereas in fact only 23 have been committed.

Using the filter Sold as a Kit/Assembly Member, you can modify the standard report. Set the filter to false and the report will display the following 2 line items:

■ DVD-R: 3
■ DVD-R 5 Pack: 4

Now the line item DVD-R does not include the 20 DVD-Rs sold as part of DVD-R 5 pack kits. See the help topic Filtering Data on Reports for more details on how to apply filters to reports.
Physical Inventory Worksheet

A Physical Inventory Worksheet is a tool to maintain accurate inventory records by comparing your physical inventory count to inventory counts in your account.

This report lists all on-hand inventory. For each item, it shows the name, description, preferred vendor and quantity on hand.

When you print the report, there are lines to enter the results of a physical count of your inventory. Then you can compare your account’s inventory count to what you have in stock.

If you find discrepancies, you can adjust the quantity on hand on the item record. For more information on adjusting inventory, see Adjusting Inventory.

To see a physical inventory worksheet:

Go to Reports > Inventory/Items > Physical Inventory Worksheet.

A message appears indicating that your report is loading. The status bar indicates the progress as your report loads. You can click Cancel Report to stop the report from loading.

Note: This report does not support reporting by period even when the Report by Period preference is set to All Reports. The Report by Period preference can be configured at Home > Set Preferences, the Analytics subtab.

Current Inventory Snapshot Report

The Current Inventory Snapshot report provides a snapshot of real-time inventory data. You can use it to monitor inventory levels and determine ordering schedules.

The Current Inventory Snapshot report can help you pinpoint which items are low on stock and place orders accordingly.

For each inventory item, this report lists the item name, description, and preferred vendor. This report shows the following amounts for each location and in total:

- Reorder Point
- Quantity On Hand
- Quantity On Order
- Quantity Committed
- Quantity To Order
- Preferred Stock Level

You can also choose to filter the report to show only items whose stock levels are at or below their Reorder Point.

Note: If you use the Multi-Location Inventory feature, this report returns values that are grouped per location for most, but not all, fields. The values shown on this report are for each item’s preferred location for the following fields:

- Average Cost, Last Purchase Price, Last Transaction Date, Preferred Stock Level, and Reorder Point
Also, a value does not display for these fields for items that do not have a preferred location set.

**To see a current inventory snapshot report:**

Go to Reports > Inventory/Items > Current Inventory Snapshot.

A message appears indicating that your report is loading. The status bar indicates the progress as your report loads. You can click **Cancel Report** to stop the report from loading.

The information in this report is similar to the information shown on the Order Items page. For more information, read the help topic Bulk Ordering Items.

**Note:** This report does not support reporting by period even when the Report by Period preference is set to All Reports. The Report by Period preference can be configured at Home > Set Preferences, the Analytics subtab.

**Inventory Back Order Report**

The Inventory Back Order report shows the number of items backordered. Backordered items are items that are committed on sales orders, but are not in stock.

When using reports that display item quantities, kits and kit parts can affect the quantities displayed on reports. Use the filter Sold as a Kit/Assembly Member to modify reports to not display quantities for kit parts. To learn more, see How Kits and Kit Parts Affect Quantities Displayed in Reports.

For each inventory item, this report details which items are backordered by transaction. The report lists each item name, order number, customer name, quantity ordered, quantity fulfilled and quantity open.

You can use this report to assess stock status, as well as analyze the replenishment process of your workflow.

Assess your stock status by seeing how many items have quantities backordered. Viewing this report on a regular basis can help you identify trends for items that are frequently out of stock. Then, you can decide if you need to change your current replenishment practices.

**To see an inventory back order report:**

Go to Reports > Inventory/Items > Inventory Back Order Report.

A message appears indicating that your report is loading. The status bar indicates the progress as your report loads. You can click **Cancel Report** to stop the report from loading.

**Note:** This report does not support reporting by period even when the Report by Period preference is set to All Reports. The Report by Period preference can be configured at Home > Set Preferences, the Analytics subtab.

**Inventory Activity Detail Report**

The Inventory Activity Detail report shows the activity associated with your inventory items. The report shows the quantity per transaction of inventory items.
You can use this report to identify trends in sales for items. Then you can make informed decisions about stocking your items.

**To see an inventory activity detail report:**

Go to Reports > Inventory/Items > Inventory Activity Detail.

A message appears indicating that your report is loading. The status bar indicates the progress as your report loads. You can click **Cancel Report** to stop the report from loading.

**Items Pending Fulfillment Report**

Items that are pending fulfillment are committed to be sold, are in stock and are ready to ship to the customer. The Items Pending Fulfillment report shows all open transaction lines on sales orders and can help you to process items to fulfill orders.

The report is sorted by item, and then grouped by sales order. For each item it gives the items, document number, customer, quantity ordered, quantity fulfilled and quantity committed for open customer orders.

**To see an items pending fulfillment report:**

Go to Reports > Inventory/Items > Items Pending Fulfillment.

A message appears indicating that your report is loading. The status bar indicates the progress as your report loads. You can click **Cancel Report** to stop the report from loading.

When using reports that display item quantities, kits and kit parts can affect the quantities displayed on reports. Use the filter Sold as a Kit/Assembly Member to modify reports to not display quantities for kit parts. To learn more, see How Kits and Kit Parts Affect Quantities Displayed in Reports.

**Note:** This report does not support reporting by period even when the Report by Period preference is set to All Reports. The Report by Period preference can be configured at Home > Set Preferences, the Analytics subtab.

**Inventory Turnover Report**

For a streamlined inventory, it is not efficient to have large quantities of inventory sitting idle on your shelves. To maximize the efficiency of your stock, you need to know how quickly each product moves through inventory.

The Inventory Turnover Report helps you assess stock level changes over time. This report lists the cost of sales, average value, turnover rate (or turn rate) and average days on hand for each inventory item. This data is based on the time period shown in the footer of the report.

Inventory turnover measures item efficiency by examining how quickly you sell a product. Turnover is based on the number of times stock is turned over, or replaced, during a certain period.

The turnover rate is measured as cost of sales divided by the average inventory value, or:

\[
\text{Cost of Sales / Average Inventory Value} = \text{Inventory Turnover Rate}
\]

For example, the annual cost of sales for item AB123 is $1000 per year.

- If the average inventory value is $1000, then the turnover rate is 1. (1000 / 1000)
If the average inventory value is $250, then the turnover rate is 4. \( \frac{1000}{250} \)

The average inventory value is calculated as follows:

\[
\text{Average Inventory Value} = \frac{\text{SUM (on hand value on the last day of each month)}}{\# \text{ of months in period}}
\]

Use data on this report to make decisions about your inventory management. For example, compare the current year turnover rate of an item with the previous year turnover rate.

A turnover rate increase may indicate stock is not ordered often enough, or may indicate an increase in demand. Top-selling items move through inventory faster and have a higher turn rate.

A low turnover rate means the item is not moving through inventory quickly. A turnover rate decrease may indicate that too much stock is being ordered and kept on hand, or could be a reflection of poor sales.

After you identify an item with poor turnover, you could increase the turn rate and efficiency of this item by decreasing the amount you order from the vendor each time. Purchasing stock in lower quantities at more frequent intervals benefits you in several ways:

- It decreases the funds you have tied up in idle stock.
- It enables you to use revenue generated from sales of the product to replenish stock.

The Inventory Turnover Report also shows the average days on hand for items. This gives you an idea of how long it takes to run out of each item during the period specified. Average days on hand is calculated as \( \frac{\# \text{ of days in month(s) of selected date range}}{\text{inventory turnover rate}} \).

### To see an inventory turnover report:

Go to Reports > Inventory/Items > Inventory Turnover.

A message appears indicating that your report is loading. The status bar indicates the progress as your report loads. You can click Cancel Report to stop the report from loading.

**Note:** This report does not support reporting by period even when the Report by Period preference is set to All Reports. The Report by Period preference can be configured at Home > Set Preferences, the Analytics subtab.

### Demand History by Item Report

The Item Demand History by Item report shows the demand history for your items as the number of units sold over time. The demand history shown is the historical data that is used for analysis in demand calculations.

To see demand across a specific period, select a range in the date field, or enter a custom date range.

The historical demand displayed is based on the Transactions to Consider preference, which determines the transactions that are included in demand calculations.

- If your setting is Orders, then demand is calculated using approved, non-canceled sales orders. If you use the Assemblies feature, then work orders are considered also.
- If your setting is Actual Sales, then demand is calculated using cash sales and invoices. Sales orders are not used to calculate demand. If you use the Assemblies feature, then assembly builds are considered also.
Inventory demand calculations consider only transactions that decrease an item's stock level. For example, an assembly build increases the stock level for the assembly item and decreases the stock level for the assembly item's components. In this case, the demand plan calculation considers the assembly build only for the assembly item's components and not for the assembly item.

For details about setting this preference, read Setting Up Demand Planning.

**To see the item demand history by item report:**

Go to Reports > Demand Planning > Item Demand History by Item.

A message appears indicating that your report is loading. The status bar indicates the progress as your report loads. You can click Cancel Report to stop the report from loading.

To see demand across a specific period, select a range in the Date field or enter a custom date range.

**Item Demand Plan by Item Report**

The Item Demand Plan by Item report displays the item demand quantity by item.

**To see the item demand plan by item report:**

Go to Reports > Demand Planning > Item Demand Plan by Item.

A message appears indicating that your report is loading. The status bar indicates the progress as your report loads. You can click Cancel Report to stop the report from loading.

To see demand across a specific period, select a range in the Date field or enter a custom date range.

**Note:** This report does not support reporting by period even when the Report by Period preference is set to All Reports. The Report by Period preference can be configured at Home > Set Preferences, the Analytics subtab.

**Item Demand Forecast vs. Actual Report**

The Item Demand Forecast vs Actual report shows the forecasted demand for an item compared to the actual demand for the item across a certain period. This report helps you determine the accuracy of the forecast as well as whether supply or pricing needs to be adjusted for an item.

For example, if the forecast predicted a spike in sales for the month, but actual sales remained flat, you know that adjustments may need to be made to your forecasting values.

Additionally, you can make short-term assessments about supply and pricing adjustments:

- In a demand-pull environment, a discrepancy between the forecast and actual numbers may imply that the production or procurement amount needs to be adjusted.
- In a supply-push environment, a discrepancy between the forecast and actual numbers may imply that the price needs to be adjusted based on the expected amount being produced or procured. For example, an item with a large amount of unexpected overstock can be placed on sale with a special price.

You can display demand for an item by the week or by the month.
The historical demand displayed is based on your setting for the Transactions to Consider preference, which determines the transactions that are included in demand calculations.

- If your setting is Orders, then demand is calculated using approved, non-canceled sales orders.
- If your setting is Actual Sales, then demand is calculated using cash sales and invoices. Sales orders are not used to calculate demand.

For details about setting this preference, read Setting Up Demand Planning.

**To see the item demand forecast vs. actual report:**

Go to Reports > Demand Planning > ItemDemand Forecast vs Actual.

A message appears indicating that your report is loading. The status bar indicates the progress as your report loads. You can click Cancel Report to stop the report from loading.

To see demand across a specific period, select a range in the Date field or enter a custom date range.

**Note:** This report does not support reporting by period even when the Report by Period preference is set to All Reports. The Report by Period preference can be configured at Home > Set Preferences, the Analytics subtab.

**Inventory Value Assessments with Reports**

The following reports can help you identify inventory value and profitability, as well as revenue generated by items:

- Stock Ledger
- Inventory Profitability Report
- Inventory Valuation Report
- Inventory Valuation Detail Report
- Inventory Revenue Report
- Inventory Revenue Detail Report

**Inventory Profitability Report**

The Inventory Profitability report shows cost, revenue, and profitability information about your inventory. You can use this report to view and analyze profitability of your items.

For each inventory item, this report details:

- item name
- description
- quantity sold
- total cost
- total revenue
- gross profit dollars
Inventory Profitability Report

- percent of total profit
- gross profit percentage

**Note:** The gross profit percentage calculations are based on selling price, not cost.

If you operate an online store with NetSuite, this report includes sales from your online store. You can view this report to determine margins on your items and identify items that are most and least profitable.

**To see an inventory profitability report:**

Go to Reports > Inventory/Items > Inventory Profitability.

A message appears indicating that your report is loading. The status bar indicates the progress as your report loads. You can click Cancel Report to stop the report from loading.

Inventory Valuation Report

The Inventory Valuation report summarizes the value of your inventory at a specific point in time. You can use this report to analyze the quantities and value of active, on-hand inventory items.

For each inventory item, this report details item name, description, inventory value (in dollars), percentage of total inventory value, and quantity on hand.

Use this report to identify areas you can potentially use to streamline your inventory.

For example, if the report shows item #JK051 has a high dollar value and high percentage of total inventory, you might investigate the item as a problem. To find the problem, consider the item's cost and turnover rate:

- If JK051 has a high cost, you can expect to have a larger investment in stocking it. However, if your purchase rate closely follows the sales rate of the item, then stock is relatively ideal.
- If JK051 has a low cost, or your purchase rate is higher than your sales rate, then the item may need re-evaluating. Keeping expensive items in stock that have low turnover can increase your overhead. You may be purchasing more than you need and have unnecessary cash tied up in that item.

Using this report to identify problem items in this manner helps you streamline your inventory by keeping an optimal number of your items in stock.

After you have identified potential problems using the Inventory Valuation report, you can use the Inventory Valuation Detail Report to examine transactions related to problem items.

**Note:** When running the inventory valuation report for a past date, NetSuite does not recalculate the average cost as of the past date. Average cost is adjusted based only on changes made to transactions.

**To see an inventory valuation report:**

Go to Reports > Inventory/Items > Inventory Valuation.

A message appears indicating that your report is loading. The status bar indicates the progress as your report loads. You can click Cancel Report to stop the report from loading.
Inventory Valuation Report

An Inventory Valuation Detail report shows the transactions affecting the value of your inventory. This report is useful for troubleshooting costing problems with your items because it lists transactions that affect inventory assets.

For example, if the report shows item #JK051 has a high dollar value and high percentage of total inventory, you might investigate the item as a problem. You can determine if JK051 has a purchase rate that is higher than its sales rate by viewing this report. It details all related transactions, such as purchases, bill payments, sales, invoices, inventory adjustments, assembly builds, fulfillments, and more.

Note: When adjusting inventory, NetSuite allocates the excess cost of inventory to the last serial number entered. NetSuite does not divide the excess cost among the total number of serials and allocate the excess to each of them.

This is also true when you add serial numbers to the system through other inventory increasing transactions such as stand-alone bill and item receipt. In the inventory cost allocation example that follows, serial number 1681, the last serial number entered was allocated the excess cost: 1679 - $12,666.11, 1680 - $12,666.11, and 1681 $12,666.13.

To see an inventory valuation detail report:

Go to Reports > Inventory/Items > Inventory Valuation > Detail.

A message appears indicating that your report is loading. The status bar indicates the progress as your report loads. You can click Cancel Report to stop the report from loading.

Inventory Revenue Report

An Inventory Revenue report shows the total sales amounts for inventory items and overall revenue from your inventory items.

Revenue is an increase in assets or reduction in liabilities that results in an increase of equity, or net worth. Sales of your items and services result in revenue.

You can use inventory revenue reports to view and analyze sales quantities and value of active, on-hand inventory items.

If you operate an online store with NetSuite, this report will include any sales from your store.

You can use this report to help maximize your company’s revenue by analyzing inventory successes and problems.

For example, use this report to re-evaluate your strategy for problematic items. You can pinpoint an item that has low sales and is a poor contributor to your revenue total. Then, you can decide to restructure the item’s pricing or marketing strategy, or even to discontinue carrying the item.

Items that are successful can be identified and fostered. For example, you can pinpoint items that have high sales and are good contributors to your revenue total. Then, you can maintain the stock, marketing, and pricing of these items.
To see an inventory revenue report:

Go to Reports > Inventory/Items > Inventory Revenue.

A message appears indicating that your report is loading. The status bar indicates the progress as your report loads. You can click Cancel Report to stop the report from loading.

Inventory Revenue Detail Report

An Inventory Revenue Detail report shows the revenue generated by your inventory items. You can view and analyze sales revenue of active, on-hand inventory items.

This report shows revenue for a certain period by sales transaction. For each transaction, the report shows the item name, date sold, transaction number, quantity sold, sales price and total revenue.

If you operate an online store with NetSuite, these reports include sales from your store.

You can use this information to determine which items are successful items by finding items that generate high revenue and have a high gross profit percentage.

For example, you can filter the report to show revenue generated this month and determine the item that generated the highest revenue.

After you find the top revenue-generating item, you can use the Inventory Profitability report to determine the success of the item.

- If an item generates high revenue, but low gross profit, you may consider raising the sales price of the item.
- If an item generates a high revenue and a high gross profit, you know the item is successful and want to maintain the item.

By analyzing reports and item records to manage your inventory, you can maintain a streamlined inventory.

To see an inventory revenue detail report:

Go to Reports > Inventory/Items > Inventory Revenue > Detail.

A message appears indicating that your report is loading. The status bar indicates the progress as your report loads. You can click Cancel Report to stop the report from loading.

Supply Chain Management Reports

NetSuite Supply Chain Management provides consolidated, real-time data for supply chain processes, making information accessible across subsidiaries and resulting in improved efficiency and transactions workflow.

You can print the following supply chain forms and reports:

- Inventory Count Sheet – This document provides information on items that need to be counted. Warehouse personnel can use the inventory count sheet to perform physical inventory counts and inspections.
Daily Shipment Detail Report – This document provides high-level visibility into shipment activities in the warehouse on a daily basis. This report lists the recipients and shipping information for each package, with summary totals and provides daily information on new shipments per status.

Manufacturing Dispatch List – This document consolidates manufacturing operation tasks and provides details of outstanding operations by work center.

Manufacturing Traveler – This document provides information on the products that need to be created or repaired, and details of the specific tasks needed in creating a product. This form is passed from one work center to another as each manufacturing task is completed.

Availability

Supply Chain Management Reports is available in the shared Supply Chain Management SuiteApp when you have the Advanced Inventory module. The SuiteApp also includes the Manufacturing Task Scheduler feature. For more information about this feature, see the help topic Manufacturing Task Scheduler.

Refer to the following for information about other features included in the Supply Chain Management SuiteApp:

- Customer Part Number
- Estimated Landed Cost
- Engineering Change Order
- Item Substitution on Sales Orders

For more information about the SuiteApp, contact your NetSuite account manager.

Limitations

Be aware of the limitations of Supply Chain Management Reports:

- If the application encounters extremely long texts when generating a form, these texts may be clipped to fit into the table.
- When an invalid UPC code error is encountered, the form is not generated.
- System-generated bar codes containing extremely long item bar code names are compressed to fit into the table. Consequently, the bar code might not be readable.
- Mark All and Unmark All capability is only applied to entries on the current page.
- If you have configured the application to send email notifications, the file link included in the email message can only be viewed when you are logged in to your NetSuite account.
- The maximum report file size is 5MB.

Prerequisites

To enable supply chain management prerequisites:

1. Go to Setup > Company > Enable Features.
2. To access the Daily Shipment Detail Report page, on the Transactions subtab enable Advanced Shipping.
3. On the Items & Inventory subtab:
   - To access the Inventory Count Sheet page, you must enable Inventory Count.
To access the Manufacturing Dispatch List and the Manufacturing Traveler page, you must enable **Manufacturing Routing and Work Center** and **Manufacturing Work in Process**.

To enable bar code printing, you must enable **Bar Coding and Item Labels** and either **Inventory Count** or **Manufacturing Routing and Work Center**.

To be able to sort inventory count sheet by item or bin, you must enable **Inventory Count** and **Bin Management**.

To enable printing of serial or lot number, you must enable **Inventory Count** and either **Serialized Inventory** or **Lot Tracking**.

To generate PDF reports, on the **SuiteCloud** subtab enable **Advanced PDF/HTML (Beta) Templates**.

To learn more, see the help topic **Enabling Features**.

### Installing Supply Chain Management

**To install supply chain management:**

1. Enable the required features and preferences:
   - See **Prerequisites** for the Supply Chain Management Reports.
   - See the help topic **Prerequisites** for the Manufacturing Task Scheduler.
   - See the help topic **Prerequisites for Customer Part Number**.
   - See the help topic **Prerequisites for Estimated Landed Cost**.
   - See the help topic **Prerequisite for Item Substitution on Sales Orders**.
   - See the help topic **Prerequisite for Engineering Change Order**.

2. Install the Supply Chain Management SuiteApp by going to Customization > SuiteBundler > Search & Install Bundles (Administrator).
   - Look for the SuiteApp with the following details:
     - Bundle Name: **Supply Chain Management**
     - Bundle Id: **47193**
   - Supply Chain Management is a managed SuiteApp and is automatically updated whenever there are changes. Issue fixes and enhancements are available after the SuiteApp is updated in your account.

3. To verify that the SuiteApp has been installed in your account, go to Customization > SuiteBundler > Search & Install Bundles > List.
   - Supply Chain Management should be displayed on the Installed Bundles page.

To learn more, see the help topic **Installing a Bundle**.

### Multi-Language Support for the Supply Chain Management SuiteApp

Supply Chain Management supports the following languages:

- Chinese (Simplified)
- Chinese (Traditional)
- Czech
To set the language preference for Supply Chain Management:

1. Go to Setup > Company > Setup Tasks > Enable Features.
   b. Click Save.
2. Go to Home > Set Preferences.
   a. On the General subtab, in the Language field, select your preferred language.
   b. Click Save.

Setting Up Supply Chain Management Reports

Roles and Permissions in Supply Chain Management

The following roles are provided Full access upon installation of Supply Chain Management:

- CEO
- CFO
- Sales Vice President
- Accountant
- Accountant (Reviewer)
- Bookkeeper
Warehouse Manager

**Note:** To generate a Manufacturing Dispatch List and a Manufacturing Traveler, you must set the CRM Groups permission (under the Lists subtab) to View. For more information on setting permissions, see the help topic NetSuite Permissions Overview.

NetSuite Center views can vary depending on your role. You can view specific pages using the following path:

- **Supply Chain Management main page:**
  - Administrator – Transaction > Management > Supply Chain Management
  - Warehouse Manager – Inventory > Other > Supply Chain Management
  - Executive or Accounting – Financial > Other > Supply Chain Management

- **Inventory Count page:**
  - Administrator – Transaction > Inventory > Print Inventory Count Sheet
  - Warehouse Manager – Inventory > Inventory > Print Inventory Count Sheet
  - Executive – Financial > Adjustments > Print Inventory Count Sheet
  - Accounting – Financial > Inventory > Print Inventory Count Sheet

- **Manufacturing Dispatch List page:**
  - Administrator – Transaction > Manufacturing > Print Dispatch List
  - Warehouse Manager – Inventory > Manufacturing > Print Dispatch List
  - Executive or Accounting – Financial > Manufacturing > Print Dispatch List

- **Manufacturing Traveler page:**
  - Administrator – Transaction > Manufacturing > Print Traveler
  - Warehouse Manager – Inventory > Manufacturing > Print Traveler
  - Executive or Accounting – Financial > Manufacturing > Print Traveler

- **Daily Shipment Detail Report page:**
  - Administrator – Transaction > Management > Supply Chain Management > Daily Shipment Detail
  - Warehouse Manager – Inventory > Other > Print Supply Chain Forms > Daily Shipment Detail
  - Executive or Accounting – Financial > Other > Print Supply Chain Forms > Daily Shipment Detail

## Setting Supply Chain Management Preferences

You can set preferences to customize how the forms appear and to specify details you want to include in the form.

Go to Transaction > Management > Supply Chain Management > Preferences, and then click **Edit**.

**Note:** The navigation paths used in the procedures are based on the Administrator role. If you are not an administrator, you may see a different view of the NetSuite Center. For more information, see Roles and Permissions in Supply Chain Management.

### To set up General preferences:

1. On the General subtab, check the **Print Barcode** box to include bar codes on the printed form.
2. From list in the **Item Barcode** field, select whether you want the bar code to be generated based on the **Item Name** or **UPC Code**.

Inventory Management
3. Select the **Send form generation email notification** box if you want to receive an email notification when supply chain forms have been generated.

**To set up Inventory preferences:**

1. On the **Inventory** subtab, select whether you want to sort the inventory count sheet by item or bin.
2. Select **Print Inventory Count Sheet with Serial/Lot Number** if you want the serial number or lot number to appear in the form.
3. In the **No. of Lines for Serial/Lot Number** field, specify the number of lines to be allotted for the serial or lot number in the form.

For preferences related to other Supply Chain Management SuiteApp features, see the following topics:

- Enabling Customer Part Number
- Enabling Estimated Landed Cost
- Enabling Item Substitution on Sales Orders
- Enabling Engineering Change Order

**Modifying Deployment Schedule of the Clean Up Process (Scheduled Script)**

A scheduled script runs one time per day to clean up process requests that are terminated unexpectedly. You can modify the scheduling based on your preferences.

**To edit the script deployment schedule:**

1. Go to Customization > Scripting > Script Deployments.
2. Click the **Edit** link for **SCM Background Cleanup Process SS**.
3. On the Script Deployment page, click **Edit**.
4. In the **Schedule** subtab, change the timing of the script according to your preference.

For more information on NetSuite's Scheduled Scripts, see the help topic **Scheduled Scripts**.

**Printing Supply Chain Reports**

**Inventory Count Sheet**

The Inventory Count Sheet generates a list of items that you can use for inventory counts and inspections. You can print the Inventory Count Sheet only when Inventory Count status has been set to **Started**.

**To print an inventory count sheet:**

1. Go to Transaction > Management > Supply Chain Management.
   Alternatively, you can also go to Transaction > Inventory > Print Inventory Count Sheet.
2. Under **Inventory**, click the **Inventory Count Sheet** link.
   On the Print Inventory Count Sheet page, the table displays a list of available forms. You can refine the list by specifying values for the following filters:
   - Subsidiary
To select a form from the table, do one of the following:

- In the Select Inventory Count field, enter the number for a form.
  The Print box for the specified form is automatically selected.
- Check the Print box next to the form you want to print.
- Click Mark All to select all forms.

4. Click Print to print the form.

If you do not want to continue, click Go to Main to return to the Supply Chain Management page.

To view the printing status, go to Transaction > Management > Supply Chain Management, and then click the Form Printing Status link. For more information, see Viewing Report Printing Status.

Daily Shipment Detail Report

The Daily Shipment Detail Report generates a list of shipments, with packages released from the warehouse within the day. Only items with Fulfillment Status of Shipped are included in the report.

To print a daily shipment detail report:

1. Go to Transaction > Management > Supply Chain Management.
2. Under Inventory, click the Daily Shipment Detail Report link.

   On the Daily Shipment Detail Report page, the table displays a list of available forms. You can refine the list by specifying values for the following filters:
   - Subsidiary
   - Location
   - From Date
   - To Date

   **Note:** On first load of the Daily Shipment Detail Report, both the From Date and To Date fields are set to the current date.

3. To select a form from the table, do one of the following:
   - In the Ref. No. field, enter the reference number of the form.
     The Print box for the specified form is automatically selected.
   - Check the Print box next to the form you want to print.
   - Click Mark All to select all forms.

4. Click Print to print the form.

If you do not want to continue, click Go to Main to return to the Supply Chain Management page.

To view the printing status, go to Transaction > Management > Supply Chain Management, and then click the Form Printing Status link. For more information, see Viewing Report Printing Status.

Manufacturing Dispatch List

The Dispatch List provides a list of outstanding operation tasks that you can provide to teams. On the Manufacturing Operation Task record, the Dispatched box is automatically checked after the task is included and printed out on a Dispatch List.
To print a dispatch list:

1. Go to Transaction > Management > Supply Chain Management. Alternatively, you can also go to Transaction > Manufacturing > Print Manufacturing Dispatch List.
2. Under Manufacturing, click the Dispatch List link.

On the Print Manufacturing Dispatch List page, the table displays a list of available forms. You can refine the list by specifying values for the following filters:
- Subsidiary
- Location
- Work Center
- Assembly Item
- Work Order Status
- Task Status
- Dispatched

**Note:** The table only shows forms with a Work Order Status of In Process and Released, and a Task Status of In Progress and Not Started.

3. To select a form from the table, do one of the following:
   - From the Select Order Number field, enter the number for a form. The Print box for the specified form is automatically selected.
   - Check the Print box next to the form you want to print.
   - Click Mark All to select all forms.
4. Click Print to print the form.
   - If you do not want to continue, click Go to Main to return to the Supply Chain Management page.
   - To view the printing status, go to Transaction > Management > Supply Chain Management, and then click the Form Printing Status link. For more information, see Viewing Report Printing Status.

### Manufacturing Traveler

All work orders with status of In Process and Released are included in the Manufacturing Traveler list. For each work order, the operation sequence, name, and other details are provided.

To print a manufacturing traveler:

1. Go to Transaction > Management > Supply Chain Management. Alternatively, you can also go to Transaction > Manufacturing > Print Manufacturing Traveler.
2. Under Manufacturing, click the Traveler link.

On the Print Manufacturing Traveler page, the table displays a list of available forms. You can refine the list by specifying values for the following filters:
- Subsidiary
- Location
- Work Order
- Assembly Item
- Work Order Status
3. To select a form from the table, do one of the following:
   - In the Select Order Number field, enter the number for a form. The Print box for the specified form is automatically selected.
   - The Print box next to the form you want to print.
   - Click Mark All to select all forms.
4. Click Print to print the form.
   - If you do not want to continue, click Go to Main to return to the Supply Chain Management page.
   - To view the printing status, go to Transaction > Management > Supply Chain Management, and then click the Form Printing Status link. For more information, see Viewing Report Printing Status.

Viewing Report Printing Status

To view the status of a form:

1. Go to Transaction > Management > Supply Chain Management, and then click the Form Printing Status link.
   - The status of a form can be Pending, In Progress, Completed, or Error.
   - The table displays a list of available forms. You can refine the list by specifying values for the following filters:
     - Report Name
     - Printing Status
     - Printed By
     - Print Date From
     - Print Date To

   **Note:** Only administrators can use the Printed By filter to view forms printed by specific users.

2. Under File Link, click the View link for the form you want to view.
Inventory SuiteAnalytics Workbooks

SuiteAnalytics Workbook offers many workbook and dataset templates, each with predefined source data, criteria, pivot tables, and charts.

This section contains the information for the SuiteAnalytics Inventory workbooks in NetSuite. For more information about SuiteAnalytics Workbook, see the help topic Workbook and Dataset Templates.

- Warehouse Inventory Dataset Templates

Warehouse Inventory Dataset Templates

SuiteAnalytics offers three Warehouse Inventory dataset templates.

- Warehouse Inventory: Counts & Adjustments Dataset
- Warehouse Inventory: Inbound Dataset
- Warehouse Inventory: Outbound Dataset

Warehouse Inventory: Counts & Adjustments Dataset

This dataset combines fields from the Transaction and Transaction Line record types to display open inventory counts and completed counts for approval, including the items for each transaction. It forms the source data for the Warehouse Inventory: Counts & Adjustments Workbook.

Dataset Configuration

The Warehouse Inventory: Counts & Adjustments dataset combines fields from two record types and multiple criteria filters. To edit the dataset, see the help topic Defining a Dataset.

<table>
<thead>
<tr>
<th>Root Record Type</th>
<th>Joined Record Type</th>
<th>Custom Formula Fields</th>
<th>Data Grid</th>
<th>Criteria Filters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction</td>
<td>Transaction Line</td>
<td>(none)</td>
<td>The following fields are included in the dataset. Transaction: Date Document Number/ID Entity Memo Status Total Amount (Transaction Currency) Transaction Type Transaction Line:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The following criteria is used to filter the dataset: Transaction: Type is Inventory Count Transaction Line: Line Type contains COUNTQUANTITY</td>
<td></td>
</tr>
</tbody>
</table>
Warehouse Inventory Dataset Templates

<table>
<thead>
<tr>
<th>Root Record Type</th>
<th>Joined Record Type</th>
<th>Custom Formula Fields</th>
<th>Data Grid Criteria Filters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction</td>
<td>Transaction Line</td>
<td>(none)</td>
<td>Item</td>
</tr>
</tbody>
</table>

Warehouse Inventory: Inbound Dataset

This dataset combines fields from the Transaction and Transaction Line record types to display inbound transactions for receiving, including purchase orders, transfer orders, and return authorizations. It forms the source data for the Warehouse Inventory: Inbound Workbook.

Dataset Configuration

The Warehouse Inventory: Inbound dataset combines fields from two record types and multiple criteria filters. To edit the dataset, see the help topic Defining a Dataset.

<table>
<thead>
<tr>
<th>Root Record Type</th>
<th>Joined Record Type</th>
<th>Custom Formula Fields</th>
<th>Data Grid Criteria Filters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction</td>
<td>Transaction Line</td>
<td>(none)</td>
<td></td>
</tr>
</tbody>
</table>

The following fields are included in the dataset:
- **Transaction:**
  - Date
  - Document Number/ID
  - Entity
  - Memo
  - Status
  - Total Amount (Transaction Currency)
  - Transaction
  - Type

The following criteria is used to filter the dataset:
- **Type** any of Purchase Order, Transfer Order, Return Authorization
- **Transaction Line: Item Type** none of Shipping Cost Item
- **Transaction Line: Main Line** is false
- **Transaction Line: Tax Line** is false

Warehouse Inventory: Outbound Dataset

This dataset combines fields from the Transaction record type and a custom formula to display outbound transactions that include sales orders and item fulfillments. It forms the source data for the Warehouse Inventory: Outbound Workbook.
Dataset Configuration

The Warehouse Inventory: Outbound dataset combines fields from one record type, one custom formula and multiple criteria filters. To edit the dataset, see the help topic Defining a Dataset.

<table>
<thead>
<tr>
<th>Root Record Type</th>
<th>Joined Record Type</th>
<th>Custom Formula Fields</th>
<th>Data Grid</th>
<th>Criteria Filters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction</td>
<td>(none)</td>
<td>Days Late</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>FLOOR(actualshipdate) - (shipdate)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following fields are included in the dataset.

Transaction:
- Actual Shipping Date
- Date
- Document Number/ID
- Entity
- Memo
- Ship Date
- Status
- Total Amount (Transaction Currency)
- Transaction
- Type

The following criteria is used to filter the dataset:

- **Type** any of Sales Order, Item Fulfillment
- **Transaction Line: Item Type** none of Shipping Cost Item
- **Transaction Line: Main Line** is false
- **Transaction Line: Tax Line** is false

Warehouse Inventory Workbook Templates

Inventory workbooks provide a collection of analytical tools with a dataset based on inventory records and transactions. Each workbook contains predefined pivot tables that show filtered data for a specific set of transactions or records. Use these workbooks to monitor transaction processing and inventory levels in your warehouse.

The following workbooks are available for both Basic and Advanced Inventory Management users:

- Warehouse Inventory: Counts & Adjustments Workbook
- Warehouse Inventory: Inbound Workbook
- Warehouse Inventory: Outbound Workbook

For more information about SuiteAnalytics Workbooks, see the help topic SuiteAnalytics Workbook Overview.

Guidelines on Feature and Transaction Dependencies

Before you access inventory workbooks, review the following feature and transaction dependencies:

- Access to standard inventory workbooks and pivot tables depends on the features enabled in your account. For example, you can access the Counts & Adjustments workbook if you use the Inventory Count feature.
- On pivot tables, you can view the data and value filters when you have existing transactions that meet the predefined criteria. Otherwise, the blank table viewer will display a message informing you that no results are found.
Accessing Inventory SuiteAnalytics Workbooks

To access workbooks, you can go to Analytics. On the Workbooks listing page, expand Standard Workbooks to display the list of inventory workbooks. Click a workbook's name to access and open it. Within each workbook, you can view the data set and pivot tables.

**Note:** Only users with the Analytics Administrator and SuiteAnalytics Workbook permissions can access and edit standard workbooks. If you have these permissions, you can also share workbooks to other users. For more information about workbook permissions, see the help topic *The Analytics Administrator Permission.*

For more information, see the help topic *Accessing and Sharing Workbooks and Datasets.*

Retrieving Updates for Workbooks

To view current data on a pivot table, clear the cached data first before retrieving the updates. At the upper-right corner of the pivot table viewer, you can access the option to clear the cache from the Menu icon . After you clear the cache, you can retrieve updates by clicking the refresh icon on the workbook toolbar.

For information about navigating workbooks, view the following topics:

- Pivot Tab
- Navigating SuiteAnalytics Workbook

Warehouse Inventory: Counts & Adjustments Workbook

This workbook displays open inventory counts and completed counts for approval, including the items for each transaction. These transactions enable you to monitor cycle counts and inventory shortages.

Counts & Adjustments Pivot Tables

The Counts & Adjustments workbook contains the following predefined pivot tables:

<table>
<thead>
<tr>
<th>Pivot Table</th>
<th>Description</th>
<th>Default Value Filters</th>
<th>Default Fields or Rows</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Open Inventory Counts</strong></td>
<td>List of unprocessed inventory counts</td>
<td>Type: Inventory Count, Status: Pending</td>
<td>Document Number/ID, Date</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Memo</td>
</tr>
<tr>
<td><strong>Inventory Counts to Approve</strong></td>
<td>List of completed inventory counts that have not been approved</td>
<td>Type: Inventory Count, Status: Pending Approval</td>
<td>Document Number/ID, Date</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Memo</td>
</tr>
</tbody>
</table>

You can edit these tables according to your business requirements. For more information, see *Customizing Inventory SuiteAnalytics Workbooks.*
Warehouse Inventory Workbook Templates

Warehouse Inventory: Inbound Workbook

This workbook displays inbound transactions for receiving, including purchase orders, transfer orders, and return authorizations. For each transaction, it also displays the list of items. These transactions enable you to monitor inbound inventory levels.

Inbound Pivot Tables

The Inbound Workbook contains the following predefined pivot tables:

<table>
<thead>
<tr>
<th>Pivot Table</th>
<th>Description</th>
<th>Default Value Filters</th>
<th>Default Fields or Rows</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase Orders to Receive</td>
<td>List of purchase orders with no item receipt</td>
<td>Type: Purchase Order Status: Pending Receipt</td>
<td>Document Number/ID Status Item Quantity</td>
</tr>
<tr>
<td>Transfer Orders to Receive</td>
<td>List of transfer orders with no item receipt</td>
<td>Type: Transfer Order Status: Pending Receipt, Partially Fulfilled</td>
<td>Document Number/ID Status Item Quantity Shipped/Received/ Picked Up</td>
</tr>
<tr>
<td>Customer Returns to Receive</td>
<td>List of return authorizations with no item receipt</td>
<td>Type: Return Authorization Status: Pending Receipt</td>
<td>Entity Document Number/ID Status Item Quantity</td>
</tr>
</tbody>
</table>

You can edit these tables according to your business requirements. For more information, see Customizing Inventory SuiteAnalytics Workbooks.

Warehouse Inventory: Outbound Workbook

This workbook displays outbound transactions that include sales orders and item fulfillments. These transactions enable you to monitor outbound inventory levels.

Outbound Pivot Tables

The Outbound Workbook contains the predefined pivot table, Sales Orders to Fulfill.

<table>
<thead>
<tr>
<th>Pivot Table</th>
<th>Description</th>
<th>Default Value Filters</th>
<th>Default Fields or Rows</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Orders to Fulfill</td>
<td>List of unfulfilled and partially fulfilled sales orders</td>
<td>Type: Sales Order</td>
<td>Document Number/ID Date</td>
</tr>
</tbody>
</table>
You can edit these tables according to your business requirements. For more information, see Customizing Inventory SuiteAnalytics Workbooks.

Customizing Inventory SuiteAnalytics Workbooks

You can customize inventory workbooks to add fields to pivot tables, create tables and charts, or modify specific elements.

When you customize a standard workbook, you must use Save As to save a copy of your custom inventory workbook. Do not overwrite the default inventory workbooks. Your copy of the workbook is saved under My Workbooks. You can share your custom workbook with other users. For more information, see the help topic Accessing and Sharing Workbooks and Datasets.

- **Add fields to pivot tables**
  You can customize pivot tables by displaying more fields from transactions. For example, on the Sales Orders to Fulfill pivot table, you can add the Date field to display the creation date of a transaction. By adding more fields, you can view more details for each transaction.

  On a pivot tab, drag a field from the Fields list, and then drop it on the appropriate section in the Layout panel. To view the default fields for inventory workbooks, see the following topics:

  - Warehouse Inventory: Counts & Adjustments Workbook
  - Warehouse Inventory: Inbound Workbook
  - Warehouse Inventory: Outbound Workbook

- **Create charts**
  You can add charts based on transactions included in a workbook. For example, you can create an accompanying chart for the Sales Orders to Fulfill pivot table. Select the fields you want to view on the chart and arrange them according to your business requirements.

  On a workbook tab, you can create charts by clicking the plus icon, and then clicking Add Chart. In the Layout panel of a new chart, you can specify the chart type, such as column or bar chart. In the X-Axis, Series, and Measures sections, you can drop the fields that you drag from the Fields list. On the Properties panel, you can enter your chart title and labels.

  For example, to create a column chart for Sales Orders to Fulfill by Customer, you can select the following fields:

  - **X-Axis**: Entity

    To sort by entity, click the Entity field to display and click its Field Menu icon. From the menu list, click your sorting preference.
Measures: Transaction

To sort by transaction, click the Transaction field to display and click its Field Menu icon. From the menu list, click your sorting preference.

See an example of the column chart in the following image:

After editing a workbook, you must refresh it to view the changes. For more information, see Retrieving Updates for Workbooks.

For detailed instructions and other ways of customizing workbooks, see the following topics:

- Creating a Workbook
- Pivot Table Customization
- Workbook Charts
- Dataset Criteria Filters
Warranty and Repairs Management

Warranty and Repairs Management enables you to register item warranties and process warranty-related claims. Claims that you receive are automatically validated against warranty terms, which helps reduce claims processing turnaround time.

Warranty and Repairs Management provides the following features:

- Multiple ways to register a warranty
  - Registration generated from an invoice (autogenerated registration) - Register a warranty for supported item types after invoice creation.
  - Manual registration - Create a standalone warranty registration.
  - Import of warranty registration details - Import registration details from a CSV file, through scheduled script or web service.
- Warranty tracking on the item record - Set up default warranty information on item records.
- Warranty claims validation and processing
  - Create a claim from a warranty registration.
  - Validate claims against existing warranty registration information to ensure that only valid claims are processed for the refund, repair, or replacement of the warranty item.
  - Create a return authorization for warranty items from the claim record.
  - Create a credit memo or sales order for claims from the return authorization record.

Availability

Warranty and Repairs Management is available as a SuiteApp that is installed in your NetSuite account. The SuiteApp is shared when you have the Advanced Inventory module.

Limitations and Recommendations

Be aware of the following limitations and recommendations for using Warranty and Repairs Management:

- Warranty registration supports only inventory and assembly items. You cannot register a warranty for non-inventory items, services, and other items.
- The SuiteApp does not currently support the Advanced Bill of Materials (BOM) feature. Some functions of the SuiteApp may not work as designed when the feature is enabled.
- The SuiteApp assumes that every sales order has a corresponding invoice. Because of this behavior, there are cases when multiple registrations are created for the same item. If, for example, a sales order has a billing schedule for three separate payments, the system creates three separate invoices for this transaction. There is currently no validation to handle this scenario, so it is possible to create three warranty registrations for the same item.
- Invoice items that do not have warranty information prior to invoice creation are not eligible for warranty registration. If you set up the item warranty information after creating the invoice, you cannot register the warranty. New line items are eligible for warranty registration if the warranty information has been set up on the item record beforehand.
- Each autogenerated registration record can be assigned only one unit of a serialized warranty item. For other inventory item types, the quantity can exceed one unit. For more information, see Best Practices for Updating Invoices with Warranty Records.
When generating a warranty from an invoice, the quantity must not be blank or equal to zero. If you have back orders for a warranty item on the invoice, you can delay or prevent warranty registration by clearing the Register Warranty box on the line item. For more information, see Generating a Warranty Registration.

When generating a warranty from an invoice or importing registration details, multiple script queues are not supported.

By default, the following warranty fields are displayed in the item sublist of sales transactions: Register Warranty, Warranty Terms, and Original Warranty Expiration. When these transactions are transformed into an invoice, the warranty fields are populated automatically for any warranty items in the sublist. If you want to hide the warranty fields from sales or non-warranty related transactions, you can customize the forms to hide the fields. On a custom transaction form, click the Columns subtab of the Screen Fields tab, and then clear the boxes for the warranty fields. For more information, see the help topic Configuring Fields or Screens.

Submitting support case records using the Warranty Claim form can be done only through the NetSuite user interface.

Claim processing supports partial returns and repairs for the same item within the same sales transaction, only in terms of quantity. For example, if an invoice has 10 units of an item, a claim can be processed for 5 units. Partial returns for items that are sold as part of a whole or a set are not supported. For example, if a computer is listed in the invoice, a claim cannot be processed only for the monitor.

Cash refund for claims is not supported. You can only issue a credit memo when processing a refund claim. For more information, see Creating a Credit Memo for Refund Claims.

Multi-Language Support for Warranty and Repairs Management

Warranty and Repairs Management supports the following languages:

- Chinese (Simplified)
- Chinese (Traditional)
- Czech
- Danish
- Dutch
- Finnish
- French (France)
- French (Canada)
- German
- Indonesian
- Italian
- Japanese
- Korean
- Latin American Spanish
- Norwegian
- Portuguese (Brazil)
- Russian
- Spanish
To set the language preference for Warranty and Repairs Management:

1. Go to Setup > Company > Setup Tasks > Enable Features.
   b. Click Save.

2. Go to Home > Set Preferences.
   a. On the General subtab, in the Language field, select your preferred language.
   b. Click Save.

Setting Up Warranty and Repairs Management

This section includes the requirements and procedures for installing Warranty and Repairs Management. After installing the SuiteApp, you can follow the procedures for setting up roles and permissions required by users to access and use the features.

Prerequisites

Warranty and Repairs Management requires the Advanced Inventory module. For repair claims, in particular, the Assemblies and Work Order module is required.

To enable prerequisites:

1. Go to Setup > Company > Setup Tasks > Enable Features
2. In the Items & Inventory subtab, check the following appropriate boxes to enable warranty tracking for the following supported types:
   - Serialized Inventory
   - Lot Tracking
   - Inventory
   - Assembly Items

   Note: To let users track warranty for serial and lot numbered items, enable the Advanced Bin/Numbered Inventory feature. To use and display the unit of measure for warranty registration, enable the Multiple Units of Measure feature.

3. To create warranty claims:
   - Customer Support and Service

   Important: Bundle installation or update errors are encountered when this feature is not enabled.
   - Return Authorization
You can register a warranty and create claims even if this feature is disabled. However, you cannot create and process return authorization transactions for the claims.

4. To process claims for refund, repair, and replacement:
   - Sales Orders
   - Advanced Bin/Numbered Inventory Management
     When this feature is disabled, you can only process claims for regular inventory and assembly items. You must enable either the Serialized Inventory or the Lot Tracking feature before you can enable this feature.
   - Work Orders
   - Drop Shipments & Special Orders

To learn more, see the help topic Enabling Features.

The following preferences are related to the import of registration details:

- Be sure to enable the following CSV Import Preferences: Run Server Side SuiteScript and Trigger Workflows. For more information and instructions, see the help topic Setting CSV Import Preferences.

  **Note:** When these preferences are disabled, the validations for imported registration details are not carried out, which may result in corrupted data during claim processing.

- If you want to update existing registrations, you must include the Internal Id of the records in your import file. You can display the Internal Id column on the Warranty Registration: Results page by enabling the Show Internal Ids preference. For more information, see the help topic General Personal Preferences.

If you want to enable automatic warranty registration on invoices created or saved using bulk processing or billing schedules, you must enable the Automatically Register Warranty on Invoice preference. To set the warranty preference:

1. Go to Lists > Warranty and Repairs > Warranty Setup.
2. On the Warranty Setup page, click the Set Warranty Preferences link.
3. On the Warranty Preferences page, click Edit.
4. Check the box for Automatically Register Warranty on Invoice.
5. Click Save.

  **Important:** Warranty and Repairs Management does not currently support the Advanced Bill of Materials (BOM) feature. Some functions of the SuiteApp may not work as designed when the feature is enabled.

### Installing Warranty and Repairs Management

To install the Warranty and Repairs Management SuiteApp, go to Customization > SuiteBundler > Search & Install Bundles. Install the SuiteApp with the following details:

- Bundle Name: Warranty and Repairs Management
- Bundle ID: 51007

For more information about installing SuiteApps, see the help topic Installing a Bundle.

Warranty and Repairs Management is a managed SuiteApp and is automatically updated whenever there are upgrades. Issue fixes and enhancements are available after the SuiteApp is updated in your account.
Roles and Permissions in Warranty and Repairs Management

To set the permissions and enable access to custom warranty records:

1. After installing Warranty and Repairs Management:
   - You cannot provide access to roles from the Customer and Vendor Center where Warranty and Repairs Management is not available.
   - To import registration details, use a role with the Import CSV File permission.
2. Go to Setup > Users/Roles > Manage Roles.
3. Click the Edit or Customize link for the role you want to set up.
4. On the Role page, Forms subtab, click the Custom Record subtab.
5. Enable the following forms:

<table>
<thead>
<tr>
<th>Form Type</th>
<th>Form Name</th>
<th>Enabled</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRM Preference</td>
<td>Standard WRM Preference Form</td>
<td>Yes</td>
</tr>
<tr>
<td>Warranty Registration</td>
<td>Warranty Registration Form</td>
<td>Yes</td>
</tr>
<tr>
<td>WRM Warranty Claim</td>
<td>Standard WRM Warranty Claim Form</td>
<td>Yes</td>
</tr>
</tbody>
</table>

6. On the Permissions subtab, set the minimum required access level for the following custom records, transactions, and lists:
   a. To associate warranty information with an item record:

      | Permission     | Subtab | Permission Level |
      |----------------|--------|------------------|
      | Custom Lists   | Setup  | View             |
      | Warranty Terms | Custom Record | View             |

   b. To register a warranty from an invoice:

      | Permission          | Subtab    | Permission Level |
      |---------------------|-----------|------------------|
      | Custom Lists        | Setup     | View             |
      | Warranty Terms      | Custom Record | View             |
      | Warranty Registration | Custom Record | Full             |
      | Warranty Preference  | Custom Record | View             |
      | Warranty Registration Queue | Custom Record | Full             |

   c. To manually register a warranty:

      | Permission            | Subtab    | Permission Level |
      |-----------------------|-----------|------------------|
      | Warranty Preference   | Custom Record | Full             |
      | Warranty Terms        | Custom Record | View             |

d. To process a warranty claim:

      | Permission | Subtab | Permission Level |
      |------------|--------|------------------|
      | Invoice    | Transactions | View             |
      | Cases      | Lists   | Full             |
Setting Up Warranty and Repairs Management

<table>
<thead>
<tr>
<th>Permission</th>
<th>Subtab</th>
<th>Permission Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custom Lists</td>
<td>Setup</td>
<td>View</td>
</tr>
<tr>
<td>Warranty Failure Reason</td>
<td>Custom Record</td>
<td>View</td>
</tr>
<tr>
<td>Warranty Registration</td>
<td>Custom Record</td>
<td>View</td>
</tr>
<tr>
<td>Warranty Claim</td>
<td>Custom Record</td>
<td>Full</td>
</tr>
</tbody>
</table>

e. To process refunds, replacements, and repairs:

<table>
<thead>
<tr>
<th>Permission</th>
<th>Subtab</th>
<th>Permission Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Memo</td>
<td>Transactions</td>
<td>Full</td>
</tr>
<tr>
<td>Sales Order</td>
<td>Transactions</td>
<td>Full</td>
</tr>
<tr>
<td>Work Order</td>
<td>Transactions</td>
<td>Full</td>
</tr>
<tr>
<td>Custom Lists</td>
<td>Setup</td>
<td>View</td>
</tr>
<tr>
<td>Warranty Registration</td>
<td>Custom Record</td>
<td>View</td>
</tr>
<tr>
<td>Warranty Claim</td>
<td>Custom Record</td>
<td>View</td>
</tr>
<tr>
<td>Return Authorization</td>
<td>Transactions</td>
<td>Full</td>
</tr>
</tbody>
</table>

f. To delete a warranty registration:

<table>
<thead>
<tr>
<th>Permission</th>
<th>Subtab</th>
<th>Permission Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warranty Registration</td>
<td>Custom Record</td>
<td>Full</td>
</tr>
</tbody>
</table>

NetSuite Center views can vary depending on your role. You can view specific pages using the following path:

- Warehouse - Inventory > Warranty and Repairs
- Administrator - Lists > Warranty and Repairs
- Executive or Accounting - Financials > Warranty and Repairs
- Sales - Customers > Warranty and Repairs
- Support - Cases > Warranty and Repairs

Adding Warranty and Repairs Management Fields to Custom Forms

You can use your own custom forms to register warranties and process claims. You have to add or enable the custom warranty fields on your existing forms. The following instructions describe how you can manually set up these fields on your custom form.

To add the fields to custom forms:

1. Go to Customization > Lists, Records, and Fields and then click the field type from the menu. The following table shows the list of custom fields that are created for the forms used in warranty transactions.

<table>
<thead>
<tr>
<th>Form</th>
<th>Field Type</th>
<th>Field Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invoice</td>
<td>Transaction Column Fields</td>
<td>Register Warranty</td>
</tr>
<tr>
<td></td>
<td></td>
<td>View Registration</td>
</tr>
<tr>
<td>Form</td>
<td>Field Type</td>
<td>Field Label</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Case (Warranty Claim)</td>
<td>CRM Fields</td>
<td>Warranty Type</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warranty Registration No.</td>
</tr>
<tr>
<td>Inventory Item or Assembly Item</td>
<td>Item Fields</td>
<td>Track Warranty</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warranty Terms</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warranty Expiration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Repaired Item (for Assembly Item only)</td>
</tr>
<tr>
<td>Return Authorization</td>
<td>Transaction Body Fields</td>
<td>Claim Number</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replacement SO No.</td>
</tr>
<tr>
<td>Item Receipt or Credit Memo</td>
<td>Transaction Body Fields</td>
<td>Claim Number</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales Order</td>
<td>Transaction Body Fields</td>
<td>Claim Number</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Return Authorization</td>
</tr>
<tr>
<td>Item Fulfillment or Work Order</td>
<td>Transaction Body Fields</td>
<td>Claim Number</td>
</tr>
<tr>
<td>Warranty Registration</td>
<td>Other Custom Fields</td>
<td>Reference Invoice No.</td>
</tr>
<tr>
<td>Warranty Registration</td>
<td>Other Custom Fields</td>
<td>Reference Serial/Lot No.</td>
</tr>
</tbody>
</table>

2. In the list of fields for your selected field type, click the link for the field label or description.

**Note:** On your custom form, you can add the standard Quantity and Units fields that are used on the Warranty Registration form.

3. On the specific Field page, click **Apply to Forms**.
4. On the Apply Custom Field to Forms page, in the Show column, check the box for the forms where you want to enable the field.
5. Click **Save**.

View your custom forms to verify that warranty fields are displayed and enabled.

## Setting Warranty Preferences and Items

**Note:** The navigation paths used in the procedures are based on the Administrator role. If you are not an administrator, you may see a different view of the NetSuite Center. For more information, see Roles and Permissions in Warranty and Repairs Management.

In this section, you can find the following procedures for setting up your preferences and warranty information to be used on registration and claim processing forms:

- Setting Warranty Preferences
- Defining Warranty Terms
- Defining Failure Reasons
Setting Warranty Preferences

To set warranty preferences:

1. Go to Lists > Warranty and Repairs > Warranty Setup.
2. On the Warranty Setup page, click the Set Warranty Preferences link.
3. On the Warranty Preferences page, click Edit.
4. In the Calculate Warranty Start Date From field, select the default date to be used as the basis for calculating the warranty start date.

The calculation of the warranty start date applies to warranty registrations that are generated from an invoice. For manual or imported registration details, you can enter the start date on the registration record or file.

- **Sales Order Date** - transaction or posting date of the sales order. This option is the default selection in the field.
- **Invoice Date** - transaction or posting date of the invoice.

On the warranty registration record, the calculated date is displayed in the Original Warranty Start Date field. In case there is no sales order yet when the registration is generated, the invoice date is used to calculate the start date, even if the sales order date is selected as the preference.

5. Check the box for the following preferences that you want to enable:
   - **Auto Generate Registration No.** - preference to automatically generate a registration number for new warranty registration records.

   **Note:** During manual registration using the Warranty Registration form, you cannot edit and update the autogenerated number, if this preference is enabled.

   - **Automatically Register Warranty on Invoice** - preference to automatically check the Register Warranty box on the invoice, for items where warranty tracking is enabled.

   Regardless of how the invoice is created or generated, the preference is automatically enabled for the warranty item. It applies to invoices generated from a sales order and estimate. For more information about the Register Warranty option, see Generating a Warranty Registration.

   **Important:** This preference is required if you want to automatically register warranty on invoices created or saved through bulk processing or billing schedules.

   - **Close RMA Upon SO Creation** - preference to automatically close a return authorization after creating a sales order. This preference is not applicable to refund claims.

   - **Ship Replacement in Advance** - preference to enable creation of a sales order from a return authorization prior to creation of an item receipt. This preference applies only to replacement claims, to let you ship warranty items in advance, before receiving them.

   **Note:** The Close RMA Upon SO Creation and Ship Replacement in Advance preferences must not be enabled at the same time. When an RMA is closed after creating the sales order, you cannot create an item receipt for the items that have been replaced in advance.

6. Click Save.
Click Reset if you want to return the fields to their default settings.

Defining Warranty Terms

Define the period and coverage of the terms that can be applied to your warranty items. For example, you want to set up a 3-year service warranty that covers only labor costs to repair an item. You can indicate the coverage in the term name and set the calculated term to 3 years.

To define a warranty term:

1. Go to Lists > Warranty and Repairs > Warranty Setup.
2. On the Warranty Setup page, click the Define Warranty Terms link.
3. On the Warranty Terms page, enter or select the values for the following fields:
   1. In the Name field, enter a name for the warranty term. For example, 3 Year Labor for a three-year warranty term on labor costs only.
   2. Select the type of term in the Term Type field.
      - Calculated - term that automatically calculates the warranty expiration date based on your defined terms. Selecting this type enables the Warranty Terms fields. In these fields, select the period (in Days, Months, or Years) and then enter the value.
      - Fixed - term where you set the warranty expiration date during registration. On the item record, you can set a default expiration date for a Fixed term. For more information, see Setting Up Warranty Information on the Item Record.
      - Lifetime - term that does not have a warranty expiration.
4. Be sure to clear the Inactive box to keep the term record active.
5. Click Save.

When editing a warranty term, you can update only the Name field and Inactive box. You can inactivate warranty terms that currently are not used. You can edit inactive records, but the terms are not included for selection in the following fields:

- Original Warranty Terms - on the warranty registration
- Warranty Terms - on an item record or line item of an invoice

In edit mode, you can delete a term that has not been used in a registration or other dependent records.

Defining Failure Reasons

Define failure reasons that are used to specify defects in the warranty item. When creating a claim, you can select the name of the failure reason from a list.

To define a failure reason:

1. Go to Lists > Warranty and Repairs > Warranty Setup.
2. On the Warranty Setup page, click the Setup Failure Reason link.
3. In the Name field, enter a name for the failure reason.
4. In the Description field, enter a short description for the failure reason.
Note: Be sure to clear the Inactive box to keep the failure reason record active.

5. Click Save.

When editing a failure reason, you can update the fields, including the Inactive box. You can inactivate failure reasons that currently are not used. You can edit inactive records, but the failure reasons are not included for selection in a warranty claim. You can also delete a failure reason if it has not been used in a warranty claim or other dependent records.

Creating Repaired Items

For assembly items, you must create a corresponding repaired item to be used for claim processing. You must also set the assembly item as a component on the repaired item record.

To create repaired items:

1. Go to Lists > Accounting > Items > New.
2. On the New Item list, click the appropriate item type:
   - Assembly/Bill of Materials
   - Lot
   - Numbered
   - Serialized
3. On the item record, in the Custom Form field, select Warranty Assembly Item Form from the list.
4. On the Purchasing/Inventory subtab:
   a. Check the Special Work Order Item box.
   b. On the Components subtab, add the assembly item to be associated with this repaired item.
5. Click Save.

The repaired items you create are added to the list in the Repaired Item field on the assembly item record. For more information, see the following topics:

- Setting Up Warranty Information on the Item Record
- Creating a Sales Order for Repair Claims

Setting Up Warranty Information on the Item Record

After setting up Warranty and Repairs Management, the Warranty Information subtab is added to item records of supported item types. On this subtab, you can enable the Track Warranty preference and set the default warranty information. For assembly items, in particular, you can map one or more repaired items.

Before you can add warranty information to items, be sure to enable required features listed in the Prerequisites topic.

To set up warranty information:

1. Go to Lists > Accounting > Items.
2. On the Items page, click the Edit link for the item record.
3. For assembly items, select the **Warranty Assembly Item Form** in the **Custom Form** field. You can skip this step for other items.

4. On the item record, click the **Warranty Information** subtab and then check the **Track Warranty** box.

5. In the **Warranty Terms** field, select a term from the list, or select **New** to create a new term.

6. Set up the following fields for specific items:
   - For Fixed terms – In the **Warranty Expiration** field, enter the expiration date, or click the Calendar icon to pick the date.
   - For assembly items – in the **Repaired Item** field, select a repaired item from the list.
     To add more repaired items to the list, see [Creating Repaired Items](#).

   **Note:** Repaired items are used during processing of repair claims. For more information, see [Creating a Sales Order for Repair Claims](#).

7. Click **Save**.

During warranty registration, you can change the default settings or information from the item record. For more information, see [Warranty Registration](#).

### Warranty Registration

Each supported item can be registered if warranty tracking has been enabled on the item record. You can create one warranty registration record for each unit of a serialized item. For regular inventory or assembly items and lot numbered items, the quantity may exceed one unit per warranty registration record.

You can create a warranty registration by generating from an invoice, manual entry on the form, or through import of details. Warranty registration is also supported through SuiteScript and web service.

See the following topics in this section for instructions and guidelines on each registration mode:

- Generating a Warranty Registration
- Creating a Manual Warranty Registration
- Importing Warranty Registration Details

Warranty registration is also supported for invoice records processed through SuiteScript and web service.

Additionally, the SuiteApp supports automatic warranty registration on invoices created or saved through bulk processing of sales orders, or using billing schedules. The **Automatically Register Warranty on Invoice** preference must be enabled if you want to register warranty for tracked items on invoices created using these processes. See [Prerequisites](#).

After registering a warranty, you can view the list of existing registration records by going to **Lists > Warranty and Repairs > Warranty Registration List**. You can view the record or edit select registration details. For information about updating an existing registration, see [Editing a Warranty Registration](#). To create a claim from a warranty registration, see [Warranty Claims](#).

### Generating a Warranty Registration

You can generate a warranty registration during invoice creation or by updating an existing invoice. Each item on the invoice can be registered for a warranty when the following conditions have been met:
Warranty tracking is enabled on the item record. For information, see Setting Up Warranty Information on the Item Record.

The item belongs to any of the supported types and there is available quantity on hand. For more information, see Limitations and Recommendations.

See the following topics for information about maintaining invoices and autogenerated registration records:

- Best Practices for Updating Invoices with Warranty Records
- Editing a Warranty Registration

**To generate a warranty registration:**

1. To access a new or existing invoice record, do either of the following:
   - For a new invoice, go to Transactions > Sales > Create Invoices.
     For instructions on entering general invoice details, see the help topic Creating an Invoice.
   - Important: If the following features are enabled, be sure that their corresponding fields are properly defined: Class, Department, and Location. You cannot edit these fields on the autogenerated registration record.
   - For an existing invoice, go to Transactions > Sales > Create Invoices > List, and then click the Edit link for the invoice to be updated.

2. On the Items subtab of the invoice record, select the warranty item from the list in the Item column.

3. For each warranty item, enter the values in the following line item columns:
   - In the Quantity column, enter the total number of items for this invoice.
   - In the Units column, select the sales unit for the quantity if your account has the Multiple Units of Measure feature enabled.
     For serial and lot numbered items, the base item unit is used on the registration record.
     To register items with varying serial or lot numbers, select the base unit and then set the quantity for each number on the Inventory Detail. Alternately, you can add a separate line item for each serial or lot number. To learn more, see Best Practices for Updating Invoices with Warranty Records.
   - Click the Inventory Details icon to register serial or lot numbered items.
     On the Inventory Details popup window, select the serial or lot numbers and then set the quantity for each number. For more information, see Inventory Management.
   - In the Ship To column, you can review and edit the shipping address.
     This column is displayed only if you use the Multiple Shipping Routes feature and have checked the Enable Item Line Shipping box. If you do not want to enter a shipping address per line item, you can edit the address on the Shipping subtab. For more information about the feature, see the help topic Multiple Shipping Routes.
   - In the Register Warranty column, check the box for the warranty item.
     If you enabled the preference to automatically register a warranty, the box is checked even when the invoice is generated from another transaction. Before generating the registration, you can update the Register Warranty setting.
     The preference to automatically register a warranty is not supported for invoices generated from an opportunity. In this case, you can edit the generated invoice to manually check the Register Warranty box. For more information about the preference, see Setting Warranty Preferences.
Note: When creating an invoice, you can choose to show or hide the Warranty Registration List subtab on the record using this column. If you leave this box clear for any and all line items you add to the invoice, the Warranty Registration List subtab is not shown when the invoice is saved. If at least one item on the invoice has the Register Warranty column checked, the Warranty Registration List subtab is shown on the invoice record when it is saved.

To replace the default term, select a term from the list in the Warranty Terms column field. For the Administrator role only, if you want to create a new term, select New from the list.

Note: Changing a Fixed or Calculated term removes the date from the Original Warranty Expiration column field. You can reset the date by switching it back to the default term on the item record.

■ To replace the default warranty expiration for Fixed terms, in the Original Warranty Expiration column field, enter the new date or click the Calendar icon to pick a date.

4. Click Add to save the new or updated line items.

5. On the Shipping subtab, you can review or edit the shipping address depending on your account setup:

■ If you use the Multiple Shipping Routes feature and have checked the Enable Item Line Shipping box, you can only review the address for each line item on this subtab. You can edit the address per line item on the Items subtab. If you did not enable item line shipping, you can edit the address in the Ship To field on this subtab. For more information about the feature, see the help topic Multiple Shipping Routes.

■ On the autogenerated registration, the Ship To Address field is populated with the address from the Ship To field on this subtab or from the line item of the Items subtab.

6. Click Save to save the invoice record.

Saving the invoice record automatically starts the generation of warranty records. Generation is handled by a scheduled script, so you may not see the records immediately. On the invoice, click the Warranty Registration List subtab to view the list of successfully generated registration records. Only active registration records are displayed in the list. To open a record, click the corresponding View link in the View Registration column. If you have to manually enter registration numbers, you can edit the record to enter your own registration number.

**Best Practices for Updating Invoices with Warranty Records**

This section contains best practices when updating invoice records linked to generated warranty registrations.

■ Before generating a warranty from the invoice, verify that all line item details are correct. Line items linked to registration records cannot be removed from the invoice. You cannot replace or change the warranty item for these line items. This condition is true unless all associated registration records are deleted. When all registration records associated with a line item are deleted, the Register Warranty box is automatically cleared.

■ Warranty information in line items cannot be updated. For serial and lot numbered warranty items, you can remove or change the serial or lot number on the inventory details record. If you do so, you must also manually update them on their corresponding registration records. However, these fields cannot be updated when the registration is already associated with a claim. For the complete list of editable fields, refer to the table in the topic, Editing a Warranty Registration.

■ Review the setup of the unit of measure on the item record. For serial and lot numbered items, the base unit is used as the unit of measure on the autogenerated registration record. The quantity for
serialized items is always set to 1. For more information, see the help topic Serial and Lot Inventory with Multiple Units of Measure.

For example, you have a serial and lot numbered item with the base unit Piece, and another unit Box with a conversion rate of 5. In the invoice line item, you selected Box as the unit of measure and 1 for the quantity. For the inventory detail, you selected a serial number and set the quantity to 1 to match the line item quantity.

- If the item is serialized, five registration records are generated, each with Piece as the unit and 1 as the quantity.
- If the item is lot numbered, one registration record is generated, with Piece as the unit and 5 as the quantity.
- To register items with different serial or lot numbers in a single line item, select the base unit and total quantity. For the inventory detail, you can select the numbers and set their quantity.

After generating a registration from an invoice, changes to the following fields on the invoice are not automatically reflected in their corresponding fields on the associated warranty registration records: Quantity, Units or Unit of Measure, and Ship To address.

You have to manually update the fields on the registration record. For serialized items, the quantity and unit of measure cannot be edited on the autogenerated registration record.

Avoid updating the Quantity field in existing line items with warranties. For serialized and lot numbered items on the invoice:

- If you want to increase the quantity, add a new line item where you can enter the additional quantity and the new serial or lot numbers. New registration records are generated when you check the Register Warranty box for this line item.
- If you want to reduce the quantity, delete the serial or lot number from the inventory details record. In the line item, you can enter the new quantity that corresponds to the reduced total quantity in the inventory details. After updating the invoice, you can void the registration record by checking its Inactive box.

Creating a Manual Warranty Registration

Create a stand-alone warranty registration, manually, without generating from a NetSuite invoice. You can provide your own registration number, invoice number, and serial or lot number for these warranty item types. Before creating a manual registration, you can review the limitations and requirements in the following topics:

- Prerequisites
- Setting Warranty Preferences and Items
- Limitations and Recommendations

Review the following guidelines for creating a manual registration:

- You cannot create registration records with the same item and reference serial number combination.
  For example, you have a warranty registration for Serial Item 1 with Serial Number 100-WRM-001. Regardless if the initial registration is manual or autogenerated, you cannot create a manual registration for the same Serial Item 1 with Reference Serial Number 100-WRM-001.
- Creating a registration with the same reference invoice is allowed, regardless if the customer is the same or not.
- When you select a warranty item, the default warranty information from the item record is automatically displayed in their corresponding fields. For more information, see Setting Up Warranty Information on the Item Record.
- For the list of required and editable fields, see Editing a Warranty Registration.
To create a manual warranty registration:

1. Go to Lists > Warranty and Repairs > Enter Warranty Registration.
   Alternately, if you are on the Warranty Registration List, click New Warranty Registration. If you already have a registration record open in view mode, go to Actions > New.

2. On the Warranty Registration form, enter the values in the Primary Information section.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration No.</td>
<td>Enter the warranty registration number.</td>
</tr>
<tr>
<td>Customer</td>
<td>Select the name of the customer or owner of the warranty item.</td>
</tr>
<tr>
<td>Subsidiary</td>
<td>This field displays the subsidiary of your selected customer.</td>
</tr>
<tr>
<td>Class</td>
<td>If your account has the Class, Department, or Location features enabled, select the values in their corresponding fields. For these fields, you must select a value that is associated or belongs to the subsidiary.</td>
</tr>
<tr>
<td>Department Location</td>
<td></td>
</tr>
<tr>
<td>Inactive</td>
<td>Be sure to clear the Inactive box to keep the record active. To void a warranty and prevent filing of claims from the registration, check the Inactive box.</td>
</tr>
</tbody>
</table>

3. Enter the values in the Warranty Information section.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Registration</td>
<td>This field is automatically checked to distinguish the record from registrations that are generated from an invoice.</td>
</tr>
<tr>
<td>Reference Invoice Item</td>
<td>Enter the invoice number for the warranty.</td>
</tr>
<tr>
<td>Item</td>
<td>Click the double arrows and then select List from the popup menu. Select the warranty item from the popup list. This field displays only items with Track Warranty enabled on the item record. For accounts with subsidiaries, you must select an item that belongs to the subsidiary.</td>
</tr>
<tr>
<td>Quantity</td>
<td>Enter or update the default item quantity. Negative numbers and zero are not allowed. For serialized warranty items, the quantity is disabled and is always set to the default value of 1.</td>
</tr>
<tr>
<td>Units</td>
<td>If you enabled the Multiple Units of Measure feature, select the unit for the quantity. For serialized warranty items, the unit is disabled and is always set to the base unit on the item record.</td>
</tr>
<tr>
<td>Reference Serial/Lot No.</td>
<td>For serial or lot numbered items, enter the serial or lot number of the warranty item. Only hyphens and alphanumeric characters are allowed.</td>
</tr>
<tr>
<td>Invoice Date</td>
<td>Enter the transaction or posting date of the invoice.</td>
</tr>
<tr>
<td>Original Warranty Terms</td>
<td>This field displays the default term on the item record. Selecting another term may automatically change or remove the default values in the following fields:</td>
</tr>
<tr>
<td></td>
<td>Original Warranty Start Date</td>
</tr>
<tr>
<td></td>
<td>Warranty Expiration</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Original Warranty Start Date</td>
<td>This field displays the calculated start date based on your preference. For more information, see Setting Warranty Preferences. Changing this default start date may automatically change or remove the default value in the Warranty Expiration field.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> You must enter a start date that does not come after the expiration date.</td>
</tr>
<tr>
<td>Warranty Expiration</td>
<td>This field displays the default expiration date on the item record. For Fixed and Calculated terms, enter the warranty expiration date or click the Calendar icon to pick a date. This field is disabled for Lifetime terms.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> The expiration date must not be set to a date later than the current date.</td>
</tr>
<tr>
<td>Warranty Document</td>
<td>Click the double arrows and then select List from the popup menu. Select the warranty document from the popup list. To upload a document, click the plus icon to create a new record where you can upload it.</td>
</tr>
<tr>
<td>Remarks</td>
<td>Enter additional warranty information.</td>
</tr>
<tr>
<td>Ship To Address</td>
<td>Enter your current delivery address to be used for shipping repaired and replacement items. You can only enter information in this field during the creation of a warranty registration. This field is disabled in edit mode.</td>
</tr>
<tr>
<td>New Address</td>
<td>This field is disabled for new registrations. You can enter an address in this field only when editing existing registration records. For more information, refer to the table in the topic,</td>
</tr>
</tbody>
</table>

4. Click **Save**.

After saving a registration record, the status is set to **Under Warranty**. The status is automatically changed to **Out of Warranty** when the warranty is past the expiration date.

### Importing Warranty Registration Details

You can register a warranty by importing the registration details from a CSV file, or through scheduled script or web service. Records created through an import are treated as manual or standalone registrations, therefore, they are not linked to a NetSuite invoice. Existing records, regardless of the mode of registration, can be updated by importing details for select fields. To review the list of required and editable fields, refer to the table in the topic, Editing a Warranty Registration.

To prepare for your import of registration details, review the following guidelines:

- Permissions required to import registration details can be found in the Roles and Permissions in Warranty and Repairs Management topic. For required features to import registration details, see Prerequisites.
- Be sure to setup the warranty information on the item record. You have to enable warranty tracking for the items included in your CSV file. For Fixed term items, the default expiration date on the item record is used for the registration, if no date is included or is left blank in your CSV file. For more information about enabling warranty tracking, see Setting Up Warranty Information on the Item Record.
- Limitations on warranty registration are listed in the Limitations and Recommendations topic.
The following instructions contain procedures specific to importing details on the Warranty Registration form, using the Import Assistant. For detailed instructions on importing CSV files, see the help topic Importing CSV Files with the Import Assistant.

**To import warranty registration details:**

1. Go to Setup > Import/Export > Import CSV Records.
2. On the Import Assistant page, complete the following tasks for Step 1 Scan & Upload CSV File:
   1. In the **Import Type** field, select **Custom Records**.
   2. In the **Record Type** field, select **Warranty Registration**.
   3. In the CSV File(s) section, select the mode and file to upload. For instructions, see the help topic Select a File for Import.
   4. Click **Next**.
3. Complete the following tasks for Step 2 Import Options:
   1. In the Data Handling section, choose from among the options: **Add**, **Update**, or **Add or Update**. For more information, see the help topic Choose Data Handling for Import.
      **Note:** The **Add or Update** option is not applicable to scheduled scripts.
   2. In the Advanced Options section, verify that either of the two forms are selected in the **Custom Form** field:
      ▪ Warranty Registration Form
      ▪ Standard Warranty Registration Form
   3. Click **Next**.
4. To import multiple files, complete the tasks for Step 3. To view the instructions, see the help topic Step 3 File Mapping. Otherwise, proceed to Step 4 Field Mapping:
   1. Verify that the fields on your CSV file are correctly mapped to the fields on the Warranty Registration form. For more information, see the help topic Step 4 Field Mapping.
   2. Click **Next**.
5. Click **Save & Run** to save the import settings and start the import job.

After running an import, the job is placed in a queue for processing. On the Finished page, click **Import Job Status** to view the status of the import job. For more information, see the help topic Checking CSV Import Status.

For import files with errors, only records with valid data are added or updated on the Warranty Registration form. In the file, look for the error message at the end of each row with invalid data.

**Best Practices for Importing Registration Details**

This section contains best practices when importing registration details, to create new or update existing warranty registrations.

- The fields or columns in your import file should correspond to those on the Warranty Registration form. Validations during manual registration are also applied during the import. For a description of the registration fields, see Creating a Manual Warranty Registration.
- To update an existing warranty registration, get the internal Id of the registration record to be edited. For more information on locating an internal Id, see the help topic How do I find a record's internal ID?
- When updating, you can export the list of existing registration records from your account. The Export-CSV icon is located in the list control bar of the Warranty Registration: Results page. Before exporting
a record, verify that the Internal Id column is displayed on the page. For more information, see Prerequisites.

- Any information that you import replaces default values and settings. For example, if you have the preference enabled to autogenerate registration numbers, when you import your own registration numbers, you automatically overwrite the autogenerated numbers. To review your warranty preference settings, go to Lists > Warranty and Repairs > Warranty Setup. For more information, see Setting Warranty Preferences.

- You can set editable registration fields to blank using a scheduled script. However, the validations for editing registration records are still applied. Specific registration fields cannot be edited when a warranty registration is already associated with a claim. To view the list of editable fields, see Editing a Warranty Registration.

**Note:** This option to set editable registration fields to blank is not available through CSV import. Existing details on the registration record are retained if their corresponding fields or columns in the CSV file are left blank.

- For more information about importing files, limitations, and tips, see the following topics:
  - General CSV File Conventions
  - Setting CSV Import Preferences
  - Tips for Successful CSV Imports
  - Custom Records Import

**Editing a Warranty Registration**

To access a warranty registration, go to Lists > Warranty and Repairs > Warranty Registration List. From the warranty registration list, click the Edit link for the record you want to update. On the Warranty Registration page, you can change or update the editable fields.

**Note:** You can also use Global Search to search for a registration record. Use the registration number, serial or lot number as search criteria. If you have the preference to display the list of suggested matches, you can click the Edit link beside the registration number to open the record in edit mode. For more information about global searches, see the help topic Global Search.

The registration fields that you can update depend on the mode of registration and whether or not the registration has an existing claim. For autogenerated registrations, changing the warranty expiration date on the registration record does not automatically change the expiration date in the invoice line item. For more information about the warranty registration fields, see Creating a Manual Warranty Registration.

The following table shows the list of registration fields that are required for creating or importing a manual registration. It also indicates if the field can be edited for a manual and autogenerated registration. For each registration mode, editable fields are further limited when a registration already has an existing claim.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Required for Manual Registration?</th>
<th>Editable for Manual Registration?</th>
<th>Editable for Autogenerated Registration?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without Claim</td>
<td>With Claim</td>
<td>With or Without Claim</td>
</tr>
<tr>
<td>Registration No.</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Customer</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Subsidiary</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
### Warranty Registration

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Required for Manual Registration?</th>
<th>Editable for Manual Registration?</th>
<th>Editable for Autogenerated Registration?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Without Claim</td>
<td>With Claim</td>
</tr>
<tr>
<td>Location</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Reference Invoice No.</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Item</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Quantity</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes, except for serialized items</td>
</tr>
<tr>
<td>Units</td>
<td>No</td>
<td>Yes</td>
<td>Yes, except for serialized items</td>
</tr>
<tr>
<td>Reference Serial/Lot No.</td>
<td>Yes, for serialized items</td>
<td>Yes, for serial or lot numbered items</td>
<td>No</td>
</tr>
<tr>
<td>Serial/Lot No.</td>
<td>No/Disabled</td>
<td>No/Disabled</td>
<td>No/Disabled</td>
</tr>
<tr>
<td>Invoice No.</td>
<td>Not used</td>
<td>Not used</td>
<td>Not used</td>
</tr>
<tr>
<td>Invoice Date</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Original Warranty Terms</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Original Warranty Start Date</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Warranty Expiration</td>
<td>Yes, except for Lifetime terms</td>
<td>Yes, except for Lifetime terms</td>
<td>Yes, except for Lifetime terms</td>
</tr>
<tr>
<td>Remarks</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Class</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Department</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Ship To Address</td>
<td>No</td>
<td>No/Disabled</td>
<td>No/Disabled</td>
</tr>
<tr>
<td>New Address</td>
<td>No/Disabled</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

In edit mode, you can also do the following:

- **Void a Warranty Registration**
  
  You can void a registration record by checking the Inactive box. You can edit an inactive record, but you cannot use it to file a warranty claim. If the registration is generated from an invoice, the record is removed from the Warranty Registration List subtab of the invoice. In the corresponding line item of the invoice, the warranty settings are not changed.

- **Delete a Warranty Registration**
  
  You can delete a registration record if it has no associated warranty claims. This condition is the same for serial items with multiple registrations but associated with one line item on an invoice. You can delete only the registration records with no claim.

  To delete a record, when in edit mode, go to Actions > Delete. To view the role requirements for deleting a registration record, see Roles and Permissions in Warranty and Repairs Management.
Note: Clicking the Remove link on the Related Records subtab only removes a record from the list of claims displayed on the registration. The claim remains associated with the registration, so the registration cannot be deleted. However, when you remove a claim, it cannot be displayed on the registration again.

If a registration is generated from an invoice, you cannot delete the record when the invoice is being edited by another user. After you are able to delete the record, the Register Warranty box is automatically cleared in the corresponding line item of the invoice. However, the box is not yet cleared if there are other existing registration records linked to the line item.

- Copy a Warranty Registration
  
  You can copy warranty details into a new registration record. In view mode, on the Warranty Registration page, go to Actions > Make Copy. A manual registration form is displayed, regardless of the mode of registration.

  - For autogenerated registrations, the invoice is copied into the Reference Invoice field. If applicable, the serial or lot number is copied into the Reference Serial/Lot No. field.
  
  - If you enabled the Auto Generate Registration No. preference, the Registration No. field is disabled and cannot be edited when you are creating the record. For more information about this preference, see Setting Warranty Preferences.
  
  - The Manual Registration box is automatically checked on the copy of the registration record.

Warranty Claims

You can create a claim for an active warranty registration, if the warranty has not yet expired. On a Warranty Claim record, you cannot select inactive registration records. Only valid claims can be entered and processed.

When creating a warranty claim, you have to determine the action:

- **Refund** - claim for an item that cannot be replaced or repaired, so the customer is issued a credit memo.
- **Replacement** - claim for an item that can be returned and replaced with another one.
- **Repair** - claim for an assembly item that can be returned for repair.

The following diagram shows the processing flow specific to each claim action:
Claim processing is initiated when you create a return authorization, which is needed when customers return the warranty item. When you receive warranty items, you can create an item receipt to track the quantity of returned items. Based on the claim action, you can proceed to creating the appropriate transaction: sales order, work order, or credit memo. When all transactions have been processed, you can ship the repaired or replacement item, or issue a credit memo for the claim refund. The flow of claim processing can be altered depending on your warranty preferences. For more information, see Setting Warranty Preferences.

Before entering or processing a claim, you can review the requirements and guidelines in the following topics:

- Limitations and Recommendations
- Prerequisites
Creating a Warranty Claim

You can create a claim directly from a registration record or manually create a new claim record. Regardless of how it is created, registration details are validated and carried over to the warranty claim.

**Important:** When creating a manual claim, you must not use the New option from the Actions submenu. This option does not display the warranty information fields, even if you use the Warranty Claim Form.

**To create a warranty claim:**

1. Go to Lists > Warranty and Repairs > Enter Warranty Claim.
   - If you are creating directly from a registration, on the Warranty Registration form, click **Create Claim**. On the Warranty Claim page, specific fields in the Primary and Warranty Information sections are populated with details from the registration record.
   
   **Note:** Before entering the claim details, verify that the warranty has not expired. The status should not be set to **Out of Warranty** and the expiration must be later than the current date.

2. On the Warranty Claim page, enter or select the values in the following Primary Information section fields.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custom Form</td>
<td>Select your claim form or the basic Warranty and Repairs Management form: Warranty Claim Form.</td>
</tr>
<tr>
<td>Important: Only cases or claims created through Warranty and Repairs Management are considered as valid warranty claim cases. Cases or claims filed outside the SuiteApp are treated as regular support cases, and are not be eligible for warranty processing. For example, a case created using the Case Management feature is not going to be eligible for warranty processing, even if it has been created using the Warranty Claim Form.</td>
<td></td>
</tr>
<tr>
<td>Claim Date</td>
<td>The claim date defaults to the current date. You can enter another date or pick a date from the calendar.</td>
</tr>
<tr>
<td>Claim Time</td>
<td>The claim time defaults to the current time. You can change the default time.</td>
</tr>
<tr>
<td>Complaint</td>
<td>Enter the subject for the claim.</td>
</tr>
<tr>
<td>Customer</td>
<td>For claims created directly from a registration, select a customer or select <strong>New</strong> to create a new customer record.</td>
</tr>
<tr>
<td>Profile</td>
<td>This field is populated based on the selected customer. You can select another profile to be used when sending notification for the claim.</td>
</tr>
<tr>
<td>Subsidiary</td>
<td>This field is populated based on the selected customer.</td>
</tr>
<tr>
<td>Claim Status</td>
<td>Select the appropriate status for the claim.</td>
</tr>
</tbody>
</table>

3. In the Warranty Information section, enter or select the values for the following fields:
   
   1. In the **Registration No.** field, enter the registration number of the warranty to be associated with the claim. For claims created directly from a registration record, the registration number is populated automatically, but you can change it.
**Note:** Be sure to enter a warranty registration that is associated with your selected customer. When you change the registration number, the invoice and related warranty details are automatically replaced with values associated with the new registration number.

If you want to view the registration details or search for a registration record, click the Warranty Search link. This link displays the Warranty Registration: Results page that contains the list of registration records. At top of the list, you can use the filtering options to limit the records shown on the page. Click the expand icon in the Filter bar to display the fields where you can set the filtering criteria.

2. **The following fields are automatically populated with details from the associated registration record. You can change the values of select fields:**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invoice</td>
<td>Depending on the mode of registration, this field displays the NetSuite invoice or your reference invoice number. You can change the invoice number.</td>
</tr>
<tr>
<td><strong>Note:</strong></td>
<td>Be sure to enter an invoice that is associated with your selected customer. When you change the invoice, the fields for the registration number and other warranty details are automatically cleared. You can then enter the associated registration number or select another item.</td>
</tr>
<tr>
<td>Item</td>
<td>This field displays the warranty item. You can select an item only when the invoice number is changed. Items included in the list are based on the selected invoice.</td>
</tr>
<tr>
<td>Serial/Lot Number</td>
<td>For serial or lot numbered items, this field displays the NetSuite or your reference serial or lot number depending on the mode of registration.</td>
</tr>
<tr>
<td></td>
<td>When you change the item, this field is also replaced with the serial or lot number associated with the selected item.</td>
</tr>
<tr>
<td></td>
<td>For manual registrations, if a lot numbered item is registered without a reference lot number, claims for that registration are also assigned a blank lot number.</td>
</tr>
<tr>
<td>Warranty Start Date</td>
<td>This field displays the original warranty start date. When you change the registration number, this field is also replaced with the warranty start date indicated on the registration.</td>
</tr>
<tr>
<td>Warranty Expiration</td>
<td>This field displays the warranty expiration date. When you change the registration number, this field is also replaced with the warranty expiration indicated on the registration.</td>
</tr>
<tr>
<td>Warranty Status</td>
<td>This field displays the warranty status. When you change the registration number, this field is also replaced with the status indicated on the registration.</td>
</tr>
</tbody>
</table>

3. **In the Failure Reason field, select a failure reason for the claim or select New to add another failure reason.**
4. In the **Action** field, select the appropriate action for the claim or select **New** to add another action.

Take note when selecting the following actions:

- **Repair** - This action is only applicable to assembly items. To process a repair claim, be sure to enable the required features. For the list of requirements, see **Prerequisites**.
- **Void** - This action prevents further processing of the claim by removing the option to create an RMA.

**Note:** The option to create a new failure reason and action is available only for the Administrator role.

5. Optionally, you can enter information in the **Product** and **Module** case fields.

For more information about these fields, see the help topic **Products and Modules**.

4. Click **Save**.

After creating a claim, you can start processing it by creating an RMA. If you have to change the claim details, be aware of the fields that cannot be edited after creating the RMA. For more information, review the following topics:

- Creating a Return Authorization for a Warranty Claim
- Editing a Warranty Claim

**Editing a Warranty Claim**

You can access existing warranty claims by going to Lists > Warranty and Repairs > Warranty Claim List. On the Warranty Claim: Results page, click the Edit or View link for the claim record. If you are viewing a registration record, you can also view the list of associated claims on the **Related Records** subtab.

You can update the details of a claim, including the claim date, time, complaint, profile, contact information, claim status, and failure reason. The following fields can be edited only if the claim does not yet have an existing RMA:

- Customer
- Registration No.
- Invoice
- Item
- Action

When claims are associated with a return authorization, you cannot edit these fields. It includes dependent fields, such as the **Serial/Lot Number** field, which depends on the value of the **Item** field. For a description of these fields, see **Creating a Warranty Claim**.

In edit mode, you can do any of the following:

- **Void a Claim**
  
  You can only void a claim that has no associated RMA records, regardless of the status of the RMA. To void a claim, select **Void** from the list in the **Action** field. The option to create an RMA from the claim is removed.

- **Delete a Claim**
  
  You can delete a claim that has no associated return authorizations and claim related transactions. To delete a claim, select Delete from the **Actions** submenu.
Return Authorization for Warranty Claims

The return materials authorization (RMA) authorizes the customer to return defective products to the supplier for refund, replacement, or repair. After determining the correct action for a claim, you can create an RMA to initiate the claim processing. See the following topics for creating the RMA:

- Creating a Return Authorization for a Warranty Claim
- Viewing Related Records of Warranty Claims
- Approving a Return Authorization for a Warranty Claim

On the RMA record, you can create an item receipt for the warranty item returned by the customer. You can also create the appropriate transaction needed to process the refund, repair, or replacement. See the following topics for processing the claim after receiving the warranty item:

- Creating an Item Receipt from a Return Authorization
- Processing Refund, Repair, and Replacement Claims

Creating a Return Authorization for a Warranty Claim

Return authorizations are associated and tracked on the warranty claim record. You can view associated RMAs and other related claim records on the Claim Transactions subtab of the Related Records subtab.

When a claim has existing RMA records, you cannot edit specific fields in the Warranty Information section of the claim record. You also cannot delete the claim. For more information, see Editing a Warranty Claim.

To create a return authorization for a warranty claim:

1. Go to Lists > Warranty and Repairs > Warranty Claims List.
2. On the Warranty Claim: Results page, click the View link for the claim record.
4. On the Return Authorization page, in the Primary Information section, the following required fields are automatically populated with claim details. You can change the default values of editable fields.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custom Form</td>
<td>Select the return authorization form.</td>
</tr>
<tr>
<td>Customer</td>
<td>This field displays the customer indicated on the claim record.</td>
</tr>
<tr>
<td>Date</td>
<td>The date of the RMA defaults to the current date. You can enter another date</td>
</tr>
<tr>
<td></td>
<td>or pick a date from the calendar.</td>
</tr>
<tr>
<td>Status</td>
<td>The status of the RMA defaults to Pending Approval. You can update the status.</td>
</tr>
</tbody>
</table>

5. Enter values in the other Primary and Sales Information section fields. In the Classification section, if you have the Class, Location, and Department features enabled, select or update the values in their corresponding fields.
For more information about these return authorization sections, see the help topic Return Authorization (RMA) Forms.

6. In the Warranty Information section, you can review the details, such as the claim number, warranty item, and action. The fields displayed in this section depend on the action of the associated claim. They are automatically populated with details from the claim record and other related transactions.

7. On the Items subtab, you can do the following for each line item:
   1. In the Quantity column, enter the quantity.

   **Note:** For serialized items, the quantity must be set to 1 because you can process only one claim for each serial number.

   2. In the Inventory Detail column, click the Inventory Details icon to enter the details for serialized or lot numbered items, as indicated on the claim.

   3. You can enter other item details, such as the description, units, and unit price.

   **Note:** You must not add, change, or remove warranty items on the return authorization. If the warranty items do not match the details on the claim, the RMA cannot be submitted.

4. Click **OK** to save a line item.

8. Click **Save**.

Return authorizations that are set to **Pending Approval** status are submitted for approval before you can create an item receipt. View the topics for procedures that follow after creating an RMA:

- To approve an RMA, see Approving a Return Authorization for a Warranty Claim.
- To create an item receipt, see Creating an Item Receipt from a Return Authorization.
- For replacement claims, if your account has the Ship Replacement in Advance preference enabled, you can proceed to creating the sales order. For instructions, see Creating a Sales Order for Replacement Claims. For more information about the preference, see Setting Warranty Preferences.

### Viewing Related Records of Warranty Claims

Return authorizations and item receipts that you create on a warranty claim are tracked on the claim record. Only approved return authorizations are included for tracking. From a claim, you can open a related record in view or edit mode.

#### To view related records of warranty claims:

1. Go to Lists > Warranty and Repairs > Warranty Claims List.
2. On the Warranty Claim: Results page, click the View link for the claim record.
3. On the Warranty Claim page, click the Related Records subtab and then click the Claim Transactions subtab.
4. In the list of claim transactions, you can access the record by doing either of the following:
   - Click the Edit link to open the record in edit mode.
   - In the Document Number column, click the number link to open the record in view mode.

   In view mode, the options to approve an RMA, create an item receipt, or create claim related transactions are displayed. For instructions, see the following topics:

   - Approving a Return Authorization for a Warranty Claim
Return Authorization for Warranty Claims

- Creating an Item Receipt from a Return Authorization
- Processing Refund, Repair, and Replacement Claims

Approving a Return Authorization for a Warranty Claim

A return authorization in Pending Approval status can be approved or cancelled. On the RMA record, the options to approve and cancel are displayed only in view mode. For instructions on accessing an RMA, see Viewing Related Records of Warranty Claims.

The following instructions begin after opening an RMA record.

To approve a return authorization for a warranty claim:

1. On the Return Authorization page, verify that the details are correct and complete.
   
   You can edit a some details before approving the RMA. After saving your changes, the record returns to view mode. For more information about the claim fields that you can edit, see Creating a Return Authorization for a Warranty Claim.

2. Click Approve Return.

After approving an RMA, you can create an item receipt. If you choose to cancel, the RMA is not tracked on the claim record and it cannot be resubmitted for approval or further processing.

Creating an Item Receipt from a Return Authorization

When an RMA has been approved or if it does not require approval, the record is set to Pending Receipt status. The option to create an item receipt is displayed only in view mode. For instructions on accessing an RMA, see Viewing Related Records of Warranty Claims.

Note: For replacement claims, if your account has the Ship Replacement in Advance preference enabled, you have the option to create a sales order. This option enables you to create a sales order for sending the replacement item to the customer, before receiving the warranty item. For more information about the preference, see Setting Warranty Preferences. For instructions on creating a sales order, see Creating a Sales Order for Replacement Claims.

The following instructions begin after opening an RMA record.

To create an item receipt from a return authorization:

1. On the Return Authorization page, verify that the details are correct and complete.
   
   If you need to edit the RMA before creating the item receipt, click Edit to update the record. After saving your changes, the record returns to view mode.

2. Click Receive. A new Item Receipt form is displayed.

3. On the Item Receipt form, you can view and edit the details in the Primary Information section.

4. On the Items subtab, do any of the following:
   
   - In the Receive column, be sure to check the box for the warranty item.
   - In the Location column, if you use the Multi-Location Inventory feature, select the location for the received item.
   - In the Quantity column, verify that the quantity of received items is correct.
   - In the Inventory Detail column, enter the details for serialized and lot numbered items, as indicated on the claim.
Return Authorization for Warranty Claims

- In the **Restock** column, be sure to check the box for repair claims. This box indicates that you are going to return the item to the inventory.

5. Click **Save** to create the item receipt record.

**Note:** You must not select the **Save & Refund** option because cash refunds are not supported. For more information, see Limitations and Recommendations.

After creating an item receipt, you can return to the RMA to process the claim for refund, replacement, or repair. For more information, see Processing Refund, Repair, and Replacement Claims.

For partially received items, you can already process a refund for the returned items or receive additional warranty items. The **Receive** option is not available when you have received all the warranty items, or when you close the line item.

Item receipts are tracked on their associated RMA and claim record. On both records, item receipts are listed on the **Related Records** subtab. For more information on viewing item receipts on claims, see Viewing Related Records of Warranty Claims.

### Processing Refund, Repair, and Replacement Claims

After receiving the items, you can continue processing according to the action defined on the claim record. See the following topics for each claim action:

- Creating a Credit Memo for Refund Claims
- Creating a Sales Order for Replacement Claims
- Creating a Sales Order for Repair Claims

After creating an item receipt, the option to create the credit memo or sales order is displayed on the RMA record. For replacement claims, if your account has the Ship Replacement in Advance preference, you have the option to create the sales order even before creating the item receipt. For more information about this preference, see Setting Warranty Preferences.

To access the RMA record from a claim, see Viewing Related Records of Warranty Claims. Alternately, if you have the item receipt open, click the Return Authorization link in the **Created From** field. The option to create a credit memo or sales order is displayed only in view mode. The following instructions begin after opening an RMA record.

**Important:** When you open an RMA record to create the credit memo or sales order, you must not add, change, or remove warranty items on the RMA. You cannot submit the RMA if you remove a warranty item.

### Creating a Credit Memo for Refund Claims

The following instructions show you how to create a credit memo specifically from a return authorization of a warranty claim.

Although you have the option to add more warranty items on a credit memo, only one RMA can be associated with it. To ensure proper tracking, it is best not to combine warranty items from different RMAs into one credit memo.
To create a credit memo for refund claims:

2. On the Credit Memo page, the required fields are populated with details from the RMA.
   You can enter other credit memo details in the Primary and Sales Information sections. In the Classification section, if you have the Class, Location, and Department features enabled, verify or select the values in their corresponding fields. For more information about creating a credit memo, see the help topic **Issuing a Customer Credit Memo**.
3. On the **Items** subtab, verify that the quantity and amount for the warranty item match the values on the RMA.
   You can enter other details for the warranty items. For more information, see the Items section in the topic, **Issuing a Customer Credit Memo**.

   **Note:** You must not change or remove warranty items on the credit memo. If a warranty item is replaced or removed, the credit memo cannot be submitted.
4. Click **Save**.

You can view a credit memo on the associated RMA and claim record, on the **Related Records** subtab. To apply a credit memo to customer transactions, see the help topic **Applying a Customer Credit Memo**.

Creating a Sales Order for Replacement Claims

After receiving an item, you can create the sales order from the return authorization. Processing of replacement claims vary when you have either of the following warranty preferences enabled in your account:

- **Ship Replacement in Advance** - This preference enables the **Create SO** button on the RMA even if you have not received the item and created an item receipt.
- **Close RMA Upon SO Creation** - This preference automatically closes the RMA when you have created the sales order.

**Important:** If you have the Close RMA Upon SO Creation preference enabled, an RMA is automatically closed even when all items have not been received yet. When you create a sales order for partially received items, you cannot receive additional items on the item receipt.

For more information about these preferences, see **Setting Warranty Preferences**.

**Note:** You must have full access to Return Authorization to link the created Sales Order back to the Return Authorization form.

Although you have the option to add more warranty items on a credit memo, only one RMA can be associated with it. To ensure proper tracking, it is best not to combine warranty items from different RMAs into one credit memo.

The following instructions begin after opening an RMA record in view mode. For instructions on accessing an RMA from a claim or item receipt, see **Processing Refund, Repair, and Replacement Claims**.

To create a sales order for replacement claims:

1. On the Return Authorization page, click **Create SO**. A new Sales Order form is displayed.
2. On the Sales Order page, the required fields are populated with details from the RMA.
You can enter other sales order details in the Primary and Sales Information sections. In the Classification section, if you have the Class, Location, and Department features enabled, verify or select the values in their corresponding fields. For more information on creating a sales order, see the help topic Creating Sales Orders.

3. On the Items subtab, verify that the quantity of the warranty item matches the value on the RMA.
   - For replacement items, the amount of the warranty item is set to zero.
   - You can enter other details for the warranty item. For more information, see the Items section in the topic, Creating Sales Orders.

   **Note:** You must not change or remove warranty items on the sales order. If a warranty item is replaced or removed, the sales order cannot be submitted.

4. Click Save.

When you save the sales order in Pending Approval status, the record is submitted for approval. To process the shipping of the replacement item, see the help topic Order Fulfillment. The sales order can be tracked on the associated claim record, on the Related Records subtab, and RMA record, in the Replacement SO No. field.

Creating a Sales Order for Repair Claims

Repair claims for assembly items require a sales order to track outgoing inventory. On the sales order, you can add the repaired items, and include replacement parts or additional services required for the repair.

**Important:** If you have the Close RMA Upon SO Creation preference enabled, an RMA is automatically closed even when all items have not been received yet. When you create a sales order for partially received items, you cannot receive additional items on the item receipt. For more information about the preference, see Setting Warranty Preferences.

To review the setup requirements related to repair claims, see Creating Repaired Items.

The following instructions begin after opening an RMA record in view mode. For instructions on accessing an RMA from a claim or item receipt, see Processing Refund, Repair, and Replacement Claims.

**To create a sales order for repair claims:**

2. On the Sales Order page, the required fields are populated with details from the RMA.
   You can enter other sales order details in the Primary and Sales Information sections. In the Classification section, if you have the Class, Location, and Department features enabled, verify or select the values in their corresponding fields. For more information on creating a sales order, see the help topic Creating Sales Orders.
3. On the Items subtab, be sure to check the box in the Create WO column for the repaired item.

   **Note:** You must not change or remove repaired items on the sales order. If the item is replaced or removed, the sales order cannot be submitted.

4. Click OK to save the line item.

   If you want to add line items for replacement parts or additional services, click Add and then enter the details in the new line item.
5. Click Save.

When you save the sales order in Pending Approval status, the record is submitted for approval. The sales order can be tracked on the associated claim record, on the Related Records subtab, and RMA record, in the Replacement SO No. field.

After a sales order has been approved, the record is updated with the work order number on the Items subtab. In the Create WO column of the warranty line item, click the work order number link to open the Work Order form. Work orders are included in the list on the Related Records subtab of the associated claim.

When creating a work order for a repair claim, you can review the repaired items that you assigned to the assembly items. For more information, see Setting Up Warranty Information on the Item Record.

For more information about work order processing and other required forms, see the following topics:

- To enter a work order, see the help topic Entering an Individual Work Order or Assembly Work Orders.
- To enter an assembly build, see the help topic Building Assembly Items.
- To create an item fulfillment, see the help topic Order Fulfillment.
Quality Management

Effective quality management helps your organization meet regulatory and internal quality expectations that can help formalize and assess your company’s inventory and process standards. The NetSuite Quality SuiteApp provides templates and tools to help you maintain and associate quality data to other business records and workflows.

The following NetSuite Quality SuiteApp components contribute a quality manufacturing program:

- Quality Management Administration
- Quality Management User Guide
- Mobile Data Collection
- Quality Reports
Quality Management Administration

NetSuite Professional Services works with your NetSuite Administrator to set up and configure the Quality Management SuiteApp to leverage important NetSuite data.

**Note:** Do not change these features and preferences after they are enabled.

Quality Management Administration contains the following:

- Quality Management Roles
- Quality Management Prerequisites
- Customizing Quality Management Workflows
- NetSuite Plugins
- Quality Management REST API
- Scriptable Inspection Triggers

### Quality Management Roles

NetSuite Quality SuiteApp roles are assigned to employees who need to view or edit specific data. The following roles and their permissions determine which features are available in the Quality interface and the tasks that they can complete:

- Quality Administrator
- Quality Manager
- Quality Engineer

To learn more, see the help topic `Assigning Roles to an Employee`.

### Quality Administrator

Quality Administrators oversee the initial implementation of the NetSuite Quality SuiteApp and manages its on-going administration.

The Quality Administrator completes the following tasks:

- Define and edit quality inspections and specifications
- Edit inspection queue priorities and assignments
- Capture inspection data
- Generate reports
- Modify workflows
- Introduce custom roles

### Quality Manager

Quality Manager align quality practices to company and industry policies, assigns and monitors quality priorities, leads quality failure responses, and shares continuous improvement data. They work with Inventory Management.
Quality Engineers, Planners, and Plant Managers, to monitor and enforce inspections, align processes with business needs, capture inspection data, and assess conformance within NetSuite.

The Quality Manager role completes the following tasks:

- Edit inspection queue priorities and assignments
- Identify production processes and capture inspection data
- Generate and review reports to analyze production quality
- Refer to historical quality inspection data to evaluate processes
- Identify non-conformance to enable corrective actions

Quality Engineer

The Quality Engineer is the person on the shop floor who records inspection data according to defined quality specifications. They enforce quality processes, collect inspection data, escalate quality failures, and implement new processes that result from quality issues. The Quality Engineer works closely with shop-floor staff and the Quality Manager to identify a non-conformance during an inspection that should trigger defined corrective actions.

The Quality Engineer role completes the following tasks:

- Can view required and pending production inspections
- Capture inspection data
- Record notes to support inspection findings
- use the tablet to capture photos to support inspection findings
- Generate quality reports

Quality Process Flow

The Quality SuiteApp links quality functions to business processes that are managed through NetSuite.

The following diagram depicts the relationship between triggering transactions (item receipt), required inspections, and conformance driven quality responses that the SuiteApp supports.

1. Complete administrative processes.
2. The transaction process populates the queue.
3. The queue is processed in the tablet.
4. Results are entered and evaluated.
   SuiteFlow processes could be initiated.
Quality Management Prerequisites

You must enable the features before you work with the NetSuite Quality Management SuiteApp.

To enable prerequisite features:

1. Go to Setup > Company Enable Features.
2. On the **Company** subtab, check the following boxes:
   - Locations
   - Multiple Units of Measure
   - File Cabinet
3. On the **Transactions** subtab, check the following boxes:
   - Return Authorizations
   - Purchase Orders
   - Vendor Return Authorizations
4. On the **Items & Inventory** tab, check the **Inventory** box.
5. On the **SuiteCloud** subtab, check the following boxes:
   - Custom Records
   - Client SuiteScript
   - Server SuiteScript
   - SuiteFlow
Customizing Quality Management Workflows


The Quality Inspection Queue

Each Quality Inspection Queue record (inspection) represents a triggered quality specification, and is the primary record displayed in the Quality Tablet list and the Inspection Queue Suitelet. All non-conformance workflows monitor this record type and respond to changes in the Status and Action fields.

The Status Field

The Status field value is affected by data collected and evaluated during an inspection. To control the lifecycle, Quality Managers can assign a value to the Status field. The following diagram displays the typical development of the Status field.

![Status Field Diagram]

The Status workflow shows that you can only collect data from inspections that are in **Pending** or **In-Process** state. The dotted line transitions (to Hold and Cancel) can only be made manually by Quality Managers.

Conformance rules defined for the specification determine an inspection’s Pass or Fail status and are evaluated once all quality data has been submitted.

The Action Field

The values that can be assigned to the Action field are controlled by the NetSuite Quality Conformance Action list. The following values are associated with the baseline workflows:

- **Quarantine**: prompts NetSuite workflows to stop the item from being used
- **Return to Vendor**: prompts NetSuite to initiate the return items to vendor process
- **New**: add actions to the list to trigger workflows
Interpreting Status and Action

Specific Select and Action field combinations can trigger the baseline workflows delivered with the Quality Management SuiteApp. The following table describes the workflow responses to inspection combinations.

<table>
<thead>
<tr>
<th>Action/Status</th>
<th>Pending</th>
<th>In-Process</th>
<th>Pass</th>
<th>Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarantine</td>
<td>Quarantine: pre-inspection quarantine</td>
<td>Quarantine: release if ready quarantine</td>
<td>Quarantine: post-inspection quarantine</td>
<td>Return to Vendor: initiate return to vendor authorization</td>
</tr>
<tr>
<td>Return to Vendor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Quality Workflows

The Quality Management SuiteApp delivers three workflow templates that you can copy and deploy with minimal setup.

Quarantine Workflow

The Quarantine workflow monitors inspection transitions (see the Interpreting Action and Status table). The workflow uses a custom SuiteFlow script to perform a NetSuite Bin Transfer or Inventory Status Change to designate items as quarantined and subsequently released.

The following diagram describes the Quarantine workflow:

To learn more, see the help topic Creating a Workflow.

SuiteFlow Configuration

The Quality Receipt Quarantine SuiteFlow script is available in the following workflow states:

- Released
- Quarantined Pending Inspection
- Quarantined

The following diagram shows the SuiteFlow script in the State Action list:

![SuiteFlow Script Diagram]

You can configure the SuiteFlow script to control behavior through the following parameters that are exposed in the State subtab, Action list.

![Parameters Table]

The following table describes the Parameters subtab fields:

<table>
<thead>
<tr>
<th>Field</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do Quarantine</td>
<td>A Boolean value that indicates whether to apply the script or reverse the quarantine action. For example, bin-transfer into or out of the quarantine bin.</td>
</tr>
<tr>
<td></td>
<td>- Select Yes for quarantine and pre-quarantine states</td>
</tr>
<tr>
<td></td>
<td>- Select No for release state</td>
</tr>
<tr>
<td>Via Bin Transfer</td>
<td>A Boolean value that indicates whether the NetSuite action should be a Bin Transfer or Inventory Status Change</td>
</tr>
<tr>
<td></td>
<td>Set identically on all states that use the script</td>
</tr>
<tr>
<td>Quarantine Bin</td>
<td>A Boolean value that indicates whether the NetSuite action should be a Bin Transfer or Inventory Status Change</td>
</tr>
<tr>
<td></td>
<td>- Set if Via Bin Transfer is set to Yes</td>
</tr>
<tr>
<td></td>
<td>- Set identically on all states that use the script</td>
</tr>
<tr>
<td>Quarantine Status ID</td>
<td>The inventory status record internal ID that represents all quarantined material</td>
</tr>
<tr>
<td></td>
<td>- Only set if Via Bin Transfer is set to No</td>
</tr>
<tr>
<td></td>
<td>- Set identically on all states that use the script</td>
</tr>
</tbody>
</table>
**Return to Vendor Workflow**

The Return to Vendor workflow monitors inspection transitions (shown in the Interpret Action and Status table). This workflow uses a custom SuiteFlow script to create a new Vendor Return Authorization that initiates the return process for the Item Receipt that failed inspection.

The following diagram outlines the Return to Vendor workflow:

![Return to Vendor Workflow Diagram](image)

**SuiteFlow Overview and Modification**

The Quality Receipt Return SuiteFlow script is used when the workflow is in Returned state. This script reviews the inspection to identify the Purchase Order (P.O.) and the Item Receipt that generated it. The system then creates a new Vendor Return Authorization (VRA) record from the receipt for all line items in the original receipt.

**Important:** Carefully consider modifying the baseline NetSuite script to better control the scope of the return. All modifications are the responsibility of the customer.

**Potential Enhancements:**

- Only the item that failed the inspection
- Only the item lots that failed inspection

**Leveraging Delivered Workflows**

Quality Management workflows are undeployed and locked to ensure that:

- The system does not invoke business behavior until the you review and update the workflows
- Future bundle updates will not conflict with, or compromise, specific configurations

Take the time to copy, configure, and enable workflows that support your Quality Management implementation.

**To copy a workflow:**

1. Go to Customization > Workflow > Workflows.
2. In the workflow list, next to the workflow you want to copy, click **Edit**.
3. Hover over the **More** list and then check **Make a Copy**.
4. Click **Edit** to make changes to the workflow.
a. Click the item you want to change.
b. Click the pencil icon.
c. Make changes in the Workflow window.
d. Click Save.

Configuring Workflows

Each NetSuite baseline workflow configuration is described in workflow sections.

To enable a workflow:

1. In the workflow list, next to the newly copied workflow, click Edit.
2. In the workflow, click the pencil icon.
3. In the Release Status list, select Released.
4. Click Save.

Creating Workflows

Workflows can be defined and implemented to work with the Quality SuiteApp in the same manner as NetSuite workflows. New workflows should:

- Leverage new Quality Conformance Actions to help isolate behavior to specific non-conformance rules
- Monitor Quality Inspection Queue records
- Define state transitions based on a combination of the Status and Action fields
- To avoid orphaned workflows, ensure the workflow ends once the Status is either Pass or Fail
- Be thoroughly tested especially if there is a potential for multiple workflows to be triggered simultaneously

To learn more, see Specification Conformance Rules.

Quality Management Connect

The NetSuite 2020.2 Quality Management SuiteApp enables you to send pending inspection notifications to NetSuite partners so that they can collect and evaluate inspection data. After the inspection has been completed, the results can be transmitted to NetSuite to trigger business processes using the existing REST interface.

Based on NetSuite’s SuiteSignOn, Quality Management Connect initiates an outbound (SuiteSignOn) call to an external application using an SSO oAuth token.

The external application uses the token to create an oAuth signature and then authenticates the application with NetSuite to establish an active web service session to retrieve Quality Inspection Queue records. This session is valid for 20 minutes.

This process enables partner solutions to retrieve enough information to push quality data back to NetSuite in order to initiate workflow actions.

NetSuite 2020.2 Quality Management Connect supports the following inspection types:

- Material Receipt
Quality Management OAuth 2.0

Client-server authentication models require you to request access to protected server resources using the resource owner's credentials. To give access to restricted resources, resource owner shares its credentials with the third party.

For example, if a client has access to the Quality SuiteApp and needs to invoke the Restlet from an application running outside of NetSuite, the client must enter their user ID and password. This is dangerous as it allows third-party access to the client's account and they can perform any operation.

NetSuite OAuth addresses these issues by introducing an authorization layer and separating the role of the client from the resource owner. The OAuth 2.0 authorization framework enables third-party applications to obtain limited access to HTTP services (Restlet). The resource owner does this by organizing an approval interaction between the resource owner and the HTTP service or allowing third-party application access.

To enable OAuth 2.0

1. Go to Setup > Company > Setup Tasks > Enable Features.
2. Click the SuiteCloud subtab.
3. In the SuiteScript section, check the following boxes:
   - Client SuiteScript
   - Server SuiteScript
4. In the Manage Authentication section, check the OAuth 2.0 box.
5. Click Save.

To create an OAuth role:

1. Go to Setup > Users/Roles > Manage Roles > New.
2. On the Permission subtab, click Setup.
3. In the Permission list, select OAuth 2.0 Authorized Applications Management.
4. Click Add.
5. Assign this new role to the user you want to access OAuth 2.0.
6. Click Save.

To create integration records to use OAuth 2.0

1. Go to Setup > Integration > Manage Integrations > New.
2. Enter an application Name.
3. Enter an integration Description.
4. In the State list, select Enabled.
5. Enter an optional Note.
6. On the Authentication subtab, in the OAuth 2.0 section check the following boxes:
   - Authorization Code Grant
   - Scope:
Restlets
Rest Web Services

7. Enter a Redirect URI.
8. Click Save.
9. Share the CONSUMER KEY / CLIENT ID (client_id) and CONSUMER SECRET / CLIENT SECRET you're your client.

Save CONSUMER KEY / CLIENT ID (client_id) and CONSUMER SECRET/ CLIENT SECRET. After you save the record, you cannot see it again. If you lose Client Key and Secrete, then lease reset and share those with client.

To learn more, see the help topic OAuth 2.0.

NetSuite Plugins

The Quality Management SuiteApp can leverage plug-ins to customize behavior that meets your organization's needs. It is important that you are familiar with SuiteScript and have a basic understanding of NetSuite Custom Plug-ins.

To learn more, see the help topic Core Plug-in Overview

Quality Custom Inspection Rule Plug-in

The Quality Custom Inspection Rule plug-in enables you to evaluate quality inspection data and standards to determine if an inspection should pass or fail. Only use this plug-in when conventional pass rules are insufficient. For example, length greater than or equal to Max_Length.

Requirements

Since the Quality Management SuiteApp uses SuiteScript 2.0, all custom plug-in implementations must also be written in SuiteScript 2.0.

Expected Input/Output

A new implementation of the custom inspection rule must take as input the following:

<table>
<thead>
<tr>
<th>Field</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>InspectionObject</td>
<td>A javascript object containing inspection information requesting specialized pass/fail assessment:</td>
</tr>
<tr>
<td></td>
<td>■ type: the inspection type</td>
</tr>
<tr>
<td></td>
<td>■ name: the inspection name</td>
</tr>
<tr>
<td></td>
<td>■ txnld: the triggering transaction internal ID</td>
</tr>
<tr>
<td></td>
<td>■ itemID: the triggering item internal ID</td>
</tr>
<tr>
<td>fieldObject</td>
<td>A javascript object containing triggering inspection field information:</td>
</tr>
<tr>
<td></td>
<td>■ name: the field name</td>
</tr>
<tr>
<td></td>
<td>■ value: the field value</td>
</tr>
</tbody>
</table>
otherFieldObjects | An array of javascript objects containing additional inspection field information. One entry for every piece of related inspection data collected:
- **name**: the field name
- **value**: the field value

standardObjects | An array of javascript objects containing standard fields of the inspection information. One entry for every standard defined:
- **name**: the field name
- **value**: the field value standard adjusted for any item specific settings

Each custom inspection rule must also return a Boolean (true or false):
- **true**: the inspection passed the custom rule
- **false**: the inspection failed the custom rule

Sample Implementation

The Quality Management SuiteApp includes a sample alternate implementation of the Quality Custom Inspection Rule Echo plug-in.

By adding this plug-in to your sandbox account, you will see a full echo of all the inputs that trigger the plug-in. You can review this in the plug-in implementation script execution to ensure you understand the data available to the plug-in.

You can review this implementation for the correct structure of the SuiteScript 2.0 script which can be used as a template. This enables you to concentrate only on the rule-specific logic of your organization. The script code is shown in the Quality Custom Inspection Rule Echo Source section.

Quality Custom Inspection Rule Echo Source

**Note:** This sample script uses the define function, which is required for an entry point script (a script you attach to a script record and deploy). You must use the require function if you want to copy the script into the SuiteScript Debugger and test it. For more information, see the help topic SuiteScript Debugger.

This implementation simply echos all inputs to the log to assist new developers and returns true.

```javascript
/**
 * @NApiVersion 2.0
 * @NScriptType pluginTypeImpl
 *
 * ECHO Implementation of Custom Rule Plug-in for Quality Management SuiteApp
 */
define(['N/log'], function(log) {
  return {
    inspectionPassed: function(inspectionObj, fieldObj, otherFieldObjs, standardObjs) {
      // echo inspectionObj
      log.debug(
        {
          title: 'inspectionObj',
          details: 'type:' + inspectionObj.type +
            ' name:' + inspectionObj.name +
            ' txnId:' + inspectionObj.txnId +
            ' itemId:' + inspectionObj.itemId
        });
      // echo fieldObj
      log.debug(
        {
          title: 'fieldObj',
          details: 'type:' + fieldObj.type +
            ' name:' + fieldObj.name +
            ' txId:' + fieldObj.txId +
            ' itemId:' + fieldObj.itemId
        });
      // echo otherFieldObjs
      log.debug(
        {
          title: 'otherFieldObjs',
          details: 'type:' + otherFieldObj.type +
            ' name:' + otherFieldObj.name +
            ' txId:' + otherFieldObj.txId +
            ' itemId:' + otherFieldObj.itemId
        });
      return true;
    }
  }
});
```
Quality Management REST API

The NetSuite 2019.1 Quality SuiteApp is exposing REST APIs that enable you to trigger quality management inspections.

Quality Management REST API uses HTTP requests to GET, PUT, POST, and DELETE data. To learn how the NetSuite Quality SuiteApp leverages REST APIs, see the following:

- **GET – qm_rest_queue**
- **POST – qm_rest_queue**
- **DELETE – qm_rest_queue**

### GET – qm_rest_queue

The Quality GET API returns a queue entry, or queue object dump.

Use the GET request to retrieve relevant information about a pending or complete quality inspection that has been queued for tablet data collection.

- **URL**
  
  `/app/site/hosting/restlet.nl?script=customscript_qm_rest_queue&deploy=1`

- **Method**
  
  GET

- **URL Params**
  
  Required:
  
  id=[integer]

- **Success Response**
  
  Code: 200

- **Example Content**

```javascript

```
Quality Management REST API

```json
{
   "message": "Loaded queue record id: 5043",
   "data": {
      "status": "Pending",
      "location": "India",
      "quantity": 1,
      "triggerType": "API",
      "specification": "Color and Quantity check",
      "priority": "0-Urgent",
      "assignedTo": "Amruta Kumbhar",
      "action": "Return To Vendor",
      "inventoryTransaction": "Item Receipt #42",
      "transactionLine": 1,
      "parentTransaction": "Purchase Order #43",
      "recordStaged": true,
      "statusId": 1,
      "locationId": 1,
      "triggerTypeId": 4,
      "specificationId": 3,
      "priorityId": 1,
      "assignedToId": 3,
      "actionId": 2,
      "inventoryTransactionId": 85,
      "parentTransactionId": 84
   },
   "requestParams": {
      "id": "5043"
   }
}
```

**Error Response**

Most endpoints can fail in many ways. For example, from unauthorized access to wrongful parameters.

**Code**: 400 BAD REQUEST

**Example Content**

```json
{
   "error": {
      "code": "JS_EXCEPTION",
      "message": "Error: {"message":"Queue record 50431 does not exist."}"
   }
}
```

**POST – qm_rest_queue**

The Quality Management POST API enables you to create new queue records. Creating a new queue record triggers processing to allow the associated inspections to be performed on the tablet interface.

**URL**

/app/site/hosting/restlet.nl?script=customscript_qm_rest_queue&deploy=1

**Method**

POST

**Data Params**

```json
{
   "specificationId": "integer(m)",
   "itemId": "integer(m)",
   "locationId": "integer(m)",
   "quantity": "integer(m)",
   "assignedToId": "integer",
}
```
Quality Management REST API

```
"priorityId": "integer",
"inventoryTransactionId": "integer",
"transactionLine": "integer",
"parentTransactionId": "integer"
```

■ Success Response

**Code:** 200

**Example Content:**

```
{
  "message": "Created queue record id: 662",
  "data": {
    "id": 662
  },
  "requestBody": {
    "actionId": 2,
    "assignedToId": 3,
    "inventoryTransactionId": 85,
    "specificationId": 3,
    "locationId": 1,
    "quantity": 1,
    "itemId": 8,
    "priorityId": 1,
    "parentTransactionId": 84,
    "transactionLine": 1
  }
}
```

■ Error Response

- **Code:** 400 BAD REQUEST

**Example Content:** Negative quantity error

```
{
  "error": {
    "code": "JS_EXCEPTION",
    "message": "Error: Unable to insert queue record: Please provide positive number for quantity"
  }
}
```

- **Code:** 400 BAD REQUEST

**Example Content:** Mandatory field error

```
{
  "error": {
    "code": "JS_EXCEPTION",
    "message": "Error: {"message":"Missing one of required parameters"},"data": {"required": [{"name":"specificationId","required":true,"min":1,"max":1},"item":1,"quantity1":1,"itemId":8]}}
  }
}
```

- **Code:** 400 BAD REQUEST

**Example Content:** Invalid fields

```
{
  "error": {
    "code": "JS_EXCEPTION",
    "message": "Error: You are passing invalid field/s: test"
  }
}
```
DELETE – qm_rest_queue

The Quality Management DELETE API is used to cancel queue records (identified by the Request-URL). You can only use this API to cancel queue records that have been created by the POST API.

- **URL:**
  /app/site/hosting/restlet.nl?script=customscript_qm_rest_queue&deploy=1

- **Method:**
  DELETE

- **URL Params**
  - **Required:**
    - id=[integer]

- **Success Response:**
  - **Code:** 200
    - **Example Content**

```json
{
  "message": "Queue record canceled id: 762",
  "data": 762,
  "requestParams": {
    "id": "762"
  }
}
```

- **Error Response**
  - **Code:** 400 BAD REQUEST
    - **Example Content**

```json
{
  "error": {
    "code": 'JS_EXCEPTION',
    "message": "Error: ({"message":"REST can only modify queue records created from REST api"})"
  }
}
```

### Scriptable Inspection Triggers

The NetSuite 2020.2 Quality Management includes a SuiteScript 2.0 module that enables you to initiate predefined inspection activities (specifications) from within SuiteScript 2.0 customizations to NetSuite. This enhancement enables you to extend inspection capabilities to address your unique market and organizational inspection needs. Exposing this API ensures that implementations are streamlined and have the necessary safeguards to avoid inconsistent inspection data.
Quality Management User Guide

A quality management process is defined by its inspections and specifications. NetSuite defines a quality specification as a collection of related inspections. These inspections and specifications determine the level of quality measured against shop floor processes and incoming and outgoing shipments. For example, did the finished product pass the pH level test, were the correct number of items shipped to the customer, or were the items received in good condition?

As your standards and requirements change, use the NetSuite Quality SuiteApp to update existing, or create new, inspections and specifications. The Copy Existing feature enables you to create new inspections and specifications from existing, similar inspections and specifications, reducing the time and effort spent on ongoing maintenance.

To learn more, see Copying an Inspection.

Quality Inspections

Quality inspections define data fields and associated standards to examine, measure, compare, or test product material or characteristics. This section describes how your Administrator can set up quality inspections.

**Note:** When an inspection is marked Is Inactive, it cannot be processed as part of a new triggering and no data collection or evaluations should be performed against it.

**Creating Quality Inspections**

To create a quality inspection:

1. Go to Quality > Inspections > New.
2. Select a Custom Form.
   - Quality Inspections
     The Quality Inspection form will be organized differently from the Standard Quality Inspection Form.
   - Standard Quality Inspection Form
3. Complete the Quality Inspection Form.

To complete the Standard Quality Inspection form:

1. Enter a unique and descriptive Inspection Name. For example, pH test.
2. Check the Inactive box to make the inspection inactive but not deleted.
3. Enter a more complete Description of the inspection. This information appears in the tablet to help the quality engineer understand the goal of the inspection.
4. Select an Inspection Type:
   - Qualitative to verify that the item is in good overall condition or that the appropriate certificates are in place.
- **Quantitative** to define multiple measurable elements along with criteria for acceptance. For example, diameter, width, temperature, or chemical composition.

5. Select a **Sampling Profile**.
   The sampling profile determines sample size for the Inspection.

6. To indicate that this inspection cannot be skipped during data collection, check the **Mandatory** box.

7. To define how the inspection is performed, select an **Inspection Method**.
   For example, visual inspection, scale, or caliper.
   You can create this list in advance or add new entries as you need them.

8. **Enter a Transaction Frequency** to define the number of item inspections:
   - Leave the field empty (do not enter a number) to create only one inspection for the received item.
   - **All Shipments** sample/inspect all shipments.
   - **Skip One** to skip every other lot or serial number.
     An inspection is created for every other lot or serial number (1, 3, 5, and so on).
   - **Skip Two** to skip 2 lots or serial numbers between inspections.
     An inspection is created for lots or serial numbers (1, 4, 7, and so on).
   - **All Completions** to sample/inspect all completions.
   - **All Fulfillments** to sample/inspect all transactions.

9. If the inspection requires sampling, enter a **Sample Rate**.
   This represents the number of inspection sample records created for each lot or serial number:
   - Leave the field empty (do not enter a number) to create only one inspection for the received item.
   - Enter a number or percentage to represent the sample records for each receipt.
     For example, enter 3 to create 3 records for each receipt. If 10% is entered, 10% of the receipt quantity will be sampled.
   - Enter a percentage figure to create that percentage of samples for each receipt.
     For example, if 10% is entered, 10% of the receipt quantity will be sampled.
   - In the **Allowable Failures** field, enter the number of samples that can fail before an inspection failure is triggered.
     For example, enter 3 to allow 3 failures for each receipt. If 10% is entered, only 10% receipt quantity failure is acceptable.

10. **Enter a Detail frequency (Lot)**:
    - Leave the field empty (do not enter a number) to create only one inspection for the received item.
    - Enter 0 to not skip any lots or serial numbers.
    - One inspection is created for each lot or serial number in the received item’s inventory detail.
    - Enter 1 to skip every other lot or serial number.
      An inspection is created for every other lot or serial number (1, 3, 5, and so on).
    - Enter 2 to skip 2 lots or serial numbers between inspections.
      An inspection is created for lots or serial numbers (1, 4, 7, and so on).
    Skip lot frequency continues as you enter higher numbers, 3, 4, and so on.
11. In the **Allowable Failures** field, enter the number of samples that can fail before an inspection failure is triggered.
   For a percentage value, enter the percent sign (%) and then a number.
   For example, 3 samples or 10% of samples.

12. Select a **Sampling Requirement**:
   - **Simple Sampling** displays the Sampling Rate and Allowable Failures fields where you can define the inspection parameters.
   - **No Sampling Required** to no require samples.

13. Check the **Collect Sample Data** box to enables you to collect data from the Quality Tablet Interface for each sample to be inspected.
   Clearing the box prompt the system to only collect summary field data.

14. Click **Save**.

To better complete the inspection, assign data fields (the data to be collected), standard fields (preset values to compare to collected data), and rules that establish the relation between them.

To learn more, see **Data Fields**.

**To complete the Quality Inspection form:**

1. Enter a unique and descriptive inspection **Name**.
   For example, pH test.

2. Enter a more complete **Description** of the inspection.
   This information appears in the tablet to help the quality engineer understand the goal of the inspection.

3. Select an inspection **Type**:
   - **Qualitative** to verify that the item is in good overall condition or that the appropriate certificates are in place.
   - **Quantitative** to define multiple measurable elements along with criteria for acceptance.
     For example, diameter, width, temperature, or chemical composition.

4. To define how the inspection is performed, select an **Inspection Method**.
   For example, visual inspection, scale, or caliper. You can create this list in advance or add new entries as you need them.

5. To indicate that this inspection cannot be skipped during data collection, check the **Mandatory** box.

6. Check the **Inactive** box to make the inspection inactive but not deleted.

7. Enter a **Detail frequency (Lot)**:
   - Leave the field empty (do not enter a number) to create only one inspection for the received item.
   - Enter 0 to not skip any lots or serial numbers.
   - One inspection is created for each lot or serial number in the received item’s inventory detail.
   - Enter 1 to skip every other lot or serial number.
     An inspection is created for every other lot or serial number (1, 3, 5, and so on).
   - Enter 2 to skip 2 lots or serial numbers between inspections.
     An inspection is created for lots or serial numbers (1, 4, 7, and so on).
Skip lot frequency continues as you enter higher numbers, 3, 4, and so on.

8. Select a **Sampling Requirement**.
   - **Simple Sampling** displays the Sampling Rate and Allowable Failures fields where you can define the inspection parameters.
   - **No Sampling Required** to no require samples.

9. If the inspection requires sampling, enter a **Sampling Rate**.
   This represents the number of inspection sample records created for each lot or serial number.
   - Leave the field empty (do not enter a number) to create only one inspection for the received item.
   - Enter a number or percentage to represent the sample records for each receipt.
   For example, enter 3 to create 3 records for each receipt. If 10% is entered, 10% of the receipt quantity will be sampled.

10. In the **Allowable Failures** field, enter the number of samples that can fail before an inspection failure is triggered.
    For a percentage value, enter the percent sign (%) and then a number. For example, 3 samples or 10% of samples.

11. Check the **Collect Sample Data** box to use the Quality Tablet interface to collect sample data.

12. Click **Save**.
    To better complete the inspection, assign data fields (the data to be collected), standard fields (preset values to compare to collected data), and rules that establish the relation between them.
    To learn more, see Data Fields.

To search for an inspection:

1. Go to Quality > Inspections > Search.
   At any time you can click **List Inspections** to display a list of all available inspections.

2. Optionally, to narrow your search, select an **Inspection Type** from the list:
   - **Qualitative** – A numerical measure or test of item characteristics against defined standards or requirements.
   - **Quantitative** – A pass or fail measure to determine whether the correct quantity of items is received in good condition.

3. Select an **Inspection Method**.

4. To include inactive inspection records in this search, check the **Show Inactive Records** box.

5. Click **List Inspections**.

6. In the **Quality Inspections** list, click **Edit** beside the inspection you want to edit or view.
   a. Click **Copy Inspection** to reuse existing inspection data to create a new inspection.
      To learn more, see Copying an Inspection.
   b. Click **Save**.

Data Fields

Quality Inspection Data Fields enable you to define the types of data to collect during an inspection. You can add multiple data fields as multiple types. For example, boolean, integer, or float. The order of data fields within the inspection are shown in the same order on the mobile interface.
To describe the inspection, assign data fields (data to be collected), standard fields (preset values to compare to collected data), and rules that establish the relation between them.

To create a quality inspection data field:

1. To define a new data field for the inspection, go to Quality > Inspections > Quality Inspections.
2. Beside the inspection you want to create a data field for, click Edit.
3. In the Data Fields subtab, click New Inspection Data Field.
   The Inspection Data Field form displays the name of the inspection you are creating this data field for.
4. In the Sequence field, enter a number to define the order in which inspection data will be collected.
5. Select a Data Field Name to label data collected during this inspection.
   You can then refer to this field when setting up inspection rules.
   For more information, see Inspection Rules.
6. Select a Data Type to match against applicable data fields.
   To enable image capture using the Quality Management table interface, select Image as the data type.
7. Check the Is Sample Summary Field box to identify whether the data field applies to each inspection or to each sample.
8. Enter a Validation Tag.
   The system uses this value to return standard values.
9. Enter any work Instructions you want to display on the data collection form as help text.
10. Click Save.

To edit a quality inspection data field:

1. In the Data Fields subtab, beside the inspection field you want to update, click Edit.
2. In the Inspection Data Field subtab, select a data field View:
   - All Fields to display all data field columns.
   - Default View is not sampling inspection.
   - Inspection Data Fields displays detailed inspection data that can be captured for each sample.
   - Sample Summary displays the aggregated results of more detailed data samples.
     For example, the number of units inspected and number defects/failures.
3. Select an Inspection Data Field value.
   The New Summary Field column identifies whether the data field is a summary field.
4. Beside the field you want to update, click Edit.
5. Make the necessary changes.
6. Click Save.

Inspection Standards

Inspections standards provide guidelines for inspectors to follow while performing inspections. These standards help establish inspection pass or fail criteria. Inspection standards can represent organizational
or industry standards that define acceptable production measurements or values. They relate to data fields through inspection rules.

To create a quality inspection standard:

   
The Inspection Data Field form displays the name of the inspection you are creating this data field for.
2. Select or add a unique Standard Field to refer to when creating inspection rules.
   
   For example, Target Value, Weight, or Temperature.
   
   This field is used during inspection rule setup.
3. Select a Data Type to match against applicable data fields.
   
   For example, Target Value, Weight, or Temperature.
4. Enter an inspection standard Default Value.
   
   This field represents the default inspection standard values created for specific items.
5. Check the Inactive box to make the inspection inactive but not deleted.
6. Click Save.

To edit a quality inspection standard:

1. In the Inspection Standard subtab, beside the standard field you want to update, click Edit.
2. Make the necessary changes.
3. Click Save.

Inspection Rules

Inspection rules are expressions that relate data to an inspection pass or fail standard. Rules can be defined for true/false, integer, boolean, and float data types using mathematical evaluations. For example, >, <, !, or =.

To create a quality inspection rule:

2. Enter a Sequence number to specify the order in which rules will be evaluated.
3. Enter a unique and descriptive Rule Name.
4. Select a Rule Type to define how the rule is to be evaluated.
5. Select a previously defined Data Field that will be evaluated using this standard rule.
6. Select a Comparison from the list.
7. Select a Standard Field to evaluate the inspection result.
8. Enter a Custom Function that you want use to evaluate Inspection results.
9. Click Save.

Pass Fail Criteria

Pass Fail Criteria are expressions that relate data to an inspection pass or fail standard. Rules can be defined for true/false, integer, Boolean, and float data types using mathematical evaluations. For example, >, <, !, or =.
To create quality pass/fail criteria:

   The Inspection Data Field form displays the name of the inspection you are creating this data field for.
2. Enter a Sequence number to specify the order in which this rule will be evaluated.
3. Enter a unique and descriptive rule Name.
4. Select a Rule Type to define how the rule is to be evaluated.
5. Select a previously defined Inspection Field that will be evaluated using this standard rule.
   For example, height, defect count, or image.
6. Select a comparison Criteria to help evaluate this inspection.
   For example, equals, greater than, or is true.
7. Select a Standard Field to evaluate the inspection result.
8. Enter a Custom Function that you want use to evaluate inspection results.
9. Click Save.

Copying an Inspection

The Copy Inspection feature offers a convenient way to reuse existing, similar or related, Quality inspection and specification data to create a new inspection. This helps to reduce time and effort spent on ongoing maintenance.

Copying Quality Inspections

To copy an inspection:

1. Go to Quality > Inspections > Search.
2. Beside the inspection you want to copy, click View.
3. In the Actions list, click Make Copy.
4. Enter a new inspection Name.
5. Make any necessary changes.
6. Click Save.
   The inspection copy is posted to the Quality Inspection List.

Quality Specifications

Quality Specifications group related inspections that define inspection scenarios and enable inspections to be refined in relation to specific items. For example, default values or standards. Specifications provide the foundation for capturing quality data, creating reports, improving workflows, and identifying non-conformance. A good quality specification formalizes a company's inventory and process standards, and define non-conformance rules and the applicable business processes they should trigger. For example, quarantine, return merchandise authorization (RMA), or downgrade.

Note: When an inspection is marked Is Inactive, it cannot be processed as part of a new triggering and no data collection or evaluations should be performed against it.

Creating Quality Specifications
To create a quality specification:

1. Go to Quality > Specifications > New.
2. To identify a group of inspections, enter a unique and descriptive **Specification Name**.
   For example, Ingredient Receiving Inspection or Circuit Board Inspection.
3. Enter a more complete **Specification Description**.
   This information helps the quality engineer understand the inspection goal. It is also available for reporting.
4. Click **Save**.
5. To assign an inspection to this specification, in the **Inspections** subtab, click **Add Inspection**.
   When a specification is marked **Is Inactive**, it cannot be modified or selected for a new context definition.
   The Detail Frequency and Sampling Rate fields will display the selected Inspection settings.
6. Enter a **Sequence** number.
   This order is applied when an inspection result is validated.
   For example, step 1, 3, or 8.
7. Select the **Inspection** name to assign to this specification record.
   Alternatively, you can click New to add a new inspection.
   **Note:** When an inspection is marked **Is Inactive**, it cannot be modified or selected as part of a new specification.
8. Select or add an **Inspection Method**.
   Alternatively, you can click New to add a new inspection method.
9. Enter a **Detail Frequency (Skip Lot)** number to define the number of lot controlled or serialized item inspections:
   - Leave the field empty (do not enter a number) to create only one inspection for the received item.
   - Enter 0 to not skip any lots or serial numbers.
     One inspection is created for each lot or serial number in the received item's inventory detail.
   - Enter 1 to skip every other lot or serial number.
     An inspection is created for every other lot or serial number (1, 3, 5, and so on).
   - Enter 2 to skip 2 lots or serial numbers between inspections.
     An inspection is created for lots or serial numbers (1, 4, 7, and so on).
     Skip lot frequency continues as you enter higher numbers, 3, 4, and so on.
10. If the inspection requires sampling, enter a **Sample Rate**.
11. Click **Save**.

To create an item inspection standard:

1. In the **Quality Specification Form**, in the **Inspections** subtab, click **Edit** the beside the specification you want to view.
2. Click the **Item Inspection Standards** subtab.
3. Click the **New Item Standard Field**.
4. Select an **Item** record to associate with the standard.
5. Select the **Standard Field** to apply to the item and inspection.

6. Select a **Data Type** to associate with the standard.
   - For example, Text, Boolean, or Image.
   - To learn more, see **Data Fields**.

7. In the **Standard Value** field, enter a pass or fail benchmark.
   - Boolean benchmarks are true or false. For example, visible damage is expected to be false.
   - Numerical standards are usually held to upper and lower control limits. For example, tire pressure cannot exceed 35 psi (35 is the standard).

8. Click **Save**.

**To search for a specification:**

1. Go to Quality > Specifications > Search.
2. Check the **Show Inactive Records** box to include inactive records in this search.
3. Click **List Specifications**.
4. In the **Quality Specification List**, click **Edit** beside the specification you want to view.

**Review Specification Context Records**

In the **Quality Specification Form**, click the **Contexts** subtab.

The Specification Context Record table displays the following **Associated Item** columns:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Where the transaction must take place to trigger the specification</td>
</tr>
<tr>
<td>Item</td>
<td>The item that must be part of the transaction to trigger the specification</td>
</tr>
<tr>
<td>Transaction Type</td>
<td>Type of transaction being monitored that will trigger the specification</td>
</tr>
<tr>
<td>Source/Destination</td>
<td>The item source (vendor) identified on the transaction that triggers the specification</td>
</tr>
<tr>
<td>Is Default</td>
<td>Indicates whether the context should apply to all sources and destinations</td>
</tr>
</tbody>
</table>

To learn more, see **Specification Context**.

**Specification Conformance Rules**

**To add a conformance rule:**

1. In the **Quality Specification Form**, click the **Conformance Rules** subtab.
2. Click **Add Conformance Rule**.
3. To specify the order conformance checks appear on the form, enter a **Sequence** number.
   - Rules will be evaluated in order and by default. After a rule fails no further conformance rules are looked at.
4. Enter a unique and descriptive **Conformance Rule Name**.
5. Select an **Inspection** to associate with any follow-up actions.
6. Select, or create an **Action** to update on the Specification Queue if the conformance rule fails.
For example, Quarantine or Return to Vendor.

7. Check the Halt on Failure box to stop active processes when an inspection fails.

8. Check the Is Inactive box to prevent this rule from displaying in lists of rules on records and transactions.

The specification cannot be modified or selected for any new context definitions.

9. Click Save.

Specification Context

Specification Context Records enable the Quality Administrator to define when NetSuite invokes a specification. Identifying these fields helps the Quality SuiteApp to monitor the appropriate transaction type and then match transaction details against context settings. When a match is identified, all inspections identified on the context record are added to the inspection queue to initiate shop floor activity.

A specification can only be triggered when an active matching context record is identified and the specification is active.

Context records support the following transaction types:

- **Receipt From Purchase Order** to monitor inbound item receipts
- **Assembly/Work Order Build** to monitor non-work center production activities
- **Work Order Completion** to monitor work center specific production activities

To create a quality specification context:

1. Go to Lists > Accounting > Items.
2. Click Edit next to the item you want to update.
3. Click the Quality subtab.

   The Quality Specification Context form displays the assembly item which, when built or completed, should be inspected.

5. Select the Location where NetSuite transactions should be monitored to potentially trigger an inspection.

6. Select a Transaction Type to monitor.

   NetSuite 2020.2 includes the Production Results Transaction Type. This new functionality provides a user event that monitors data entry and scans context records for matches which then trigger appropriate specifications via the new module.

   **Note:** you must have SuiteCloud and SuiteScript 2.0 knowledge and experience to work with this trigger.

7. Select the quality Specification to be triggered when this context record matches a monitored transaction.

8. Optionally, select a Pre-inspection Action to implement when the specification is triggered.

   This action must be recognizable by an active workflow.

   After installation, the Quality SuiteApp recognizes Quarantine as an action that can be taken at the time of context triggering.

9. Define transaction matching in the Apply Specification To section:
   a. Check the Apply to Default box when:
■ Transaction Type is Receipt From Purchase Order and you want to trigger the item specification regardless of vendor. If selected, any Vendor marked in step b is ignored.

■ Transaction Type is Work Order Completion and you want to trigger the item specification at the last manufacturing routing operation. If selected, any Work Center marked in step c is ignored.

Check the Apply to Default box to designate this fulfillment as the default fulfillment for this item and location no matter which customer the item is being shipped to. Deselect this box to target inspections by customer.

b. If the Transaction Type is Receipt From Purchase Order, select one or more Vendors with receipts that will trigger the inspection.

c. Optionally, if Transaction Type is Receipt From Purchase Order, select a Customer name to filter inspections based on the receipt's purchase order details.

d. If the Transaction Type is Work Order Completion, select the Work Center where production must be reported to trigger an inspection. For example, enter 2 to trigger an inspection on every other reported completion.

10. Select a Work Center.

11. Select the details to Automatically Generate Inspections:

   a. Enter a Transaction Frequency to define the number of lot controlled or serialized item inspections.

   b. The Current Transaction Count field value is controlled by logic set by the Quality Administrator.

   c. Check the Inactive box to make the inspection inactive but not deleted.

12. Click Save.

Fulfillment Triggers

The NetSuite 2020.2 Quality Management SuiteApp enables you to define and carry out quality inspections to support sales order fulfillment. Inspections can be associated with any combination of item, location, customer, and shipping status to ensure inspections meet your organization's requirements. You can assign quality specifications to fulfillment transactions to initiate inspection activities based upon this data. A trigger is a term used to describe an event that is happening in NetSuite that alerts the Quality Management SuiteApp that an inspection activity is about to occur.

Storing Quality Images

The Quality Administrator designates a file cabinet folder to control access to the images and manage file cabinet quota.

To learn more, see the help topic Creating File Cabinet Folders.

Quality engineers can use the tablet to take a picture during an inspection and then save the images for review and to support quality findings. NetSuite automatically uploads images to the designated folder in the File Cabinet and records them against the inspection.

To setup quality file storage:

1. Go to Quality > Data Collection > Settings.
In the **Quality Setting** window, the selected folder for image storage is displayed in the upper left corner of the folder selector.

2. To expand a folder, next to the folder name, click the + icon.
3. Select the file cabinet folder you want to save this image to.
   Your Quality Administrator creates these folders.
4. Click **Save**.
   Click Cancel to ignore all changes.

### Storing Files

After the top-level folder is defined in the file cabinet, additional folders are created to help organize image content. Since image files are linked to the inspection data directly, the following section describes the sub-folders and naming convention used for image files for reference only.

Images are grouped by:

- **Triggering Transaction and Specification.** Subfolder IDs are concatenated by an underscore (_).
- The **Inspection** subfolder can contain multiple image fields.
- The **Data Field** is captured within the file name to segregate images.

To avoid conflicts with folder naming, the internal record IDs are used to build folder names.

For example, the following Quality Management Setup:

- Specification — Inspect for Receipt [ID=32]
- Inspection — Check for Visual Damage [ID=71]
- Image Field — Photo of Damage [ID=108]

This specification is triggered when an Item Receipt [ID = 120] is processed in the system.

After capturing the image, the following are created:

Folder 120_32
subfolder 71
Setting up Data Fields

To enable the Quality Management tablet interface to capture inspection details, add a new data field image data type. All other elements of the data field setup (sequence, data field name, and instruction text) behave identically as with other field types.

Resetting Transaction Count

You can reset the Current Transaction Count field by configuring the scheduled QM Initialize Context Current Count script. Each time the script runs, it locates Transaction Count context records that need to be reset to zero, and then resets them. Scheduled resets (for example, weekly) and then setting the associated Transaction Frequency very high (for example, 1000) prompts the system to perform inspections for the first occurrence within the defined period.

To control when transaction is reset:

1. Go to Customization > Scripting > Script Deployments.
2. Beside the QM Initialize Context Current Count Script, click Edit.
3. In the Script Deployment window, click the Parameters subtab.
4. Select the reset Location from the list.
5. In the Transaction Type list, select the reset triggering transaction type.
6. Select the reset Item.
7. Click Save.

To reset all displayed field entries leave that field empty. For example, leave the Locations, Transaction Type, and/or Items fields empty.

These parameters are set on the reset deployment record. By default, the Quality Management SuiteApp is delivered with one inactive deployment. You can create as many deployments as you need to handle the reset policies across your locations, transaction types, and items.
Mobile Data Collection

The Quality SuiteApp enables you to use mobile devices to collect inspection data. Tablets (as opposed to phones) are preferred due to the amount of information displayed and captured to support Quality activities. The mobile collection interface is designed to deliver all of the relevant information a quality engineer needs to efficiently and accurately gather inspection data. The interface is also available on computers and laptops.

Configuring Custom Search in the Quality Tablet Interface

To create a custom search:

1. In NetSuite, go to Lists > Search > Saved Searches.
2. In the Saved Searches page, beside QM Configuration, click Edit.
3. Enter a Search Title.
4. In the Results subtab, and the Transaction Quantity and Item:Description fields.
5. Click Save.
7. In the Record Types page, beside QM Tablet Queue Searches, click New Record.
8. In the QM Tablet Queue Searches page, enter a search Name.
9. Select the QM Tablet Saved Search.
10. Click Save.
11. Refresh your tablet and then click Settings.
12. Select a Tablet Data Source.
13. Tap OK

Managing Quality Inspections

After an inspection is triggered, it is displayed in the data collection tool inspection queue. A quality manager can control several important attributes of the pending inspection including the assignee, priority, and status.

An inspection for a triggered specification can only be staged for the tablet when an active specification-inspection record is identified and the inspection is marked Active.

To assign an inspection:

1. Go to Quality > Data Collection > Assign Inspections.
   In the Inspection Queue Filters section, you can set the status of pending inspections to determine the Queue Record list order.
2. Select the Location where the inspection is to occur.
3. Select the **Item** to be inspected.
4. Select an inspector name from the **Assigned To** list.
   Click New to add an inspector name.
5. Select an **Inspection Status**.
6. Select the **Transaction Type** to be inspected.
7. Click **List** to display existing inspections that match your inspection criteria.
8. In the **Update Queue** section, select an inspector name from the **Set Assigned To** list.
9. Select an inspection priority from the **Set Priority** list.
10. Select an inspection status from the **Set Status** list.
11. In the **Queue Records** list, beside the inspection you want to update, check the **Select** box.
12. Click **Assign**.

### Tablet Data Collection

The NetSuite Quality Management SuiteApp enables you to use your mobile device to record quality inspection data wirelessly within your facility. The tablet Quality Specifications Queue table displays summary information for all specifications that are in Pending or In Work status. You can report data for a Location, Specification, Transaction, Item, and Status you want to report data for. To control the table contents and quickly identify inspection activities to be taken, click the **Specification Queue** to search, filter, and then adjust your tablet language settings.

### Tablet Requirements

To use the NetSuite Quality Management SuiteApp, your tablet must meet the following requirements:

- At least 256 MB flash memory
- Android 4.1 or higher
- 1D barcode scanner
- 4 inch or larger touch screen
- 802.11a/b/g enabled
- Bluetooth enabled
- HTML 5 and Javascript enabled browser (TLS 1.2 compliant)
- Interactive Sensor Technology (IST)
- Ruggedized or semi-ruggedized (optional)

**To collect quality data using a tablet:**

1. Go to Quality > Data Collection > Tablet.
   The tablet Quality Specifications Queue table displays summary information for all specifications that are in Pending or In Work status. To control the table contents and quickly identify inspection activities to be taken, click the Specification Queue Icons to search, filter, and then adjust your tablet language settings.

2. In the **Quality Inspection Queue**, click the row containing the specification you want to view.
For example, click the Washington facility.

The Quality Specification is organized by the following collapsible panes:
- Specification Queue
- Tablet Sidebar
- Collapsible Pane
- Inspection Details

**Specification Queue**

The Queue Specification window displays icons that can direct you to Quality Tablet Collections features.

**To search for an inspection:**

1. Click the **Search** icon.
2. In the **Search** field, enter the term you want to search for.
   For example, Circuit Board Inspections - Incoming.
3. From the list, select **Any** or a specific Quality Specification Queue field.

**To filter inspection data:**

1. Click the **Filter** icon.
2. In the **Filter** section, select which **Quality Specification Queue** field you want to filter.
   From the list, select **Any**, or another filter from one, some, or all queue fields.
   Click Clear All to delete your previous selections.

**To manage settings:**

1. Click the **Settings** icon.
2. In the **User Settings** popup window, select a **Font size**.
3. Select a **Tablet Data Source**.
4. To return only queue entries assigned to you, check the **Show only my items** box.
5. To return receipt inspections, check the **Show receipt inspections** box.
6. To return in-process inspections, check the **Show in-process inspections** box.
7. Check the **View Columns** box beside the column you want to display in the tablet interface.

8. To display queue data, click **Log State**.
   
   Copy and then send this information with any case related to incorrect queue displays to support or include the details in the support case.

9. Click OK.

Click the **Go Back** icon (左手箭头) to return to the previous page.

### Inspection Details

Click the arrow beside the column name to sort all queue data based on values in that column. The active sort column title is highlighted blue.

The following table describes the inspection queue fields:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location</strong></td>
<td>The name of the facility where the inspection is to be performed.</td>
</tr>
<tr>
<td><strong>Specification</strong></td>
<td>The specification ID number.</td>
</tr>
<tr>
<td><strong>Item Description</strong></td>
<td>A brief description of the item.</td>
</tr>
<tr>
<td><strong>Transaction</strong></td>
<td>The NetSuite transaction, Item Receipt, Work Order Build, or Work Order Completion, that matches a specification context. In this example, Purchase Order #61 initiates the inspection.</td>
</tr>
<tr>
<td><strong>Quantity</strong></td>
<td>The number of items to be inspected.</td>
</tr>
<tr>
<td><strong>Transaction Date</strong></td>
<td>The time that has elapsed since the inspection was queued.</td>
</tr>
<tr>
<td><strong>Priority</strong></td>
<td>The urgency of the inspection relative to other inspections.</td>
</tr>
<tr>
<td><strong>Assignee</strong></td>
<td>The name of the quality engineer the inspection is assigned to.</td>
</tr>
</tbody>
</table>

### Tablet Sidebar

The Quality Management Tablet interface collapsible sidebar displays the same list of Pending and In-Work inspections that are in the primary Inspection Queue page.

To **Expand** the sidebar, tap the menu icon (≡).

To **Collapse** the sidebar, tap the close icon (×).

### Collapsible Pane

Quality Management 2019.1 allows you to collapse the upper information pane to maximize screen space for data entry.

To **Expand** the information pane, tap the down arrow (▼).

To **Collapse** the information pane, tap the up arrow (▲).
The following table describes the Tablet Data Entry window details:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| Inspection Bar       | A vertical list of inspections to be performed. These panes are presented top-to-bottom based on the sequence number assigned to them during setup. The color of the pane highlights the inspection activity:  
  - Grey indicates that no data has been entered.  
  - Blue indicates that data has been entered but not recorded.  
    Blue can also indicate that data has been recorded, but the evaluation is pending.  
  - When data is recorded but not evaluated, a spinning gear icon appears to show the system is processing the information.  
  - Yellow indicates that some (not all) data has been recorded.  
  - Green indicates that data has been recorded and no quality standards have been violated.  
  - Red indicates that data has been recorded and at least one quality standard has been violated.  
  The collapsible inspection bar displays the inspection number (220201), the number of inspections to be conducted, and the number of pass/fail inspections. |
| Inspection Panes     | Displays the inspection details. In this example, the number of inspections to be conducted (1 of 3), any lots associated with this inspection, and inspection number. |
| Inspection Instructions| Detailed information describing the inspection procedure or expected outcomes  
  This example displays, “Review material certificate. File with vendor.” |
| Summary Data         | Summary data is displayed as data fields for non-sampling inspections. Layout is controlled by inspection setup.  
  This enables you to enter data to drive inspection pass/fail behavior. Sample data is supporting data and is setup up automatically. |
| Sample Data Grid Icon| The sample data grid icon ( ) appears when sample data collection is enabled.  
  Click the sample data icon to display the sample data grid. |
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Data Grid</td>
<td>■ The column data field layout sequence is defined by your administrator or quality manager.</td>
</tr>
<tr>
<td></td>
<td>■ Field focus auto advances after you enter data, from left to right, top to bottom.</td>
</tr>
<tr>
<td></td>
<td>■ Pre-created row count matches the number of samples required. The maximum is 50 rows with scrollable with static headers. For example, 5 columns x 50 rows = 250 fields.</td>
</tr>
<tr>
<td></td>
<td>■ Fields with validation rules are evaluated and displayed as data entered system checking rules to highlight pass/fail green/yellow/red.</td>
</tr>
<tr>
<td></td>
<td>■ The grid supports numeric, text, and Boolean data types.</td>
</tr>
<tr>
<td></td>
<td>■ Saves and restores partial data.</td>
</tr>
<tr>
<td></td>
<td>■ You must provide inspected and defect counts if pass/fail evaluation used.</td>
</tr>
<tr>
<td>Record</td>
<td>Click the <strong>Record</strong> button to save the data entered.</td>
</tr>
<tr>
<td>? (Inspection Help)</td>
<td>Click the help icon to display a description of the inspection specification. This can display minimum and maximum measurements, instruments required, and more.</td>
</tr>
<tr>
<td></td>
<td>In this example, Material Certificate is OK.</td>
</tr>
<tr>
<td>Finish Inspection</td>
<td>Click <strong>Finish inspection</strong> to complete the inspection.</td>
</tr>
<tr>
<td></td>
<td>The Finish inspection button is hidden if a mandatory inspection is not completed.</td>
</tr>
</tbody>
</table>

Capturing Quality Images

NetSuite enables Quality Engineers to use the Quality SuiteApp tablet interface to capture images, associate them a quality record, and upload them to a NetSuite File Cabinet. This helps improve and support inspections and processing returns and refunds related to quality non-conformance.

The Quality Administrator designates a quality file cabinet folder for storing images, controlling folder access, and managing cabinet quota.

To learn more, see the help topic [Creating File Cabinet Folders](#).

Quality Engineers use the tablet to take a picture during an inspection and then save the images for review and support quality findings. NetSuite automatically uploads images to the file cabinet and records them against the inspection.

**To capture images:**

1. To take a picture, on the tablet interface, tap the **Photo** icon.
   
   To select an image from the device, click the image icon.
   
   The image is linked to the inspection data.
Double-click the image to preview the image in a separate browser window.

2. To transfer the image to the NetSuite Field Cabinet, click **Record**.
3. Give the image a unique and descriptive name.
   For example, `<queue record ID> - <inspection ID> - <field ID>.<image format extension>` (312 - 12 - 23.jpg).
4. Associate the new file with the quality data inspection record.

### Inspection Sampling CSV

The NetSuite 2020.2 Quality Management SuiteApp CSV Upload functionality enables you to capture large volumes of sample data. When an inspection definition requires more that 25 samples, the Quality tablet interface makes a pre-formatted Excel template available to help you collect sample data off-line. By uploading data off-line, the quality tablet speed and responsiveness isn't compromised. Uploading data directly into the tablet interface speeds data transfer with little interruption to tablet usage.

Quality Engineers are then notified in their dashboard or by email if errors are encountered during data upload so they can address the problem in-line or re-import the data set. If you re-import the data set, the previous upload is erased, and the list is refreshed. This new solution supports up to 8Mb of data.

### CSV in the Quality Management Tablet

When you open an inspection that requires sampling of more than 25 samples, the table entry icons displayed in the tablet are replaced by the CSV upload () and download () icons.

**To upload data using CSV in the tablet:**

1. Click the download icon () to download the pre-formatted Excel template.
2. Enter your sample data into the template.
3. To launch the tablet file browser to upload the Excel document directly to NetSuite, click the upload icon ().

   Excel file processing is handled in NetSuite leaving the tablet to respond to the next inspection.

The pre-formatted CSV Excel document contains sample data fields that are required for your inspection. For example, a Sample Weight (kg) field, Integer field, Text field, and a Boolean field. The first column
is populated with number of samples that are expected based on your inspection definition. If your is configured for 57 sample, the column displays number up to 57.
Quality Reports

The Quality SuiteApp offers two administrative reports that help you to review the Quality SuiteApp setup and inspection execution. Each report appears in a separate window where you can preview results to help refine your criteria.

Future SuiteApp releases will add operational reports that can help you to quickly review quality data items, vendors, inspections, and other data that defines your quality standards and data collected.

Administrative Reports

Administrative reports enable you to monitor the inspection process and quickly respond to resolve errors and ensure similar errors do not occur in future operations.

Specification Review

Specifications can be quite complex, incorporating numerous inspections, each containing a variety of fields, standards, and rules. A specification review helps you to ensure that your organization’s quality needs are represented by providing a view of the underlying definition to help examine the entire specification.

To review specifications:

1. Go to Quality > Reports > Specifications.
2. In the Review Specifications page, click List.
3. To include inactive specification records in this report, click the Show Inactive Records box.
4. Check the box beside the specification you want to review. Select only one record.
5. Click Review.
6. To view the report, click the Inspection List tab.

Inspection Review

Use the Quality Inspection Queue feature to display and review inspection records within the queue.

To view an inspection queue:

1. Go to Quality > Reports > Inspection Queue.
2. Click List to display all inspections in the queue. Alternatively, you can refine your search results by completing some, or all of the following fields:
   a. Select a Location from the list. For example, Indianapolis Manufacturing Center.
   b. Select an Item record to associate with the inspection standard.
   c. Select an Inspection Status.
   d. Select the name of the person this inspection is Assigned To.
   e. Select a Transaction Type.
3. Click **List**.
4. In the **Inspection Queue** subtab, check the box beside the queue record you want to display. Select only one record.
5. Click **Review**.
6. Click the **Queued Inspections** subtab to review the queue record details,