



# Infor LN User Guide for Lot Control

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# About this Guide

## Objective

The objective of this guide is to describe lot control in LN.

## Intended audience

This document is intended for persons in charge of lot control. The intended audience can include key users, implementation consultants, product architects, and support specialists.

## References

Use this guide as the primary reference for the lot control functionality. Use the current editions of these documents for information that is not covered in this guide:

- *User Guide for Serialized Items*
- *User Guide for Warehousing Procedures*
- *User Guide for Warehouses*
- *User Guide for the Inbound Goods Flow (U9788 US)*
- *User Guide for the Outbound and Shipments Goods Flows (U9794 US)*
- *User Guide for Item Setup*
- *User Guide for Handling Units (U8938)*

## How to read this document

This document was assembled from online Help topics. As a result, references to other sections in the manual are presented as shown in the following example:

For details, refer to Introduction. To locate the referred section, please refer to the Table of Contents or use the Index at the end of the document.

At the end of this document, a glossary is included. Terms explained in the glossary are presented as shown in the following example:

In Common, you can link *addresses* to *business partners*.

If you view this document online, you can click these terms to go to the term's definition in the glossary.

## Contacting Infor

If you have questions about Infor products, go to Infor Concierge at <https://concierge.infor.com/> and create a support incident.

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If you have comments about Infor documentation, contact [documentation@infor.com](mailto:documentation@infor.com).

# Chapter 1: Overview

## Lot control

Lot control enables you to trace the origin of incoming and outgoing *lots*, and to find out where these lots are used.

You can record information about each lot, such as lot number, buy-from business partner, manufacturer, and certificate number-information that you can use for quality assurance.

In the **Item Defaults (tcibd0102m000)** session, you can specify whether an item is lot-controlled.

**Note:** If an item is not lot controlled, *effectivity units* are not recorded in warehouse inventory.

### Types of lot control

LN offers these types of lot control:

- *Low-volume* lot control
- *High-volume* lot control

### Low-volume lot control

*Low-volume* lot control offers a high level of detail. LN generates separate receipt lines, inbound advice lines, *outbound advice* lines, and *shipment* lines for each lot if the **Consolidate Stock Points in one Receipt Line** and **Consolidate Stock Points in one Shipment Line** check boxes are cleared in the **Inventory Handling Parameters (whinh0100m000)** session.

If these check boxes are selected, multiple lot codes can be present for a receipt line, advice line, or shipment line. The related lot codes are displayed in the **Receipt Line Stock Point Details (whinh3123m000)**, **Shipment Line Stock Point Details (whinh4133m000)**, and **Outbound Advice Lots and Serials (whinh4126m000)** sessions.

The specific location of the lot in inventory is also known. This type of lot control can lead to a administrative burden if mistakes were made in the lot quantities. Therefore, this type is less suitable for high-volume, low-value items, such as, nuts and bolts.

To activate low-volume lot control, select the **Lots in Inventory** check box in the **Item - Warehousing (whwmd4500m000)** or **Item - Warehousing (whwmd4600m000)** session.

## High-volume lot control

*High-volume* lot control is a type of *lot control*, intended for high-volume, low-value items. The functionality for lot control (not in inventory) is similar to the functionality for high-volume serialized items.

To activate high-volume lot control, clear the **Lots in Inventory** check box in the **Item - Warehousing (whwmd4500m000)** or **Item - Warehousing (whwmd4600m000)** session.

For more information, refer to High volume lot-control.

With both types of lot control, you can record information about each lot, which you can use for quality assurance.

## High volume lot-control

The *high volume scenario* is intended for high-volume, low-value items. To deploy the high volume scenario for lot items, clear the **Lots in Inventory** check box in the **Item - Warehousing (whwmd4500m000)** or the **Item - Warehousing (whwmd4600m000)** session.

In the lot-control *high volume scenario*, these rules apply:

- LN does not record the inventory for each combination of lot and warehouse, and location.
- You can record information about each lot, such as lot number, buy-from business partner, manufacturer, and certificate number-information that is used for quality assurance.
- For inbound and outbound transactions, depending on parameter settings, you can register which lots were involved in the transaction. See, Lot registration in the high volume scenario.
- *Lot tracking* is possible, but only insofar as lot numbers and quantities have been entered for various transactions. Lot tracking does not check the consistency between the total quantity received versus the total issued quantity.
- *Lot pricing* is unavailable in the high volume scenario, because financial information or inventory-valuation information is unavailable at the lot level.

## To generate lot codes

If you need a new lot number, you can enter a lot number manually, or generate a lot number according to a user-defined *mask*. See, refer to Lot registration in the high volume scenario and Setting up lot items.

If the **Generate Lots Automatically** check box in the **Warehousing Order Types (whinh0110m000)** session had been selected, LN automatically generates lots wherever needed, for example, upon receipt of goods.

## Print labels

During the outbound process, you can take any lot from the warehouse, but in the relevant outbound lot and serial registration sessions, you must specify which lot you picked. Use clear print labels to obtain the lot number of the picked lot. See, refer to Lot registration in the high volume scenario.

## Chapter 2: Setup

### Setting up lot items

#### 1 Activate lot control

To use lot control in Warehousing, in the **Warehouse Master Data Parameters (whwmd0500m000)** details session, select the **Lot Control in Use** check box.

#### 2 Define lot item

Define an item and select the **Lot Controlled** check box in the **Item Defaults (tcibd0102m000)** session. You can define every type of item defined in LN as a lot item.

#### 3 Specify mask for lot number

In the **Lot Control Parameters (whltc0500m000)** session, specify the *masks* for generated lot codes in the following fields:

- **Purchase Order Mask**
- **Production Order Mask**
- **General Purpose Mask**

If no mask is specified in the **Lot Control Parameters (whltc0500m000)** session, or LN cannot find an applicable mask, LN searches for an applicable mask in the **Mask by Item/Item Group (tcibd4505m000)** session.

If no specific mask can be found, LN uses the company's default mask.

#### 4 Select additional tracking

To track the orders by means of which lot items were received or issued, in the **Item - Warehousing (whwmd4600m000)** session, select the Lot Tracking check box.

#### 5 Select the type of lot control

In the **Item - Warehousing (whwmd4500m000)** or the **Item - Warehousing (whwmd4600m000)** session, specify the type of lot control to be used for the item. Select the Lots in Inventory check box to deploy the *low volume scenario* or clear this check box to deploy the *high volume scenario*. See High volume lot-control and Lot control.

#### 6 Select registration template

You can define registration templates to determine at which stage of the receipt process or issue process the lots must be registered.

If you cleared the Lots in Inventory check box in the **Item - Warehousing (whwmd4500m000)** or the **Item - Warehousing (whwmd4600m000)** session, you can also specify a template in the Lot and Serial Registration Template field. See Lot and serial registration templates.

#### 7 Select registration parameters



If you cleared the Lots in Inventory check box in the **Item - Warehousing (whwmd4500m000)** session, various parameters are available to enable the registration of lot codes. See High volume lot and serial registration parameters and Lot registration in the high volume scenario.

#### 8 Convert non-lot item to lot item - optional

In general, you can no longer change the lot-control setting after you receive or issue inventory for an item. To convert a non-lot item to a lot item or vice versa, use the **Convert (to) Lot Item (whltc1202m000)** session.

In the same session, you can convert an item with **Lots in Inventory = Yes** to **Lots in Inventory = No**, and vice versa.

## Variable lot features

Variable lot features are features that apply to specific lots. Variable lot features can be, for example, production process data or data regarding inspection or quality standards. You can assign a value for every feature for each lot.

### To set up variable lot features

To set up variable lot features, take the following steps:

- 1 Define all possible lot features in the **Variable Lot Features (whltc2100m000)** session.
- 2 Specify which lot features are relevant for a particular item in the **Item - Variable Lot Features (whltc2110m000)** session.

### To assign values to lot features

To assign a value to a lot feature for a particular lot, use the **Item - Lot - Variable Lot Feature Values (whltc2120m000)** session.

### Example

The following table contains several variable lot features.

Variable Lot Feature	Description
KM3	No. of Layers of Varnish
KM4	Density (kg/L)
COL	Color
CL	Quality Class
PED	Product Expiry Date

The following table shows the lot feature values of a particular lot.

---

**Item = DBO-56**

**Lot = 2006-B000023**

<b>Feature</b>		<b>Lot Feature Value</b>
KM3	No. of Layers of Varnish	4
CL	Quality Class	A+

After you define the variable lot features, you can assign these features to items and/or lots in the **Item - Variable Lot Features (whltc2110m000)** session.

## Lot registration in the high volume scenario

This topic describes how and when you can register *lot numbers* in the *high volume scenario*.

Typically, in the *high volume scenario*, you do not need to specify the lot codes until the items leave the warehouse, that is, when you issue a quantity. Optionally, you can also register lots during receipt. LN can generate outbound advice lines or shipment lines for a combination of several lots.

To determine for which inbound or outbound transaction lot numbers must be registered, you can define one or more templates in the Lot and serial registration templates.

To link an item to a lot and serial registration template, use the **Lot and Serial Registration Template** field in the **Item - Warehousing (whwmd4500m000)** or the **Item - Warehousing (whwmd4600m000)** session.

If an item has no lot and serial registration template, or the template contains no setting for the applicable combination of order origin and transaction type, LN falls back on the following fields in the **Item - Warehousing (whwmd4500m000)** or the **Item - Warehousing (whwmd4600m000)** session:

- **Lot Entry During Receipt**
- **Lot Entry During Transfer**

**Note:** The setting of the **Register Lot Issue During As Built** field in the **Item - Warehousing (whwmd4500m000)** or the **Item - Warehousing (whwmd4600m000)** session overrules the lot and serial registration template.

### Inbound

If lot numbers must be entered during receipt according to the lot registration parameters, you must register the lot numbers during the *inbound* process. However, if the **Generate Lots Automatically** check box in the **Warehousing Order Types (whinh0110m000)** session has been selected, LN registers the lot numbers automatically.

You can register the lot numbers in one of the following sessions:

- Inbound Order Line Lots and Serials (whinh2116m000)
- Shipment Notice Line Stock Point Details (whinh3105m000)
- Handling Unit Stock Point Details (whwmd5136m000)
- Receipt Line Stock Point Details (whinh3123m000)

If an order's *lot selection* is **Specific**, you cannot generate new lot codes in the inbound procedure. In that case, the lot code is already specified in the order.

## Outbound

If you deploy the *high volume scenario*, you must specify the lot codes for every quantity of items that leaves the inventory, with the following exception:

- If **Lot Entry During Transfer** is set to **no**, you cannot specify the lot numbers for issues related to *transfer orders*.

### Note:

- You must register the lots before you finish the outbound procedure. If you have not registered the lots, LN does not permit you to complete the last order step of the outbound *procedure*.
- If you use *cross-docking* to send a purchased component directly to a work center, the item does not pass through the warehouse's inbound procedure and outbound procedure.
- To ensure that you can enter lot codes, set the **Create Shipment** field in the **Default Order Types by Origin (whinh0120m000)** session to **Cross-docking Lot/Serial** for the relevant combination of warehouse and work center. In that case, LN generates *shipments* to allow you to enter the lot numbers. For more information, refer to Create Shipment.

In the following situations, you cannot generate new lot codes in the outbound procedure:

- If **Lot Entry During Receipt** is **yes**. In that case, you must use existing lot codes in the outbound procedure
- If the order's *lot selection* is **Specific**. In that case, the lot code is already specified in the order.

## Outbound advice lines

You can register lots in the **Outbound Advice Lots and Serials (whinh4126m000)** session. You can start this session from the **Outbound Advice (whinh4525m000)** session or from the **Warehouse Inspections Overview (whinh3122m000)** session.

If you do not create shipment lines, you must register lots at the outbound advice lines. Otherwise, you can register the lots at the shipment lines.

If you create shipment lines after you register the lot numbers for the outbound advice lines, LN uses the lot numbers of the outbound advice lines as default data for the shipment lines.

## Shipment lines

The most common place to register the lots is in the **Shipment Line Stock Point Details (whinh4133m000)** session. You can start this session from the **Shipment Lines (whinh4131m000)** session.

In the *cross-docking* scenario, you must register lots in the **Shipment Line Stock Point Details (whinh4133m000)** session, because the outbound advice lines are not available.

If you split a shipment line and you move part of the shipment line quantity to a new shipment line, you must also specify how the various lots and serial numbers are split over the shipment lines.

### As-Built components

If the **Register Lot Issue During As Built** field is **yes** and the *end item* is *serialized*, you must register the lot numbers during the recording of as-built components in the **Serial End Item - As-Built Components (timfc0111m000)** session.

In this situation, you can skip the registration of lots for outbound advice lines or shipment lines.

If the end-item is not serialized, you must register the lot numbers for the outbound advice lines or shipment lines, because there will be no As-Built.

### Handling units

For information about registering lot numbers for handling units, refer to To register lot and serial numbers for handling units.

### Other situations

In specific situations, you can register the lot numbers in the following sessions:

- Cycle Counting Order Line Stock Point Details (whinh5106m000)
- Adjustment Order Line Stock Point Details (whinh5126m000)

### Lot registration and inspections

If the *warehousing procedure* specifies that the received or issued items must be inspected, you can start the lot registration from the **Warehouse Inspections Overview (whinh3122m000)** session.

In this situation, you must specify the lot codes (or serial numbers) for the accepted or rejected items.

## High volume lot and serial registration parameters

In the *high volume scenario*, serial numbers are registered for serialized items during a warehouse transaction such as a receipt or an issue, or during production or maintenance of an item.

### Serial registration parameters

In the **Item - Warehousing (whwmd4500m000)** or the **Item - Warehousing (whwmd4600m000)** session, these parameters are available to enable the registration of serial numbers:

- Serial Number Entry for Direct Delivery
- Serial Number Entry During Receipt
- Serial Number Entry During Transfer
- Register Serial Issue During As Built
- Register Serial Issue in Service
- Lot and Serial Registration Templates

If serial registration is enabled, the registration is mandatory.

In the **Warehousing Order Types (whinh0110m000)** session, select the Generate Serials Automatically check box if you want serial numbers to be automatically generated for warehouse receipts and transfers.

The **Register Serial Issue During As Built**, **Register Serial Issue in Service**, and the **Register Lot Issue During As Built** parameter overrule the lot and serial registration templates that you define. See Lot and serial registration templates and How to define lot and serial registration templates.

If you selected **yes** for the Register Serial Issue During As Built and/or the Register Serial Issue in Service fields, you must register serial numbers for warehouse issues of origins other than **JSC Production**. For an overview of what these settings accomplish, see Overview of the high volume serial registration parameters.

Serial number registration is mandatory for warehouse issues unless otherwise specified by these parameters:

- Register Serial Issue During As Built
- Register Serial Issue in Service
- Lot and Serial Registration Template

### Lot registration parameters

In the **Item - Warehousing (whwmd4500m000)** or the **Item - Warehousing (whwmd4600m000)** session, these parameters are available to enable the registration of lot numbers:

- Lot Entry for Direct Delivery
- Lot Entry During Receipt
- Lot Entry During Transfer
- Register Lot Issue During As Built
- Register Lot Issue in Service & Maintenance

If lot registration is enabled, the registration is mandatory.

You must always register lot codes for issues from the warehouse (except issues related to *transfer orders*).

LN falls back to these parameter settings if no relevant lot and serial registration template is available. See Lot registration in the high volume scenario.

## Maintaining high volume lot and serial registration parameters

When initially setting up master data for an item, *high volume* lot and serial registration parameters are specified in these sessions:

- **Items - Warehousing Defaults (whwmd4101s000)**
- **Item - Warehousing (whwmd4500m000)**
- **Item - Warehousing (whwmd4600m000)**

After the initial setup, the registration options in these sessions are read-only if any of these conditions apply:

- Inventory is present in the **Stock Point Inventory (whinr1540m000)** session.
- Lots and serial numbers are present in these sessions:
  - **Shipment Notice Lines (whinh3101m000)**

- **Warehouse Receipt Lines (whinh3512m100)**, and the receipt lines that contain the lots or serials are unconfirmed.
- **Inbound Order Lines in Transit (whinh2110m200)**, and the inbound order lines that contain the lots or serials are not yet received in the destination warehouse.

If the *high volume* lot and serial registration parameters are read-only in the sessions mentioned previously, the registration parameters are maintained in the **Change Item Lot and Serial Registration (whwmd4200m000)** session.

If you disable a high-volume lot or serial registration parameter for an item and click **Process** in the **Change Item Lot and Serial Registration (whwmd4200m000)** session, the related inbound or outbound lots or serial numbers for the item are deleted in these sessions:

- **Shipment Notice Line Stock Point Details (whinh3105m000)**
- **Shipment Line Stock Point Details (whinh4133m000)**
- **Inspection Lines (whinh2131m000)**
- **Quarantine Inventory Disposition (whwmd2172m000)**
- **Receipt Line Stock Point Details (whinh3123m000)**

If you enable a high-volume lot or serial registration parameter, no new lots or serial numbers are generated. See To register serial numbers in the high volume scenario and Lot registration in the high volume scenario on how to register *high volume* serial numbers or lots.

**Note:** Lot and serial registration parameters specified in the **Item - Warehousing (whwmd4600m000)**, **Item - Warehousing (whwmd4500m000)**, or the **Change Item Lot and Serial Registration (whwmd4200m000)** session are updated in the **Item - Warehousing by Site (whwmd4104m000)** session. This is because lot and serial registration parameters are mandatory warehouse – item parameters on company level. See *Warehousing User Guide for Multisite*.

## Lot and serial registration templates

Lot and serial registration templates are used to specify the order origins and transaction types for which serial and/or lot registration must take place. This applies to lot and serial numbers not stored in inventory.

For example, you can specify that for a particular item, serial registration must be performed for **Maintenance Sales** orders when the item is received for repair, but that serial registration is not required when the same item is received on a **Purchase** order.

While performing an *inventory transaction* for an item on a particular order, LN checks whether a lot and serial registration template exists for the order origin and the transaction type. If yes, lot and/or serial registration must be carried out according to the template. If not, lot and/or serial registration must be carried out according to the applicable parameter from the following list:

- **Serial Number Entry During Receipt**
- **Serial Number Entry During Transfer**
- **Lot Entry During Receipt**
- **Lot Entry During Transfer**

If the following parameters are set, however, they overrule the lot and serial registration template:


- **Register Serial Issue During As Built**
- **Register Serial Issue in Service**
- **Register Lot Issue During As Built**

The parameters from the lists are available in the **Item - Warehousing (whwmd4600m000)** session.

## How to define lot and serial registration templates

Lot and serial registration templates are used to specify the order origins and transaction types for which serial and/or lot registration must take place.

To define lot and serial registration templates, proceed as follows:

- 1 In the **Lot and Serial Registration Templates (whwmd4102m000)** session, enter an identification code and a description for the lot and serial registration template.
- 2 Highlight the identification code and description you entered in the previous step and on the *appropriate* menu, select **Lot and Serial Registration by Order Origin**. As a result, the **Lot and Serial Registration by Order Origin (whwmd4103m000)** starts. The highlighted registration template identification code and description is displayed in the header section.
- 3 In the **Lot and Serial Registration by Order Origin (whwmd4103m000)**, click .
- 4 In the **Order Origin** field, select the origin of the orders for which lot and/or serial registration must take place.
- 5 In the **Transaction Type** field, select the *inventory transaction type* for which lot and/or serial registration must take place.
- 6 Select the **Lot Registration** check box if lot registration must take place for the selected order origin and transaction type.
- 7 Select the **Serial Registration** check box if serial registration must take place for the selected order origin and transaction type.
- 8 Save the settings made in the previous steps.
- 9 If required, repeat the previous steps to specify other order origin and transaction type combinations for which lot and/or serial registration must take place.

**Important:** You can also use lot and serial registration templates to exclude order origins and transaction types from lot and/or serial registration. If a general lot and/or serial registration parameter is set in the **Item - Warehousing (whwmd4600m000)** session and you do not want lot or serial registration to take place for a particular order origin and transaction type, select the order origin and the transaction type as described in steps 4 and 5, and clear the **Lot Registration** and/or **Serial Registration** check boxes.

## To register lot and serial numbers for handling units

The serial registration parameters in the **Item - Warehousing (whwmd4600m000)** session determine the types of warehouse transaction for which registration of lot or serial numbers is required.

If you use handling units for lot and serialized items in the *high volume scenario*, you can register the lot or serial numbers for either of these objects:

- The handling units that contain the lot or serialized items.  
This allows you to accurately locate your lot and serialized items.
- The *associated lines* of the handling units

### **Automatic generation of lot and serial numbers for handling units**

Sometimes, LN automatically registers lot and serial numbers for a handling unit if you create the handling unit after you have registered the lot and serial numbers for the associated line.

### **To manually register lot or serial numbers for handling units**

You can also register the lot or serial number for handling units manually. The lot and serial numbers are then automatically updated on the associated lines.

### **Lot and serial registration in handling unit structures**

When you use handling unit structures, you are not required to register lot and serial numbers for each of the handling units within the structure. If you do not, you must register the remaining lot or serial numbers for the associated line. This is because LN does not allow incomplete registration of lot and serial numbers.

### **Registration procedure depends on requirements**

Based on your requirements you can register lot or serial numbers for:

- The associated lines before registering for the handling units
- The handling units only and not for the associated lines ( LN updates the lot and serial numbers on the associated lines anyway)
- Part of the handling unit structure and register the remaining numbers on the associated lines

### **High volume and low volume lot and serial registration combined**

The procedure is different for the receipt of handling units containing items that are both *high volume* serialized and *low volume* lot controlled.

### **To change lot or serial numbers for handling units**

In the **Handling Unit Stock Point Details (whwmd5136m000)** session, you can change the lot or serial numbers that you registered for the selected handling unit.



## Chapter 3: Using Lot Control

### How to use lots

This topic describes what you can do with *lots*.

#### To create a new lot

In the warehouse-receipts procedure, you can generate a new lot code or enter an existing lot code.

To generate a new lot code for a received quantity, click **Generate Lot** in one of the sessions in which you enter receipts. LN uses a *mask* to generate a lot code.

You can manually create lots in the **Item - Lot (whltc1100m000)** session.

To convert a nonlot item into a lot item, use the **Convert (to) Lot Item (whltc1202m000)** session.

**Note:** If the **Generate Lots Automatically** check box in the **Warehousing Order Types (whinh0110m000)** session had been selected, LN automatically generates lots wherever needed, for example, upon receipt of goods.

#### To enter lot information

You can fill in the specifics of each lot in the **Item - Lot (whltc1100m000)** session.

A lot can be of type **Purchase** or of type **Production**. For lots of type **Purchase**, you can record the supplier and the supplier lot number.

You can specify additional lot selection codes in the **Lot Selection Codes (whltc1110m000)** session.

You can freely define *variable lot features*, such as color, quality class, and so on, and record the relevant features by lot for particular items. For more information, refer to Variable lot features.

#### Lot date

You can record a date for each lot. You can use these dates to retrieve lots based on the outbound priority.

You can use the **Lot Date** field in two ways:

- As the date the lot was received in inventory
- As the lot's *product expiry date*

For more information, refer to Lot Date.

### To block lots

Lots can be blocked for all transactions or only for inbound and outbound movement or transshipment. Blocked lots are recorded by the user's login code and can be unblocked only by using the same login code that blocked the lots. For more information, refer to To block and unblock.

### To delete lots

All lot data for a particular selection can be deleted if the following values for that lot are zero:

- *Inventory on hand*
- *Location allocated inventory*
- *Inventory on order*

You can delete lots with the **Archive/Delete Lots (whltc1200m000)** session.

### To use lots in purchase orders and sales orders

In purchase order lines and sales order lines, you must set the **Lot Selection** field to one of the following values:

- **Any**  
The goods to be received or shipped are not subject to specific lot conditions. You can use more than one lot.
- **Same**  
You can select any lot for receipt or shipment, but the entire receipt or shipment must have the same lot.
- **Specific**  
You can receive or ship only one, specific lot.

### Lot pricing

If you use the *inventory valuation method* of **Lot Price (Lot)**, LN calculates a separate valuation price for each lot.

For more information, refer to Lot pricing.

### Engineering revisions

If the **Engineering Revisions in Lot Control** check box in the **Lot Control Parameters (whltc0500m000)** session is selected, you can record the revision of the item for which inbound or outbound movements are performed.

For more information, refer to Engineering Revisions in Lot Control.

## Lot tracking

Lot tracking establishes where *lots* are used and traces the origin of lots.

Lot tracking consists of several print and display sessions that provide an overview of both the origin and the destination of lots. Origins can be shown from the lowest to the highest levels. The lot codes of the raw materials can be shown as well as all levels, from purchase to sales, provided that each level in the bill of material is lot controlled.

The following lot tracking overview sessions are available:

- **Item, Lot and Serial 360 (whltc3600m100)**
- **Item - Lots - Issues (whltc3500m000)**
- **Item - Lots - Receipts (whltc3501m000)**
- **Order - Lots (whltc3502m000)**

The following lot tracking print sessions are available:

- **Print Issues for Lots and Serials (whltc3400m000)**
- **Print Receipts for Lots and Serials (whltc3401m000)**

**Note:**

If the **Lot Entry During Receipt** field in the **Item - Warehousing (whwmd4600m000)** session has the value **No**, LN does not properly track the lots.

If the **Lot Entry During Transfer** field in the **Item - Warehousing (whwmd4600m000)** session has the value **No**, the lot-tracking session do not show *transfer orders*.

**To turn on lot tracking**

To turn on lot tracking, in the **Item - Warehousing (whwmd4500m000)** session, select the **Lot Tracking** check box.

## Chapter 4: Lot Pricing

### Lot pricing

This topic describes the *inventory valuation method* of lot pricing.

Using the **Lot Price (Lot)** valuation method, the inventory is valued against a price that is differentiated for each *lot*. The lot price is determined at the first receipt of the lot. If the price of the item changes and subsequent receipts are performed for the same lot, the inventory is still valued against the lot price determined at the first receipt of the lot. The price variance between the first receipt and subsequent receipts is balanced as a lot result in the financial reconciliation. For further information about financial reconciliations, refer to the User's Guide for Financial Integration and Reconciliation Transactions (U8967B US).

#### Example

A purchase order lists one lot with a total quantity of 90 electric switches. The purchase price of the first receipt of 50 switches is \$5 each. As a result, the lot price of the switches is \$5 each.

Lot price	5
Receipt 1	50 switches of \$5 each
Receipt 2	30 switches of \$6 each
Receipt 3	10 switches of \$6.5 each

The next day, you receive another 30 switches for the same lot with purchase price \$6, and after one more day you receive the remainder at a purchase price of \$6.50 each. Because the lot price is determined at the first receipt, the lot price is still \$5 each for the second and third receipt.

The lot result for the second and third receipt is \$ -30 (150 - 180) and \$ -15 (50 - 65), respectively.

#### To set up lot pricing

To use the *inventory valuation method* **Lot Price (Lot)**:

- In the **Item - Warehousing (whwmd4500m000)** session, select:
  - The Lot Price check box.
  - The **Lots in Inventory** check box.
- In the **Inventory Valuation Method** field of the **Item Data by Warehouse (whwmd2510m000)** session, select **Lot Price (Lot)**.

As a result, LN calculates a separate valuation price for each lot.

**Note:** To use lot pricing, the items must be lot-controlled. For more information, refer to Setting up lot items.

To calculate the lot price for purchased items, you can have LN add surcharges to the purchase price. To have LN add surcharges in the lot-price calculation, in the **Lot Control Parameters (whltc0500m000)** session, click **Calculate Surcharges on Purchase Price of Lot Item**.

If you want to change the inventory valuation method after any inventory arrived for the item or after any issues have been made, use the **Change Valuation Method (whina1232m000)** session.

### **Lot price**

The **Total Lot Price** field in the **Item - Lot (whltc1100m000)** session displays the actual price.

To view details, on the *appropriate* menu, click **Cost Details**.

## Chapter 5: Lot Control in Enterprise Planning

### Lot sizing

In Enterprise Planning, a number of constraints can be imposed on the ordered quantity of a production order, purchase order, or distribution order.

#### Example

You can specify that the ordered quantity must be a multiple of 100 units. If you have a requirement for 530 units, LN generates an order for 600 units.

You can also specify a fixed order quantity of 50 units. If you have a requirement for 530 units, LN generates 11 orders of 50 units each.

Define an item's *order method* in the **Items - Ordering (tcibd2100m000)** session.

Define the order quantity settings in the following sessions:

- **Items - Ordering (tcibd2100m000)** session
- **Item Data by Warehouse (whwmd2510m000)** session
- **Items - Purchase Business Partner (tdipu0110m000)** session
- **Supplying Relationships (cprpd7130m000)** session

#### Use of lot size settings

If you defined warehousing data for the item, and you cleared the **Use Item Ordering Data** check box in the **Item Data by Warehouse (whwmd2510m000)** session, LN uses the warehousing data for lot sizing. If you selected the **Use Item Ordering Data** check box, LN carries out lot sizing according to the value that you specified in the **Method** field in the **Items - Ordering (tcibd2100m000)** session. Next, LN sorts out which supply source to use, and takes into account the order quantity details of the **Items - Purchase Business Partner (tdipu0110m000)** session for purchase orders, or the constraints that you set for lot sizing in the **Supplying Relationships (cprpd7130m000)** session for distribution orders.

**Note:** A *project item* always has a **Lot for Lot** order method.

#### Lot sizing of purchase schedule items

For purchase schedule items, LN divides the purchase part of the supply over the available suppliers. Instead of lot sizing the divided quantities according to the lot-size settings that you defined for the supplier in the **Items - Purchase Business Partner (tdipu0110m000)** session, which LN does for normal purchase items, LN groups the purchase requirements for purchase schedule items according to the delivery moments of the supplier. Next, LN groups the purchase requirements for each supplier to the delivery moments and lot sizes

the quantities of separate schedule lines according to the lot-size settings in the **Items - Purchase Business Partner (tdipu0110m000)** session.

## Computing lot-size-related costs

As part of the optimization procedure for logistic parameters, LN calculates the total cost during the optimized period.

**Note:** The computation only considers the time period that you specified in the Resource Cost Values (cpao3120m000) session.

### Calculation

$$TC = ICC + COI + SCN + SCO$$

Where:

TC	total cost during optimized period
ICC	<i>inventory carrying cost</i>
COI	cost of obsolete items
SCN	setup cost (normal rate)
SCO	setup cost (overtime rate)

### Inventory carrying cost

$$ICC = AIL * (IP/100) * C * L$$

Where:

ICC	inventory carrying cost
AIL	average inventory level
IP	inventory cost percentage
C	material cost of the item (standard cost)
L	length of time period (in days)

### Example: inventory carrying cost

Data:

AIL	1200 kg (average inventory level)
-----	-----------------------------------

IP	0.1 %/day (inventory cost percentage)
C	45 \$/kg (material value)
L	30 days (length of time period)

$$ICC = AIL * (IP/100) * C * L$$

Result of the calculation: ICC = 1620 \$ (inventory carrying cost for the period of 30 days)

### Cost of obsolete items

$$COI = AIL * C * (Ri/100) * L/F$$

Where:

COI	cost of obsolete items
AIL	average inventory level
C	material cost of the item (standard cost)
Ri	risk of turning obsolete (percentage by day)
L	length of time period (in days)
F	number of times that the item is produced in the time period

### Example: Cost of obsolete items

Data:

A	1200 kg (average inventory level)
C	45 \$/kg (material value)
R	1 %/day (risk of turning obsolete)
L	30 days (length of time period)
F	20 (number of times that the item is produced in the time period)

$$COI = AIL * C * (Ri/100) * L/F$$

Result of the calculation COI = 810 \$ (cost of obsolete items)

$$AIL = D / (2 * F)$$

Where:

D	total demand during the time period (in inventory unit)
F	number of times that the item is produced



**Example: average inventory level**

Data:

L	30 days (length of time period)
D	48,000 kg (total demand during the time period)

If the inventory is replenished once every 30 days, to a level of 48,000 kg, the average level is 24,000 kg.

However, if the inventory is replenished 20 times in every 30 days, to a level of 2400 kg, the average level is 1200 kg.

$$AIL = D / (2 * F)$$

Result of the first calculation:

F	1 (number of times that the item is produced)
AIL	24,000 kg (average inventory level)

Result of the second calculation:  $F = 20$  AIL = 1200 kg

$$F = D / LS$$

Where:

F	number of times that the item is produced
D	total demand during the time period (in inventory unit)
LS	lot size

**Setup cost (normal rate)**

$$SCN = F * S' * R * (1 + SR/100)$$

Where:

SCN	setup cost (normal rate)
F	number of times that the item is produced
S'	setup time during normal working hours [hours]
R	operation rate (cost per hour)
SR	the setup rate percentage of the resource

**Setup cost (overtime rate)**

$$SCO = F * S'' * R * (1 + SR/100) * (1 + OR/100)$$

Where:

SCO	setup cost (overtime rate)
S"	setup time during overtime hours [hours]
OR	overtime rate percentage

The result of the computation is displayed in the Plan Items - Optimized Lot Sizes (cpao3110m000) session.

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